

# Health & Physical

*Fourth Edition*

## *Assessment in Nursing*

**Cynthia Fenske, DNP, RN**

Campus Dean for Nursing  
Associate Professor  
Concordia University Ann Arbor  
Ann Arbor, Michigan

**Katherine Watkins, DNP, RN, CPNP-PC, CNE**

Clinical Professor  
Doctor of Nursing Practice Program Coordinator  
Northern Arizona University  
Flagstaff, Arizona

**Tina Saunders, MSN, RN, CNE, GCNS-BC**

Senior Lecturer  
Kent State University College of Nursing  
Kent, Ohio

**Donita D'Amico, MEd, RN**

Associate Professor  
William Paterson University  
Wayne, New Jersey

**Colleen Barbarito, EdD, RN**

Associate Professor  
William Paterson University  
Wayne, New Jersey

Executive Portfolio Manager: Pamela Fuller  
Development Editor: Pamela Lappies  
Portfolio Management Assistant: Taylor Scuglik  
Vice President, Content Production and Digital Studio: Paul DeLuca  
Managing Producer Health Science: Melissa Bashe  
Content Producer: Michael Giacobbe  
Vice President, Sales & Marketing: David Gesell  
Vice President, Director of Marketing: Brad Parkins  
Executive Field Marketing Manager: Christopher Barry Field  
Marketing Manager: Brittany Hammond

Director, Digital Studio: Amy Peltier  
Digital Producer: Jeff Henn  
Full-Service Vendor: Pearson CSC  
Full-Service Project Management: Pearson CSC, Dan Knott  
Manufacturing Buyer: Maura Zaldivar-Garcia, LSC Communications, Inc.  
Interior Designer: Studio Montage  
Cover Designer: Studio Montage  
Text Printer/Bindery: LSC Communications, Inc.  
Cover Printer: Phoenix Color

Credits and acknowledgments borrowed from other sources and reproduced, with permission, in this textbook appear on appropriate page within text except for the following: Chapter 1 opener: Westend61/Getty Images; Chapter 2 opener: Jan Novak/123rf; Chapter 3 opener: kali9/Getty Images; Chapter 4 opener: Monkey Business Images/Shutterstock; Chapter 5 opener: KidStock/Blend Images/Corbis; Chapter 6 opener: Cultura Creative (RF)/Alamy Stock Photo; Chapter 7 opener: wavebreakmedia/Shutterstock; Chapter 8 opener: Iakov Filimonov/Shutterstock; Chapter 9 opener: wavebreakmedia/Shutterstock; Chapter 10 opener: belushi/Shutterstock; Chapter 11 opener: Terry Schmidbauer/123RF; Chapter 12 opener: Monkey Business Images/Shutterstock; Chapter 13 opener: FotoFlirt/Alamy Stock Photo; Chapter 14 opener: Andy Gin/Shutterstock; Chapter 15 opener: ferrantraite/Getty image; Chapter 16 opener: Alistair Berg/DigitalVision/Getty; Chapter 17 opener: bbernard/Shutterstock; Chapter 18 opener: bbernard/Shutterstock; Chapter 19 opener: Ariel Skelley/DigitalVision/Getty images; Chapter 20 opener: Monkey Business Images/Shutterstock; Chapter 21 opener: Rawpixel.com/Shutterstock; Chapter 22 opener: veryulissa/Shutterstock; Chapter 23 opener: Halfpoint/Shutterstock; Chapter 24 opener: Cathy Yeulet/123RF; Chapter 25 opener: Blend Images/Superstock; Chapter 26 opener: Ariel Skelley/Getty Images; Chapter 27 opener: Syda Productions/Shutterstock; Chapter 28 opener: LittlePerfectStock/Shutterstock; Cover: LittlePerfectStock/Shutterstock.

---

Copyright © 2020, 2016, 2012, 2007 by Pearson Education, Inc. 221 River Street, Hoboken, NJ 07030. All rights reserved. Manufactured in the United States of America. This publication is protected by Copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or likewise. To obtain permission(s) to use material from this work, please submit a written request to Pearson Education, Inc., Permissions Department, 221 River Street, Hoboken, New Jersey 07030.

Many of the designations by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and the publisher was aware of a trademark claim, the designations have been printed in initial caps or all caps.

Notice: Care has been taken to confirm the accuracy of information presented in this book. The authors, editors, and the publisher, however, cannot accept any responsibility for errors or omissions or for consequences from application of the information in this book and make no warranty, express or implied, with respect to its contents.

The authors and publisher have exerted every effort to ensure that drug selections and dosages set forth in this text are in accord with current recommendations and practice at time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package inserts of all drugs for any change in indications of dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new and/or infrequently employed drug.

Library of Congress Cataloging-in-Publication Data

Names: D'Amico, Donita, author. | Fenske, Cynthia, author. | Watkins, Katherine, author. | Saunders, Tina, author. | Barbarito, Colleen, author.

Title: Health & physical assessment in nursing / Cynthia Fenske, Katherine Watkins, Tina Saunders, Donita D'Amico, Colleen Barbarito.

Other titles: Health and physical assessment in nursing

Description: 4th edition. | Upper Saddle River, New Jersey : Pearson Education, Inc., [2020] |

Donita's name appears first in the previous editions. | Includes bibliographical references and index.

Identifiers: LCCN 2019000240 | ISBN 9780134868172 (student edition) | ISBN 013486817X (student edition)

Subjects: | MESH: Nursing Assessment--methods | Physical Examination--nursing | Holistic Nursing--methods | Case Reports

Classification: LCC RT48 | NLM WY 100.4 | DDC 616.07/5--dc23

LC record available at <https://lcn.loc.gov/2019000240>

1 20



ISBN-10: 0-13-486817-X  
ISBN-13: 978-0-13-486817-2

# About the Authors

## Cynthia Fenske, DNP, RN

Cynthia Fenske graduated with a BSN from Valparaiso University and an MS in Medical-Surgical Nursing from the University of Michigan. She earned her Doctor of Nursing Practice degree from Oakland University in Rochester Hills, Michigan. She was a faculty member at the University of Michigan for 32 years prior to leaving to start a nursing program at Concordia University Ann Arbor. In the classroom her teaching responsibilities include physical assessment, medical-surgical nursing, and fundamentals; in the laboratory setting she teaches physical assessment, nursing skills, and simulation.

