

FIFTH EDITION

Nutrition AND Dietetics

Practice and Future Trends

Esther A. Winterfeldt, PhD

Professor Emeritus, Department of Nutritional Sciences
College of Human Environmental Sciences
Oklahoma State University
Stillwater, Oklahoma

Margaret L. Bogle, PhD

Retired
Active Member of the Academy of Nutrition and Dietetics
Dallas, Texas

Lea L. Ebro, PhD

Professor Emeritus, Department of Nutritional Sciences
College of Human Environmental Sciences
Oklahoma State University
Stillwater, Oklahoma



JONES & BARTLETT
LEARNING

World Headquarters
Jones & Bartlett Learning
5 Wall Street
Burlington, MA 01803
978-443-5000
info@jblearning.com
www.jblearning.com

Jones & Bartlett Learning books and products are available through most bookstores and online booksellers. To contact Jones & Bartlett Learning directly, call 800-832-0034, fax 978-443-8000, or visit our website, www.jblearning.com.

Substantial discounts on bulk quantities of Jones & Bartlett Learning publications are available to corporations, professional associations, and other qualified organizations. For details and specific discount information, contact the special sales department at Jones & Bartlett Learning via the above contact information or send an email to specialsales@jblearning.com.

Copyright © 2018 by Jones & Bartlett Learning, LLC, an Ascend Learning Company

All rights reserved. No part of the material protected by this copyright may be reproduced or utilized in any form, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from the copyright owner.

The content, statements, views, and opinions herein are the sole expression of the respective authors and not that of Jones & Bartlett Learning, LLC. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not constitute or imply its endorsement or recommendation by Jones & Bartlett Learning, LLC and such reference shall not be used for advertising or product endorsement purposes. All trademarks displayed are the trademarks of the parties noted herein. *Nutrition and Dietetics: Practice and Future Trends, Fifth Edition* is an independent publication and has not been authorized, sponsored, or otherwise approved by the owners of the trademarks or service marks referenced in this product.

There may be images in this book that feature models; these models do not necessarily endorse, represent, or participate in the activities represented in the images. Any screenshots in this product are for educational and instructive purposes only. Any individuals and scenarios featured in the case studies throughout this product may be real or fictitious, but are used for instructional purposes only.

The authors, editor, and publisher have made every effort to provide accurate information. However, they are not responsible for errors, omissions, or for any outcomes related to the use of the contents of this book and take no responsibility for the use of the products and procedures described. Treatments and side effects described in this book may not be applicable to all people; likewise, some people may require a dose or experience a side effect that is not described herein. Drugs and medical devices are discussed that may have limited availability controlled by the Food and Drug Administration (FDA) for use only in a research study or clinical trial. Research, clinical practice, and government regulations often change the accepted standard in this field. When consideration is being given to use of any drug in the clinical setting, the health care provider or reader is responsible for determining FDA status of the drug, reading the package insert, and reviewing prescribing information for the most up-to-date recommendations on dose, precautions, and contraindications, and determining the appropriate usage for the product. This is especially important in the case of drugs that are new or seldom used.

15819-9

Production Credits

VP, Executive Publisher: David D. Cella
Publisher: Cathy L. Esperti
Acquisitions Editor: Sean Fabery
Associate Editor: Taylor Maurice
Production Assistant: Molly Hogue
Director of Marketing: Andrea DeFronzo
VP, Manufacturing and Inventory Control: Therese Connell

Composition: Cenveo® Publisher Services
Cover Design: Theresa Manley
Rights & Media Specialist: Merideth Tumas
Media Development Editor: Shannon Sheehan
Cover Image: © Bounce/Getty Images
Printing and Binding: Edwards Brothers Malloy
Cover Printing: Edwards Brothers Malloy

Library of Congress Cataloging-in-Publication Data

Names: Winterfeldt, Esther A., author. | Bogle, Margaret L., author. | Ebro, Lea L., author.