Dr. Fenske has published articles on the use of simulation and innovative teaching strategies to assess and enhance learning. She is a faculty advocate, consultant, and trainer for Pearson Education's virtual community, The Neighborhood 2.0. Her research includes strategies to improve the development of clinical judgment and interprofessional teamwork skills through the use of simulation.

Dr. Fenske is a member of Sigma Theta Tau International Honor Society of Nursing and the State of Michigan State Board of Nursing.

## Katherine Watkins, DNP, RN, CPNP-PC, CNE

Dr. Watkins earned her MSN as a Pediatric Nurse Practitioner at Yale, her post-master's certificate in Nursing Education at University of Alaska Anchorage (UAA), and her doctor of nursing practice from Northern Arizona University. She is a Clinical Professor of Nursing at Northern Arizona University in Flagstaff, Arizona. Dr. Watkins earned dual bachelor's degrees in architecture and geography and spent many years as a successful graphic designer and illustrator before coming to professional nursing and nursing education. After earning her MSN, she moved to Alaska and practiced as a pediatric primary care NP and began teaching nursing full-time at the UAA. Dr. Watkins has taught nursing education courses at all levels and in a variety of delivery formats with a particular focus on teaching nursing assessment at the pre-licensure and advanced levels.

Dr. Watkins is the coordinator for the Doctor of Nursing Practice program, is a Certified Nurse Educator, and practices part time as a primary-care pediatric NP in rural northern Arizona. She volunteers as a manuscript reviewer for *Journal of Pediatric Health Care* and on TeamPEDS of the National Association of Pediatric Nurse Practitioners.

## Tina Saunders MSN, RN, CNE, GCNS-BC

Tina Saunders earned a baccalaureate degree in nursing from Youngstown State University, and a master's degree in nursing as an Adult Clinical Nurse Specialist with a specialization in gerontology from Kent State University. She has been a faculty member of the College of Nursing at Kent State University since 2006. She is the coordinator for the MSN Nurse Educator concentration and teaches in the RN-to-BSN program as well as in the Adult-Gerontology Clinical Nurse Specialist and Nurse Educator MSN program concentrations. Her clinical practice experience includes long-term care and critical care step-down nursing.

Mrs. Saunders has published an article on teach back methodology in *Orthopaedic Nursing* and has authored online RN-BSN health assessment and capstone courses for Pearson. She serves on several committees, on task forces, and in leadership positions within Kent State University at the College of Nursing. She is a member of the Delta Xi chapter of Sigma Theta Tau International, National League for Nursing, Northeast Ohio Clinical Nurse Specialists, Midwest Nursing Research Society, and Gerontological Advanced Practice Nurses Association. In addition, she serves on the editorial review board for the *Online Journal of Issues in Nursing* (OJIN).

## **Donita D'Amico, MEd, RN**

Donita D'Amico, a diploma nursing school graduate, earned her baccalaureate degree in Nursing from William Paterson College. She earned a master's degree in Nursing Education at Teachers College, Columbia University, with a specialization in Adult Health. Ms. D'Amico has been a faculty member at William Paterson University for more than 30 years. Her teaching responsibilities include physical assessment; medical–surgical nursing; nursing theory; and fundamentals in the classroom, skills laboratory, and clinical settings. Within the university, she is a charter member of the Iota Alpha Chapter of Sigma Theta Tau International. She also serves as a consultant and contributor to local organizations.

## **Colleen Barbarito, EdD, RN**

Colleen Barbarito received a nursing diploma from Orange Memorial Hospital School of Nursing, graduated with a baccalaureate degree from William Paterson College, and earned a master's degree from Seton Hall University. She received her Doctor of Education from Teachers College, Columbia University. Prior to a position in education, Dr. Barbarito's clinical experiences included medical–surgical, critical care, and emergency nursing. Dr. Barbarito has been a faculty member at William Paterson University since 1984, where she has taught Physical Assessment and a variety of clinical laboratory courses for undergraduate nursing students and curriculum development at the graduate level. Dr. Barbarito is a member of Sigma Theta Tau International Honor Society of Nursing and the National League for Nursing.

# Thank You

## CONTRIBUTORS

---

We extend a sincere thanks to our contributors, who gave their time, effort, and expertise so tirelessly to the development and writing of chapters and resources that helped foster our goal of preparing student nurses for evidence-based practice.

### Fourth Edition Contributors

**Laura Karnitschnig, DNP, RN, CPNP**

Assistant Professor  
Northern Arizona University, School of Nursing  
Flagstaff, Arizona  
*Chapter 11, Psychosocial Health, Substance Use, and Violence Assessment*

### Previous Edition Contributors

**Michelle Aebersold, PhD, RN**

Clinical Assistant Professor/Clinical Associate Professor  
Director of Simulation and Educational Innovation  
University of Michigan  
Ann Arbor, Michigan  
*Case Studies*

**L. S. Blevins, MS, MFA, ELS, RN**

WilliamsTown Communications  
Zionsville, Indiana

**Vicki Lynn Coyle, RN, MS**

Assistant Professor  
William Paterson University  
Wayne, New Jersey  
*Chapter 25, The Pregnant Woman*

**Dorothy J. Dunn, PhD, RN, FNP-BC, AHN-BC**

Assistant Professor, School of Nursing  
President, Lambda Omicron Chapter of Sigma Theta Tau  
Northern Arizona University  
Flagstaff, Arizona  
*Chapter 4, Health Disparities*

**Dawn Lee Garzon, PhD, APRN, BC, CPNP**

Clinical Associate Professor  
University of Missouri–St. Louis  
Ladue, Missouri  
*Pediatrics content in assessment chapters*

**Karen Kassel, PhD, ELS**

WilliamsTown Communications  
Zionsville, Indiana

**Sheila Tucker, MA, RD, CSSD, LDN**

Executive Dietitian, Auxiliary Services  
Nutritionist, Office of Health Promotion  
Performance Nutritionist, Athletics  
Part-time Faculty, Connell School of Nursing  
Part-time Faculty, Woods College of Advancing Studies

Boston College  
Boston, Massachusetts  
*Chapter 10, Nutritional Assessment*

**Linda D. Ward, PhD, ARNP**

Assistant Professor  
Washington State University College of Nursing  
Spokane, Washington  
*Genetics and Genomics in Chapter 5, Interviewing and Health History*

## REVIEWERS

---

We would like to extend our deepest gratitude and appreciation to our colleagues who have given their time to help create this updated edition of our health and physical assessment textbook. These individuals helped us plan and shape our book by providing valuable feedback through the review of chapter content, art, design, and more. *Health & Physical Assessment in Nursing, Fourth Edition*, has reaped the benefit of your collective expertise, and we have improved the materials due to your efforts, suggestions, objections, endorsements, and inspiration. Those who generously gave their time include the following:

**Carol S. Amis, MSN, RN, CCRN-K**

Faculty, Nursing Program  
Minneapolis Community & Technical College  
Minneapolis, Minnesota

**Jocelyn M. Dunnigan, PhD, RN, BC**

Associate Professor  
University of Mary, Division of Nursing  
Bismarck, North Dakota

**Matthew Good, MS, RD, LD**

Master's of Science in Nutrition and Dietetics  
President & Founder, Good Health Industries, LLC  
Youngstown, Ohio

**Marie P. Loisy, RN, MSN, FNP-C**

Associate Professor, Nursing  
Chattanooga State Community College  
Chattanooga, Tennessee

**Shirley MacNeill, MSN, RN, CNE**

Chair, Allied Health Department  
Upward Mobility LVN to ADN Nursing Program  
Coordinator  
Lamar State College  
Port Arthur, Texas

**Rosemary Macy, PhD, RN, CNE, CHSE**

Associate Professor  
Faculty Development & Education Coordinator  
School of Nursing  
Boise State University  
Boise, Idaho

**Tonia Mailow, DNP, RN**

Assistant Professor, School of Nursing  
Murray State University  
Murray, Kentucky

**Carole A. McKenzie, PhD, CNM, RN**

Associate Professor  
Texas A&M University  
Commerce, Texas

**Jill Morsbach, RNC-MNN, MSN**

Assistant Professor of Nursing  
Missouri Western State University  
St. Joseph, Missouri

**Brenda Reed, RN, DNP, FNP-BC**

Assistant Professor, Professional Practice Nursing  
Texas Christian University  
Harris College of Nursing & Health Sciences  
Fort Worth, Texas

**Christy Seckman, DNP, RN**

Associate Professor  
Goldfarb School of Nursing at Barnes-Jewish College  
St. Louis, Missouri

**Adam Strosberg, DNP, ARNP-BC**

Christine E. Lynn College of Nursing  
Florida Atlantic University  
Boca Raton, Florida

**Jennifer Wheeler, RN, MSN/Ed**

Assistant Professor of Nursing  
Jackson College  
Jackson, Missouri

# Preface

This updated edition of *Health & Physical Assessment in Nursing*, along with its comprehensive collection of digital resources, will help instructors guide pre-licensure nursing students and facilitate their learning of the art, science, and skills of health and physical assessment. The focus of this book is assessment of the whole person and recognizing the wide diversity of patients and settings where nurses practice. The professional nurse will assess the entirety of the patient experience, including the physical, emotional, cultural, and spiritual aspects of their lives. Because learning the practice of nursing is complex, this text provides a systematic and detailed look at health and physical assessment as the fundamental first step in the nursing process. We approach assessment holistically while emphasizing the scientific, evidence-based knowledge and skills needed for professional practice. We introduce concepts related to health, wellness, communication, culture, and human development to underscore the importance of health assessment as an integral part of the expanded role of the nurse.

## ORGANIZATION OF THIS TEXTBOOK

*Health & Physical Assessment in Nursing* is composed of four units. Unit I, Foundations of Health Assessment, introduces foundations of nurses' role in comprehensive health assessment. The chapters within this unit examine the definitions and concepts important to assessment, as well as the social and cultural influences. Nursing assessment includes all of the factors that impact the patient and health. Chapter 1 describes the knowledge, skills, and processes that comprise the role of professional nurses in holistic health assessment and health promotion. Among these processes is evidence-based practice (EBP). This is introduced in Unit I, and references to evidence-based guidelines, recommendations, and practices are addressed throughout this text. The professional nurse functions within the healthcare delivery system and has a responsibility to partner with other professionals and patients to maximize health. We introduce all the steps of the nursing process, then provide a detailed explanation of assessment. Chapter 2 discusses many concepts related to health and wellness, including health promotion. This chapter also provides definitions of health and examples of several health promotion models. Chapter 3 discusses how the patient's culture, heritage, and spirituality have significant influences on the individual's health-related activities. This chapter provides an overview of cultural concepts and describes methods to incorporate and address the patient's culture, values, and beliefs in the assessment process. Chapter 4 discusses the expanded understanding of health disparities across populations. An examination of the assessment of vulnerable patient groups includes factors that place certain populations at risk for health disparities.

Unit II, Techniques for Health Assessment, introduces the fundamental skills for performing the health and physical assessment. This unit emphasizes current evidence-based nursing

practice and guidelines. Chapter 5 presents the skills, knowledge, and attitudes needed to gather the subjective data through interviewing and collecting the health history. The nurse's ability to communicate effectively is essential to the interview process, and this chapter presents details of the communication process and examples of effective communication techniques. Chapter 6 covers the key principles of nursing documentation across a variety of settings. We describe techniques and equipment required for physical assessment in Chapter 7. Chapter 8 provides an in-depth explanation of the initial steps of the objective physical assessment—the general survey and measurement of vital signs. Chapters 9, 10, and 11 discuss factors that are of crucial importance to health assessment: pain; nutrition; and assessment of mental health, substance use, and violence. Each chapter describes concepts related to these areas and includes measurements, methods, and tools to guide data gathering and interpretation of findings for patients across the lifespan.

Unit III, Physical Assessment, introduces the methods and techniques that nurses use to obtain objective data. Current evidence-based practice knowledge and guidelines are highlighted throughout this unit. The chapters in Unit III are organized by body system, and each chapter begins with a review of anatomy and physiology. This is followed by a Special Considerations section with discussion of the issues the nurse must consider when collecting subjective and objective data, including health promotion; age; developmental level; and cultural, psychosocial, and emotional wellness. These highly structured chapters use a consistent format to guide students through the steps of assessment and build their skills step by step.

Unit IV, Specialized Assessment, contains three chapters that provide information about physical assessment of specialized patient groups. These chapters focus on assessment concepts and issues relevant to pregnant females; newborns, infants, children, and adolescents; and older adults. Chapter 28 presents a comprehensive overview of the complete health assessment along with a focus on hospitalized patients.

## NEW CHAPTERS

Several chapters have been combined, reorganized, and amended in this edition. Completely new chapters include the following:

- Chapter 6, Documenting Your Findings, provides the rationale for accurate documentation, as well as the core principles for solid documentation. Differentiating the methods of documentation for subjective and objective data is emphasized. We also provide charting for narrative notes, problem-oriented charting, flow sheets, and more.
- Chapter 26, Newborns, Infants, Children, and Adolescents, describes the assessment of pediatric populations. This content has been brought together in this chapter, showing the changes in practices as children age.