Title: Nutrition and dietetics : practice and future trends / Esther A. Winterfeldt, PhD, Professor Emeritus, Department of Nutritional Sciences, College of Human Environmental Sciences, Oklahoma State University, Stillwater, Oklahoma, Margaret L. Bogle, PhD, RD, LD, Lower Mississippi Delta Nutrition Intervention Research Initiative, Agriculture Research Service, United States Department of Agriculture, Little Rock, Arkansas, Lea L. Ebro, PhD, Professor Emeritus, Department of Nutritional Sciences, College of Human Environmental Sciences, Oklahoma State University, Stillwater, Oklahoma.

Other titles: Dietetics (Winterfeldt)

Description: Fifth edition. | Burlington, MA : Jones & Bartlett Learning, [2018] | Revision of: Dietetics / Esther A. Winterfeldt, Margaret L. Bogle, Lea L. Ebro. 3rd ed. c2011. | Includes bibliographical references and index.

Identifiers: LCCN 2016049226 | ISBN 9781284107975 (alk. paper)

Subjects: LCSH: Dietetics—Vocational guidance.

Classification: LCC RM217 .W56 2018 | DDC 613.2023—dc23 LC record available at <https://lcn.loc.gov/2016049226>
6048

Printed in the United States of America

21 20 19 18 17 10 9 8 7 6 5 4 3 2 1

Contents

	Preface	ix
	Reviewers	xiii
Chapter 1	Introduction to the Profession of Nutrition and Dietetics	1
	Introduction	2
	The Early Practice of Dietetics	3
	Founding of the Academy of Nutrition and Dietetics	4
	Influential Leaders	6
	Dietetics as a Profession	8
	Growth of the Profession	9
	Reaching out to the Public	15
	Historical Events in the Academy of Nutrition and Dietetics	16
	Summary	16
	Definitions	17
	References	17
Chapter 2	The Academy of Nutrition and Dietetics	21
	Introduction	22
	The Strategic Plan	23
	Membership Categories	24
	Membership Benefits	25
	Governance of the Academy of Nutrition and Dietetics	25
	Position Papers	31
	Dietitian Salaries	31

	Affiliated Units of the Academy of Nutrition and Dietetics	33
	Summary	34
	Definitions	35
	References	35
Chapter 3	Educational Preparation in Dietetics	37
	Introduction	38
	Undergraduate Education	38
	Dietetics Education Programs	39
	Education Program Standards	40
	Supervised Practice in Dietetics	41
	Advanced-Level Education	43
	Distance Education	46
	Future Education Preparation	47
	Summary	48
	Definitions	48
	References	49
Chapter 4	Credentialing of Nutrition and Dietetic Practitioners	51
	Introduction	52
	Development of Credentialing	54
	Commission on Dietetic Registration	55
	Registered Dietitian Nutritionist	56
	Dietetic Technician, Registered or Nutrition and Dietetics Technician, Registered	56
	New Dietetic Technician Registration Eligibility Pathway	58
	Specialist Certification	60
	Interdisciplinary Specialist Certification in Obesity and Weight Management	61
	Advanced Practice Certification in Clinical Nutrition	62
	Certificates of Training	63
	Recertification of the RD/RDN and DTR/NDTR	64
	Recertification of Specialists and Advanced Practice in Clinical Nutrition	65
	Appropriate Use of Credentials	65

	Legal Regulation Statutes for Dietitians	
	Nutritionists and Dietetic Technicians	66
	Summary	67
	Definitions	68
	References	68
Chapter 5	The Nutrition and Dietetics Professional	73
	Introduction	74
	Scope of Practice and Performance Standards	74
	Ethical Practice	77
	Diversity and Culturally Competent Practice	80
	Lifelong Professional Development	80
	The Legal Basis of Practice	84
	Evidence-Based Practice	85
	Summary	87
	Definitions	88
	References	88
Chapter 6	The Dietitian in Clinical Practice	91
	Introduction	92
	Employment Settings of Dietitians and Dietetic	
	Technicians	93
	Practice Audit Activities	95
	Organization of Clinical Nutrition Services	95
	Responsibilities in Clinical Dietetics	96
	The Clinical Nutrition Service Team	100
	Clinical Dietetics Outlook	102
	Summary	104
	Definitions	105
	References	105
Chapter 7	Management in Food and Nutrition Systems	107
	Introduction	108
	Activities of Entry-Level Dietitians and	
	Dietetic Technicians	109
	Areas of Employment	110
	Characteristics of Successful Food and	
	Nutrition Managers	114
	Expanded Opportunities	117
	Expansion of Roles	117