- Chapter 27, Older Adults, presents assessment techniques and consideration for the older adult patient. Abnormal conditions related specifically to the aging process are identified.
- In Appendix C we present advanced skills that offer step-by-step instructions for some skills that, while less common, may still be performed by nurses in certain situations.

## FEATURES TO HELP YOU USE THIS TEXT

Features are designed to enhance the learning process and help you use this text successfully. New features for this edition—Medical Language, Evidence-Based Practice, and the Documenting Your Findings section—are shown and described along with those from previous editions.

### KEY TERMS

acini cells, 332	breast self-awareness, 335	mammary ridge, 333	peau d'orange, 342
areola, 332	galactorrhea, 347	mastalgia, 337	suspensory ligaments, 333
axillary tail, 332	gynecomastia, 348	Montgomery's glands, 332	

**Key Terms** at the beginning of chapters identify the terminology that the student encounters in conducting assessment and the pages where the student can find the definitions. Key terms are boldfaced throughout and defined in the text and in the glossary.

Knowing components of medical language can improve and enhance the learning experience. Prefixes, suffixes, and root words found in the chapter are provided in the **NEW Medical Language** features after the Key Terms to reinforce learning of these fundamental parts of medical terminology.

### MEDICAL LANGUAGE

<b>extra-</b>	Prefix meaning "outside"	<b>ophthalm-</b>	Prefix meaning "eye"
<b>-graphy</b>	Suffix meaning "process of recording"	<b>-opia</b>	Suffix meaning "vision condition"
<b>-itis</b>	Suffix meaning "inflammation"	<b>photo-</b>	Prefix meaning "light"

#### Subjective Data—Health History

Cardiovascular assessment includes the gathering of subjective and objective data. Subjective data collection occurs during the patient interview, before the actual physical assessment. During the interview, the nurse uses a variety of communication techniques to elicit general and specific information about the patient's state of cardiovascular health or illness. Health records, the results of laboratory tests, cardiograms, and other tests are important secondary sources to be reviewed and included in the data-gathering process. See Table 18.5 for information on potential secondary sources of patient data.

**Focused Interview**

The focused interview for the cardiovascular system concerns data related to the structures and functions of that system. Subjective data related to cardiac status are gathered during the focused interview. The nurse must be prepared to observe the patient and listen for cues related to the function of the cardiovascular system. The nurse may use open-ended and closed questions to obtain information. Often a number of follow-up questions or requests for descriptions are required to clarify data or gather missing information.

The focused interview guides the physical assessment of the cardiovascular system. The information is always considered in relation to normal parameters and expectations about cardiovascular function. Therefore, the nurse must consider age, gender, race, culture, environment, health practices, past and concurrent problems, and therapies when framing questions and using techniques to elicit information. Categories of questions related to cardiovascular status and function have been developed to address all of the factors when conducting a focused interview. These categories include general questions that are asked of all patients; those addressing illness and infection; questions related to symptoms, pain, and behaviors; those related to habits or practices; questions that are specific to patients according to age; those for the pregnant female;

LABORATORY TESTS	NORMAL VALUE
Cholesterol	< 200 mg/dL
Triglycerides	< 150 mg/dL
HDL (high-density lipoprotein)	> 60 mg/dL
LDL (low-density lipoprotein)	< 50 mg/dL
CPK (creatinine phosphokinase)	Males: 52–336 Units/L Females: 38–176 Units/L
CPK-MB	0–3 mcg/mL
Myoglobin	< 90 mcg/mL
Troponin I	< 0.04 nanogram/mL
LDH	122–222 Units/L
SGOT	Males: 8–48 Units/L Females: 6–43 Units/L

and questions that address internal and external environmental concerns. One approach to questioning about symptoms is the OLD CART & ICE method, which is described in Chapter 5. See Figure 5.3.

Focused Interview Questions	Rationales and Evidence
<p>The following section provides sample questions and tailored follow-up questions in each of the previously mentioned categories. A rationale for each of the questions is provided. The list of questions is not all-inclusive but represents the types of questions required in a comprehensive focused interview related to the cardiovascular system.</p> <p><b>General Questions</b></p> <ol style="list-style-type: none"> <li><b>Describe how you are feeling. Has your sense of well-being changed in the last 2 months? Is your sense of well-being different than it was 2 years ago?</b> <ul style="list-style-type: none"> <li>Describe the change.</li> <li>How long have you experienced the change?</li> <li>Do you know what caused the change?</li> <li>Have you seen a healthcare provider?</li> <li>Was a diagnosis made?</li> <li>Was treatment prescribed?</li> <li>What have you done to deal with the change?</li> </ul> </li> <li><b>Are you able to perform all of the activities needed to meet your personal and work-related responsibilities?</b> <ul style="list-style-type: none"> <li>Describe the changes in your abilities.</li> <li>Do you know what is causing the difficulty?</li> <li>How long have you had this problem?</li> <li>What have you done about the problem?</li> <li>Have you discussed this with a healthcare professional?</li> </ul> </li> <li><b>Is there anyone in your family who has had a cardiovascular problem or disease?</b> <ul style="list-style-type: none"> <li>What is the disease or problem?</li> <li>Who in the family now has or has ever had the problem?</li> <li>When was it diagnosed?</li> <li>Has the problem been treated?</li> <li>What was the outcome?</li> </ul> </li> <li><b>What is your weight? Have you experienced a change in your weight?</b> <ul style="list-style-type: none"> <li>How much weight have you gained or lost?</li> <li>Over what period of time did the change occur?</li> <li>Do you know what caused the change?</li> <li>Have you done anything to address the change in your weight?</li> <li>Have you discussed the change with a healthcare provider?</li> </ul> </li> </ol> <p><b>Questions Related to Illness</b></p> <ol style="list-style-type: none"> <li><b>Have you ever been diagnosed with a cardiovascular disease?</b> <ul style="list-style-type: none"> <li>When were you diagnosed with the problem?</li> <li>What treatment was prescribed for the problem?</li> <li>Was the treatment helpful?</li> <li>Describe things you have done or currently do to cope with the problem?</li> <li>Has the problem ever recurred (acute)?</li> <li>How are you managing the problem now (chronic)?</li> </ul> </li> <li><b>Alternative to question 1: List possible cardiovascular problems, such as MI, congestive heart failure, atherosclerosis, coronary artery disease, angina, arrhythmias, and valvular disease, and ask the patient to respond "yes" or "no" as each is stated.</b></li> <li><b>Do you now have or have you ever had an infection or viral illness affecting the cardiovascular system?</b> <ul style="list-style-type: none"> <li>When were you diagnosed with the infection?</li> <li>What treatment was prescribed?</li> <li>Has the treatment helped?</li> <li>What kind of things do you do to help with the problem?</li> <li>Has the infection recurred (acute)?</li> <li>How are you managing the problem now (chronic)?</li> </ul> </li> </ol>	<p>This question gives patients the opportunity to provide their own perceptions about their health. Statements about fatigue, weakness, dizziness, or shortness of breath, especially after activity, may indicate problems with cardiovascular health.</p> <p>Inability to carry out or perform personal or work-related activities can be indicative of problems in the cardiovascular system.</p> <p>This may reveal information about cardiovascular diseases associated with familial predisposition. Follow-up is required to obtain details about specific problems, occurrence, treatment, and outcomes.</p> <p>Obesity and a high percentage of body fat are risk factors for cardiovascular disease. Weight gain or loss may accompany physical problems, including systemic diseases such as diabetes, which increases risk for cardiovascular disease. Psychological problems, including stress, can affect weight gain or loss and also contribute to cardiovascular problems (AHA, 2017).</p> <p>The patient has an opportunity to provide information about specific cardiovascular illnesses. If a diagnosed illness is identified, follow-up about the date of diagnosis, treatment, and outcomes is required. Data about each illness identified by the patient are essential to an accurate health assessment.</p> <p>Illnesses can be classified as acute or chronic, and follow-up regarding each classification will differ.</p> <p>This is a comprehensive and easy way to elicit information about all diagnoses. Follow-up would be carried out for each identified diagnosis as in question 1.</p> <p>If an infection is identified, follow-up about the date of infection, treatment, and outcome is required.</p>

In the **Subjective Data—Health History** sections, students learn how to gather subjective data while conducting a patient interview. We provide **Focused Interview Questions** that ask the patient about general health, illness, symptoms, behaviors, and pain. We also provide follow-up questions to help the student gather more data from the interview, as well as rationales and supporting evidence so the student understands why the nurse must ask these questions. We provide reminders about specific communication techniques to increase student confidence and competence while performing the health assessment. A **Potential Secondary Sources for Patient Data** table is included in each of the assessment chapters in Unit III. The table includes laboratory tests with the normal values and other possible diagnostic tests relevant to the particular system.

In **Objective Data—Physical Assessment**, we show the student how to collect objective data and conduct a physical assessment—from the preparation of the room and gathering of equipment, to greeting the patient and the examination, to sharing findings with the patient. **Equipment** features help students prepare for the assessment by identifying the equipment needed to conduct the assessment. **Helpful Hints** boxes provide suggestions and reminders about conducting the physical assessment. We offer clinical guidance to prepare the student for the assessment and promote patient comfort.

Throughout the Objective Data–Physical Assessment section are two columns. The left-side column demonstrates step-by-step instruction for patient preparation, position, details for each technique in assessment, and the expected findings. The right-side column includes corresponding abnormal findings and special considerations, such as an alternate method, technique, or finding in relation to age, development, culture, or specific patient condition such as obesity. This format helps the student differentiate normal from abnormal findings while interpreting and analyzing data to plan nursing care. Hundreds of photos and illustrations help the student envision how to perform the techniques precisely and thoroughly. Documentation samples for each chapter are presented to help students practice this skill.

## Objective Data—Physical Assessment

### Assessment Techniques and Findings

Physical assessment of the skin, hair, and nails requires the use of inspection and palpation. Inspection includes looking at the skin, hair, and nails to determine color, consistency, shape, and hygiene-related factors. Knowledge of norms or expected findings is essential in determining the meaning of the data as the nurse performs the physical assessment.

#### EQUIPMENT

- Examination gown and drape
- Examination light
- Examination gloves, clean and nonsterile
- Centimeter ruler
- Magnifying glass
- Penlight

#### HELPFUL HINTS

- Provide a warm, private environment that will reduce patient anxiety.
- Provide special instructions and explain the purpose for removal of clothing, jewelry, hairpieces, and nail enamel.
- Maintain the patient's dignity by using draping techniques.
- Monitor one's verbal responses to skin conditions that already threaten the patient's self-image.
- Be sensitive to a patient's individual needs. Ask permission before touching or examining.
- Because covering the head, hair, face, or skin may be part of religious or cultural beliefs, provide careful explanations regarding the need to expose these areas for assessment.
- Direct sunlight is best for assessment of the skin, so if it is not available, the lighting still must be strong and direct. Tangential lighting may be helpful in assessment of dark-skinned patients.
- Use standard precautions throughout the assessment.

### Techniques and Normal Findings

- To test the maxillary sinus, place a clean penlight in the patient's mouth and shine the light on one side of the hard palate, then the other. Gently cover the patient's mouth with one hand.
- There should be a red glow over the cheeks (see Figure 15.25A ■). Make sure the penlight is cleaned before using it again.
- An alternate technique is to place the penlight directly on the cheek and observe the glow of light on the hard palate (see Figure 15.25B ■).



Figure 15.25A Transillumination of the maxillary sinuses.

### Mouth and Throat

*Note: Be sure to wear clean, nonsterile examination gloves for this part of the assessment.*

1. **Inspect and palpate the lips.**
  - Confirm that the lips are symmetric, smooth, pink, moist, and without lesions. Makeup or lipstick should be removed.
  - Note the presence, shape, and color of the vermillion border, which is the darker line that forms a boundary between the lips and the skin.
2. **Inspect the teeth.**
  - Observe the patient's dental hygiene. Ask the patient to clench the teeth and smile while you observe occlusion (see Figure 15.26 ■).
  - Note dentures and caps at this time.
  - The teeth should be white, with smooth edges, and free of debris. Adults should have 32 permanent teeth, if wisdom teeth are intact.



Figure 15.26 Inspecting the teeth.

### Abnormal Findings and Special Considerations

- ▶ If there is no red glow under the eyes, the sinuses may be inflamed.

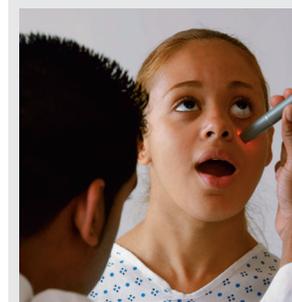


Figure 15.25B Transillumination of the maxillary sinuses using alternate technique.