	Summary	119
	Definitions	119
	References	119
Chapter 8	The Public Health/Community Nutrition Dietitian	121
	Introduction	122
	Public Health/Community Practice	123
	Public Health Nutrition	124
	Community Nutrition	125
	Career Outlook	127
	Summary	127
	Definitions	128
	References	128
Chapter 9	Dietitians in the Government and Military Services	129
	Part I. The Government	130
	Introduction	130
	Government Programs in Food and Nutrition	131
	Role of the Academy of Nutrition and Dietetics in Policy Formation	135
	Policy Issues in Dietetics	136
	Part II. The Military Services	137
	Summary	138
	Definitions	139
	References	139
Chapter 10	The Consultant in Health Care, Business, and Private Practice	141
	Introduction	142
	Becoming a Consultant	143
	The Consultant in Health Care and Extended Care	145
	The Consultant in Business Practice	148
	The Consultant in Private Practice	150
	Ethical and Legal Bases of Practice	154
	Summary	154
	Definitions	155
	References	155

Chapter 11	Career Choices in Business, Communications, and Health and Wellness	157
	Introduction	158
	The Dietitian in Business and Communications . . .	158
	The Dietitian in Health and Wellness Programs . . .	161
	Practice Groups	169
	Summary	169
	Definitions	170
	References	170
Chapter 12	The Dietitian as Manager and Leader	173
	Introduction	174
	Leadership	175
	Management Functions	177
	Skills and Abilities of Managers	178
	Management in Practice	186
	Summary	187
	Definitions	188
	References	188
Chapter 13	The Dietitian as Educator	191
	Introduction	192
	Educational Activities of Dietitians	193
	Learning to Teach	194
	Career Opportunities in Education	195
	Educator Roles	198
	Types of Learning	206
	Adults as Learners	208
	Teaching Groups and Teams	208
	Summary	209
	Definitions	210
	References	210
Chapter 14	The Dietitian as Researcher	213
	Introduction	214
	Importance of Research in Dietetics	215
	The Research Philosophy of the Academy	215
	The Academy's Research Priorities	216
	Research Applications	219

	Involvement in Research	220
	Career Opportunities in Research	220
	Information Sources	224
	Summary	224
	Definitions	225
	References	225
Chapter 15	The Future in Dietetics and Nutrition	227
	Introduction	228
	Education	229
	Degree Options	231
	Practice	231
	Communications and Technology	234
	Food and the Food Supply	235
	Management and Leadership	237
	Summary	239
	Definitions	239
	References	239
Appendix A	Code of Ethics for the Profession of Dietetics and Process for Consideration of Ethics Issues (2009)	243
	Preamble	243
	Application	244
	Fundamental Principles	244
Appendix B	Dietetics Career Development Guide	247
	Glossary	249
	Index	255

Preface

As in previous editions, *Nutrition and Dietetics: Practice and Future Trends, Fifth Edition* presents an overall look at the dietetic profession—what dietitians do, where they practice, and the education and experiences needed to become a credentialed, fully prepared dietitian, nutritionist, and dietetic technician. For this edition, we have updated all the chapters, added a chapter on the government and military, and looked extensively at all references.

Our profession is focused on helping patients, clients, and the public to maintain healthy lifestyles that help prevent the onset of chronic disease and enhance the quality of life throughout the life cycle. Through educational programs, research, and many forms of communication, reliable and relevant information is provided for the public, consumers, and clients.

Dietitian nutritionists, through their unique knowledge of both the science and art of nutrition, are leaders in the promotion of nutritional health today. Because of this blend of scientific knowledge and the social and cultural factors that influence what people eat, dietitian nutritionists are able to use their skills to help individuals in illness and disease prevention as well as those who are healthy and active. Dietitian nutritionists also interact with professionals in other disciplines and are able to blend their assorted expertise for the benefit of clients. Their participation in basic research and integration of new scientific concepts into all areas of practice adds an invaluable dimension to the dietetic profession.