- ▶ Lesions or blisters on the lips may be caused by the herpes simplex virus. These lesions are also known as **fever blisters** or **cold sores**. However, because cancer of the lip is the most common oral cancer, lesions must be evaluated for cancer. Pallor or cyanosis of the lips may indicate hypoxia.
- ▶ A thin vermillion border may be a sign of fetal alcohol syndrome. The vermillion border may also be absent after reconstructive surgery for cleft lip or hemangioma resection.
- ▶ Loose, painful, broken, or misaligned teeth; malocclusion; and inflamed gums need further evaluation.

**ALERT!** Do not percuss or palpate the patient who reports pain or discomfort in the pelvic region. Do not percuss or palpate the kidney if a tumor of the kidney is suspected, such as a neuroblastoma or Wilms' tumor. Palpation increases intra-abdominal pressure, which may contribute to intraperitoneal spreading of this neuroblastoma. Deep palpation should be performed only by experienced practitioners.

Familiarity with evidence-based practice information is critical for student success and nursing excellence. **NEW Evidence-Based Practice** boxes summarizing the findings of recent studies related to chapter content appear throughout the text.

**Alert!** boxes remind students of specific nursing care tips or signs to be aware of when performing a physical assessment and identify critical findings that the nurse should report immediately.

### Evidence-Based Practice

#### Concussion

- Sports injuries, specifically concussions, are a significant clinical and public health concern because of the potential long-term effects including cognitive impairment and mental health problems in some individuals (Manley et al., 2017). In addition to implementing evidence-based guidelines for recognition of concussion, researchers are looking for new ways to measure the severity of the injury and the time needed for recovery or return to play. There is a promising role for advanced brain imaging, a variety of biomarkers, and genetic testing in the assessment of concussion (McCreary et al., 2017).
- A novel method to objectively determine when an athlete can safely return to play after a concussion injury has been uncovered. Athletes who show an elevated plasma tau concentration within 6 hours of a concussion injury tend to have a prolonged return to play time (Gill, Merchant-Borna, Jeromin, Livingston, & Bazarian, 2017).
- In mild traumatic brain injury, researchers found several salivary markers that were up to 85% accurate in determining risk of prolonged post-concussion symptom risk in children (Johnson et al., 2018).

The **NEW Documenting Your Findings** sections explain the importance of documentation of assessment findings. There is a focus on the clear distinction between subjective and objective findings. Examples of findings for each body system are presented.

**Documenting Your Findings**

Documentation of assessment data—subjective and objective—must be accurate, professional, complete, and confidential.

**Focused History (Subjective Data)**

This is information from Review of Systems (ROS) and other pertinent history information that is or could be related to the patient's neurologic function.

Patient reports a change in coordination and balance. States difficulty in climbing stairs and doing usual stretching exercise routine. Denies history of head injury, seizures, migraines, or other neurologic illnesses. States no change in vision, hearing, taste, smell, sensation, or memory.

**Physical Assessment (Objective Data)**

Grooming and hygiene appropriate, posture erect, body language and facial expressions appropriate. Able to follow directions, complete calculations accurately, speech and language clear, abstract thinking and judgment intact. Oriented × 3. CN I–XII intact. Positive Babinski. Unable to complete tandem walk or standing on one foot without losing balance. Upper extremity coordination and RAM intact. Sensation intact to light touch, sharp/dull, temperature, vibration, stereognosis.

**Patient-Centered Interaction**



Source: Olena Kachmar/123RF.

**Interview**

**Nurse:** Good morning, Ms. Carbone. Are you having pain now?  
**Ms. Carbone:** Yes, I am.  
**Nurse:** On a scale of zero to ten with ten being the highest, how do you rate your pain?  
**Ms. Carbone:** Now it is about four, but I'm afraid it will become ten or twelve like the last time.  
**Nurse:** I need to ask you some questions to get information from you. Will you be able to talk to me for a few minutes?  
**Ms. Carbone:** I think so! I'll try. I'll let you know if I can't sit any more.  
**Nurse:** Tell me about the pain.  
**Ms. Carbone:** I have back pain on my left side, right here (pointing to the left costovertebral area). It

Ms. Angela Carbone, age 55, comes to the Medi-Center at 10:30 a.m. with the chief complaint of left back pain. She has some nausea but denies vomiting. She complains of dysuria and gross hematuria and indicates she had a kidney stone on the right side several years ago. The following is an excerpt from the focused interview with Ms. Carbone.

feels like it moves down my back but not all the time. It really hurts and is getting worse each day.  
**Nurse:** When did the pain start?  
**Ms. Carbone:** It started about five days ago. That's when I noticed my urine was darker than usual.  
**Nurse:** Did you do anything to help reduce the pain?  
**Ms. Carbone:** Not really. At first I thought I slept funny. Then my urine got darker. I tried to drink three glasses of water a day, but I became nauseated and had to stop drinking.  
**Nurse:** Earlier you commented that you are afraid the pain will become ten or twelve like the last time. Tell me more.  
**Ms. Carbone:** I had a kidney stone about three years ago on my right side. Now the pain is similar on the left side.

**Analysis**

The nurse immediately asked Ms. Carbone about her current pain status to determine her ability to participate in the interview. Throughout the interview, the nurse used open-ended questions and leading statements. These statements encouraged verbalization by the patient to explore and describe actions and feelings in detail. The open-ended questions and leading statements permitted the patient to provide detail, thereby eliminating the need for multiple closed questions.

The **Patient-Centered Interaction** feature teaches effective communication skills. It presents a brief clinical scenario and interaction between the patient and the nurse. Each Patient-Centered Interaction includes assessment cues to help the student develop strong communication skills by addressing body language, cultural sensitivity and values, language barriers, and noncompliance. These are common issues that present challenges to nurses, and the Analysis at the end of each interaction offers the student goals that the nurse must obtain with this specific patient.

In **Abnormal Findings**, we provide a vivid atlas of illustrations and photographs that feature examples of abnormal findings, diseases, and conditions. This section helps the student recognize these conditions and distinguish them from normal findings before they see them in the clinical setting.

**Abnormal Findings**

Abnormalities of the eye arise for a variety of reasons and can be associated with vision, eye movement, and the internal and external structures of the eye. The following sections address abnormal findings associated with the eyelids (see

Table 14.2), the eye (see Table 14.3), and the **fundus** (see Table 14.4). In addition, an overview of conditions that may be associated with an impaired pupillary response is provided (see Table 14.5).

**Table 14.2** Abnormalities of the Eyelids

**Blepharitis**

**Blepharitis** is inflammation of the eyelids. Staphylococcal infection leads to red, scaly, and crusted lids. The eye burns, itches, and tears.



Blepharitis. Source: Gromotaya/Shutterstock.

**Basal Cell Carcinoma**

Usually seen on the lower lid and medial canthus. It has a papular appearance.



Basal cell carcinoma on lower eyelid. Source: DR ZARA/BSIP SA/Alamy Stock Photo.

**Application Through Critical Thinking**

**CASE STUDY**



Source: logboom/Shutterstock.

John Jerome is a 45-year-old male who made an appointment for an annual employment physical assessment. Mr. Jerome completed a written questionnaire in preparation for his meeting with a healthcare professional. He checked "none" for all categories of family history of disease except diabetes. He indicated that he knew of no changes in his health since his last assessment.

The focused history reveals the following: A male wearing eyeglasses entered the room; he appears his stated age of 45 yrs. He turned his head to the left and right and looked about the room before sitting across from the examiner. The patient had some redness in the sclera of both eyes. During the interview, the patient reveals that his last eye examination occurred 6 months ago, and he received a prescription for new glasses. He states that he is still having a problem with the new glasses and needs to have them checked. When asked to describe the problem, Mr. Jerome replies, "I just don't feel right with these glasses, and these are the second pair in a little over a year." He further states, "I just think I am overworking my eyes lately. I need to rest them more than ever, and I have had some headaches. I thought the glasses would help, but it hasn't gotten better." The patient denies any other problems. In response to inquiries about family history, he reports that his mother had diabetes but had no problems with her eyes. He doesn't know of any other eye problems in his family, except his mother had told him that an aunt of hers had been blind for some time. He reiterates that his only problem of late has been "this thing with my glasses, otherwise I feel fine."

The physical assessment reveals the following:

- Vital signs: BP 128/84—P 88—RR 22
- Height 6'3", weight 188 lb
- Eyeballs firm to palpation
- Moderately dilated pupils

**SAMPLE DOCUMENTATION**

The following information is summarized from the case study.  
**SUBJECTIVE DATA:** Visit for annual employment physical assessment. Negative family history except diabetes. No changes in health since last assessment. Last eye assessment 6 months ago—result prescription for new glasses. Stated he was having a problem with the new glasses. "I don't feel right with them." Stated, "I think I'm overworking my eyes lately. I thought the new glasses would help, but it hasn't gotten better." History of aunt with blindness.  
**OBJECTIVE DATA:** Turns head to left and right and looked around room before sitting across from examiner. Scleral redness bilaterally. Eyeballs firm to palpation. Pupils moderate dilation. Cupping of optic discs. Height 6'3", weight 188 lb. VS: BP 128/84—P 88—RR 22.

**CRITICAL THINKING QUESTIONS**

1. What conclusions would the nurse reach based on the data?
2. How was this conclusion formulated?
3. What information is missing?
4. What is the priority for this patient, and what options would apply?
5. As Mr. Jerome ages, for what age-related vision changes will he be at risk?

In the **Application Through Critical Thinking** sections, we challenge students to apply critical thinking and clinical reasoning by working through a Case Study. After a detailed patient scenario, students will answer critical thinking questions and prepare documentation.

## MYLAB NURSING

---

MyLab Nursing is an online learning and practice environment that, in tandem with the text, helps students master key concepts, prepare for the NCLEX-RN exam, and develop clinical reasoning skills. Through a new mobile app experience, students can study Pathophysiology: Concepts of Human Disease anytime, anywhere. New adaptive technology with remediation personalizes learning, moving students beyond memorization to true understanding and application of the content. MyLab Nursing contains the following features.

### Dynamic Study Modules

New adaptive learning modules with remediation personalize the learning experience by allowing students to increase both their confidence and their performance while being assessed in real time.

### NCLEX-Style Questions

Practice tests with more than a thousand NCLEX-style questions of various types build student confidence and prepare them for success on the NCLEX-RN exam. Questions are organized by chapter.

### Decision-Making Cases

Clinical case studies provide opportunities for students to practice analyzing information and making important decisions at key moments in patient care scenarios. These 15 unfolding case studies are designed to help prepare students for clinical practice.

### Pearson eText

Student learning is enhanced both in and outside the classroom. Students can take notes, highlight, and bookmark important

content, or they can engage with interactive and rich media to achieve greater conceptual understanding of the text content. Physical examination sections are enhanced by videos illustrating the steps of the processes.

## RESOURCES FOR FACULTY SUCCESS

---

Pearson is pleased to offer a complete suite of resources to support teaching and learning, including the following:

- **TestGen Test Bank**
- **Lecture Note PowerPoints**
- **Instructor's Resource Manual**
- **Teaching Resources, including laboratory guides, laboratory activities, games, and demonstration videos**

## ACKNOWLEDGMENTS

---

The fourth edition of this book would not have been possible without the contributions of many individuals. We especially want to thank Pamela Lappies, our development editor, who has provided invaluable support and guidance. Thanks also goes to Executive Portfolio Manager Pamela Fuller for her commitment to excellence in nursing education and dedication to shaping this updated book into the greatest possible resource for students. Special thanks goes to Portfolio Management Assistant Erin Sullivan for scheduling, supporting, and coordinating many pieces of this project.

## DEDICATION

---

*We dedicate this book to our families, friends, colleagues, and students.  
We have been privileged to receive their loving support and encouragement.*

# Contents

About the Authors v

Thank You vii

Preface ix

## UNIT I

### *Foundations of Health Assessment*

#### CHAPTER 1

##### Health Assessment 1

- Introduction 1
- Role of the Professional Nurse 2
- Evidence-Based Practice 3
- Nursing Process 4
- Health Assessment 5
- Critical Thinking 7
- Health and Health Disparities 7
- Application Through Critical Thinking 8

#### CHAPTER 2

##### Health and Wellness 9

- Introduction 9
- Nursing Theory and Foundations 10
- Health, Wellness, and Health Promotion 10
- Perspectives on Health Promotion 12
- Health Promotion and the Nursing Process 17
- Application Through Critical Thinking 18

#### CHAPTER 3

##### Cultural and Spiritual Considerations 20

- Introduction 20
- Culture 21
- Cultural Phenomena That Impact Healthcare 23
- Culture in Comprehensive Health Assessment 26
- Spirituality 27
- Application Through Critical Thinking 31