This text is geared toward students beginning in dietetics, those who may be undecided about a career choice, and those who are nearing completion of their education and training and exploring career opportunities. Job opportunities for the non-RD are also included throughout the text. In addition, dietitians and nutritionists considering a career change

will find information about many career options, including some new emerging opportunities. Some may become entrepreneurs and join the business world, some may partner with other professionals in health care institutions to provide their expertise for clients, and some may become consultants and others may become educators and researchers. The opportunities for food and nutrition professionals are greater today than at any time in the past, and we encourage students to fully explore the many career possibilities.

Readers will find updated information regarding education, credentialing, salary data, and position descriptions. The reader will note that references are inclusive through mid-2016. The Academy will be publishing practice audit results later in 2016 and some position papers are currently under revision with an expected 2016 publication date.

We thank the Academy of Nutrition and Dietetics headquarters staff for timely information. We also acknowledge and thank other professionals who contributed to this text by sharing their knowledge and expertise in this and previous editions.

We encourage faculties and students to make full use of information sources provided as well as others which will lend further details in topic areas. We hope readers will be stimulated to participate in and enjoy the privileges of helping others through the practice of nutrition and dietetics.

New to This Edition

Each chapter has been reviewed and revised for the *Fifth Edition*. Notable changes include the following:

- Chapter 9, “Dietitians in the Government and Military Services,” is new to this edition and discusses the roles of dietitians within government and military organizations as well as public policy.
- Chapter 15, “The Future in Dietetics and Nutrition,” has been completely rewritten to discuss future opportunities due to changes in the field as well as future educational needs as indicated both by the Academy of Nutrition and Dietetics and employers of dietitians.
- Chapter 8, “The Public Health/Community Health Nutrition Dietitian,” has been extensively revised to streamline the discussion of community and public health in relation to each other.
- Chapter 5, “The Nutrition and Dietetics Professional,” discusses diversity in greater detail.

- Charts and tables throughout the text have been updated to reflect the latest salary and Academy membership data for dietitians.

Instructor Resources

Qualified instructors can receive access to the full suite of Instructor Resources for the *Fifth Edition*, including the following:

- Test Bank
- Slides in PowerPoint format
- Lecture Outlines

Esther A. Winterfeldt, PhD
Margaret L. Bogle, PhD
Lea L. Ebro, PhD

Reviewers

Susan E. Adams, MS, RD, LDN, FAND
Assistant Professor
La Salle University
Philadelphia, PA

Melissa Anderson, PhD, RD, LDN
Director, School of Human Ecology
Tennessee Tech University
Cookeville, TN

Cynthia Blanton, PhD, RD
Associate Professor
Idaho State University
Pocatello, ID

Detri Brech, PhD, RD, LD, CDE
Professor
Ouachita Baptist University
Arkadelphia, AR

Judi Brooks, PhD, RD
Professor
Eastern Michigan University
Ypsilanti, MI

Eileen Chopnick, MBA, RDN, LDN
Adjunct Faculty
La Salle University
Philadelphia, PA

Barbara Lloyd, MA, RD
Assistant Professor
Southwest Tennessee Community College
Memphis, TN

Diane Longstreet, PhD, MPH, RD, LDN
Instructor
Keiser University
Lakeland, FL

Jaimette McCulley, MS, RD, LD
Assistant Professor
Fontbonne University
St. Louis, MO

Katie Miner, PhD, RDN, LD
Senior Instructor
University of Idaho
Moscow, ID

Deborah Myers, EdD, RD
Professor
Bluffton University
Bluffton, OH

Patricia H. Terry, PhD, RD, LD
Professor and Dietetics Program Director
Samford University
Birmingham, AL

Peggy Turner, MS, RD/LD, FAND
Assistant Professor
The University of Oklahoma Health Sciences Center
Oklahoma City, OK

Kit Werner, PhD, RD, CD, CDE
Clinical Assistant Professor and Nutritional Science Clinical Director
University of Wisconsin—Milwaukee
Milwaukee, WI