#### CHAPTER 4

##### Health Disparities 34

- Introduction 34
- Health Disparities 34

Factors Influencing Health Disparities in Vulnerable Populations 35

Strategies to Reduce and Eliminate Health Disparities 40

Application Through Critical Thinking 41

## UNIT II

### *Techniques for Health Assessment*

#### CHAPTER 5

##### Interviewing and Health History: Subjective Data 44

- Introduction 45
- The Purpose of the Health History: Subjective Information 45
- Interactional Communication Skills and the Health History 46
- Professional Characteristics to Enhance the Nurse–Patient Interaction 48
- Barriers to Effective Patient Interaction 49
- Phases of the Health History Interview 51
- Components of the Health History 53
- Application Through Critical Thinking 62

#### CHAPTER 6

##### Documentation 64

- Introduction 64
- Purpose of Nursing Documentation: Communication 65
- Principles of Nursing Documentation 66
- Documenting the Comprehensive Patient Assessment 69
- Charting and Documentation 75
- Application Through Critical Thinking 80

#### CHAPTER 7

##### Physical Assessment Techniques and Equipment 82

- Introduction 83
- Basic Techniques of Physical Assessment 83
- Equipment 87
- Professional Responsibilities 91
- Application Through Critical Thinking 94

**CHAPTER 8****General Survey and Physical Exam: Objective Data 96**

- Introduction 97
- Components of the General Survey 97
- Measuring Height and Weight 99
- Measuring Vital Signs 101
- The Functional Assessment as Part of the General Survey 109
- Application Through Critical Thinking 111

**CHAPTER 9****Pain Assessment 113**

- Introduction 114
- Definition of Pain 114
- Physiology of Pain 114
- Nature of Pain 116
- Factors Influencing Pain 118
- Assessment of Pain 121
- Application Through Critical Thinking 125

**CHAPTER 10****Nutritional Assessment 127**

- Introduction 128
- Defining Nutritional Health 128
- Nutritional Assessment Factors 130
- Nutritional History 131
- Physical Assessment 133
- Biochemical Assessment—Laboratory Measurements 142
- Nutritional Screening and Assessment Tools 143
- Application Through Critical Thinking 146

**CHAPTER 11****Psychosocial Health, Substance Abuse, and Intimate Partner Violence 148**

- Introduction 149
- Psychosocial Health 149
- Substance Abuse 155
- Intimate Partner Violence 157
- The Nursing Process in Psychosocial Assessment 160
- Application Through Critical Thinking 166

**UNIT III***Physical Assessment***CHAPTER 12****Skin, Hair, and Nails 169**

- Introduction 170
- Anatomy and Physiology Review 170

- Special Considerations 172
- Application Through Critical Thinking 204

**CHAPTER 13****Head, Neck, and Related Lymphatics 206**

- Introduction 207
- Anatomy and Physiology Review 207
- Special Considerations 211
- Application Through Critical Thinking 228

**CHAPTER 14****Eyes 231**

- Introduction 232
- Anatomy and Physiology Review 232
- Special Considerations 234
- Disorders of Visual Acuity 256
- Application Through Critical Thinking 260

**CHAPTER 15****Ears, Nose, Mouth, and Throat 262**

- Introduction 263
- Anatomy and Physiology Review 263
- Special Considerations 268
- Application Through Critical Thinking 293

**CHAPTER 16****Lungs and Thorax 295**

- Introduction 296
- Anatomy and Physiology Review 296
- Landmarks 299
- Special Considerations 305
- Application Through Critical Thinking 329

**CHAPTER 17****Breasts and Axillae 331**

- Introduction 332
- Anatomy and Physiology Review 332
- Special Considerations 335
- Application Through Critical Thinking 352

**CHAPTER 18****Cardiovascular System 355**

- Introduction 356
- Anatomy and Physiology Review 356
- Special Considerations 371
- Application Through Critical Thinking 389

**CHAPTER 19****Peripheral Vascular System 392**

- Introduction 393
- Anatomy and Physiology Review 393
- Special Considerations 395
- Application Through Critical Thinking 417

**CHAPTER 20**

- Abdomen 419**
  - Introduction 420
  - Anatomy and Physiology Review 420
  - Landmarks 423
  - Special Considerations 426
  - Application Through Critical Thinking 444

**CHAPTER 21**

- Male Genitourinary System 446**
  - Introduction 447
  - Male Genitourinary System Anatomy and Physiology Review 447
  - Special Considerations 452
  - Application Through Critical Thinking 484

**CHAPTER 22**

- Female Genitourinary System 488**
  - Introduction 489
  - Female Genitourinary System Anatomy and Physiology Review 489
  - Special Considerations 494
  - Application Through Critical Thinking 524

**CHAPTER 23**

- Musculoskeletal System 528**
  - Introduction 529
  - Anatomy and Physiology Review 529
  - Special Considerations 539
  - Application Through Critical Thinking 576

**CHAPTER 24**

- Neurologic System 578**
  - Introduction 579
  - Anatomy and Physiology Review 579
  - Special Considerations 582
  - Application Through Critical Thinking 616

**UNIT IV***Specialized Assessment***CHAPTER 25**

- The Pregnant Woman 618**
  - Introduction 619
  - Anatomy and Physiology Review 619
  - Special Considerations 629
  - Application Through Critical Thinking 663

**CHAPTER 26**

- Infants, Children, and Adolescents 667**
  - Introduction 668
  - Anatomy and Physiology Review 668
  - Special Considerations 678
  - Developmental Considerations 679
  - Application Through Critical Thinking 693

**CHAPTER 27**

- Older Adults 696**
  - Introduction 697
  - Anatomy and Physiology Review 697
  - Special Considerations 704
  - Application Through Critical Thinking 720

**CHAPTER 28**

- Complete Health Assessments: Putting the Pieces Together 725**
  - Introduction 726
  - Applying Health Assessment Skills in a Community Setting 726
  - Application Through Critical Thinking 730
  - Applying Health Assessment Skills in a Hospital Setting 732
  - The Rapid Assessment 732
  - The Routine Assessment 733
  - Special Considerations 735
  - Summary 736
  - Application Through Critical Thinking 736

**Appendix A A-1**

Standard Precautions for All Patient Care

**Appendix B B-1**

Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings

**Appendix C C-1**

Advanced Assessment Techniques

**Glossary G-1****Index I-1**

