
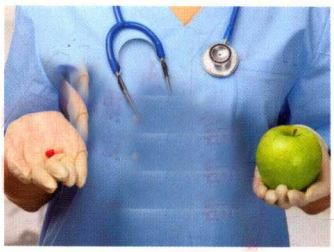


Nutrition & Diagnosis-Related Care

EIGHTH EDITION

SYLVIA ESCOTT-STUMP

Wolters Kluwer

Nutrition and Diagnosis-Related Care

EIGHTH EDITION

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FOREWORD

This book is a valuable resource for registered dietitian-nutritionists, dietetic interns and students, and other health care professionals involved or interested in medical nutrition therapy. Efficient time management is required to deliver high-quality patient care. However, the registered dietitian-nutritionist (RDN) must be both efficient *and* effective. Tools such as Hot Topics related to inflammation will trigger important critical thinking, as will the content related to gene–nutrition interactions and the nutrition care process. Indeed, this latest edition provides key updates for prioritizing patient care and planning nutrition therapies.

The guidance provided by *Nutrition and Diagnosis-Related Care* charts the course for each patient, especially for clinical conditions that the practitioner does not routinely treat. This book presents an extensive yet succinct compilation of nutrition information. The most impressive attribute is that the germane information required by dietitians is presented in a single resource. This greatly simplifies the development of nutrition care plans and interventions. Thus, dietetic practitioners have this superb resource to provide evidence-based interventions and to achieve excellent patient outcomes.

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PREFACE

Health care professionals must identify all elements of patient care capable of affecting nutritional status and outcomes. The registered dietitian-nutritionist (RDN) must provide nutritional care in a practical, efficient, timely, and effective manner regardless of setting. Various environments provide unique and special considerations. The astute dietitian is sensitive to the patient/client's current status in the continuum of care, meticulously adapting the nutritional care plan. Communication between facilities saves time for screenings and assessments and will simplify making progress with interventions. With electronic health records, data and summary reports must be shared confidentially from one practitioner to the next.

Nutrition and Diagnosis-Related Care has evolved since 1985 to supplement other texts and references and to quickly assimilate and implement medical nutrition therapy (MNT). This guide can be used to help write protocols, establish nutrition priorities, and demonstrate cost-effective therapies. The majority of disorders are described where nutrition interventions can decrease complications, further morbidity, and lengthy hospital stays. Adequate nutritional intervention often results in financial savings for the patient, the family, and the health care system.

Evidence-based knowledge solidifies the role of nutrition as therapy and not just a basic daily requirement. The eighth edition updates and clarifies the current status of nutrition therapy guidance. A major factor influencing health is **inflammation**. For example, a recent study provided vitamin D, omega-3 fatty acids, melatonin, and methylated vitamin B_{12} to individuals with Alzheimer's disease. Results have shown improvement in overall functioning. Thus, **Hot Topic** boxes provided in this edition hone in on the current knowledge about the role of nutrition in reducing inflammatory conditions.

The format of the book continues to promote easy navigation for quick retrieval of information. Appendix A summarizes the nutrients, requirements, functions, and food sources. Appendix B highlights the nutrition care process for the profession of dietetics. Sample forms are included, including language related to the critical thinking involved with A-D-I (assessment, nutrition diagnosis, interventions) and M-E (monitoring and evaluation). The nutritional acuity level ranking for prioritizing dietitian services is found in Appendix C. As nutrition knowledge continues to evolve at a rapid pace, the Recommended Dietary Allowances (RDA) and Dietary Reference Intakes (DRI) tables included in prior editions of this text should now be accessed online to ensure that the most current information is used. The tables are available at http://fnic.nal.usda.gov/dietary-guidance/dietary-reference-intakes/dri-tables.

The field of dietetics continues to be a focus for health promotion and disease prevention. The profession is a top career choice for making a difference in people's lives: changing them for the better!

ASSUMPTIONS ABOUT THE READER

For this text, the following assumptions have been made:

1. The reader has an adequate background in nutrition sciences, physiology and pathophysiology, medical terminology, biochemistry, basic pharmacotherapy, and interpretation of biochemical data to understand the abbreviations, objectives, and interventions in this book.
2. An individualized drug history review is essential, as only a few medications are included here. Note as well that drugs are often removed from the market; check with a pharmacist for more guidance.
3. Herbs, botanicals, and dietary supplements are discussed because they are often used without prior consultation with a dietitian or a physician. They have side effects as well as perceived or real benefits. Products may be "natural" but not necessarily "safe" for an individual.
4. For teaching, the nutrition professional must provide appropriate handouts, printed materials, and teaching tools to prepare the patient for independent functioning. The educator must identify teachable moments and share what is needed at the time. "More information" is not always the best option for a single intervention. When possible, multiple visits should be scheduled to address nutrition and lifestyle changes.
5. The nutrition counselor must use evidence-based techniques with the patient and significant other(s). Follow-up interventions are highly recommended to evaluate successful behavioral changes by the patient/client. Appendix B provides a brief overview; the reader must devote adequate time to develop counseling skills that will achieve desirable outcomes.
6. Dietitians must prioritize nutritional diagnoses that can be managed within a given time frame. A realistic plan must be designed and goals should include a time frame.
7. With assignments in ambulatory centers, extended care facilities, subacute or rehabilitative centers, private practices, grocery stores, Web-based practices, rehabilitation facilities, and home care, the "seamless" continuum affords registered dietitian-nutritionists the possibility of lifelong patient relationships. The "patient-centered medical home" affords continuity through monitoring, follow-up, and evaluation by one team.
8. **Clinical Indicator** lists offer common tests, disease markers, and biochemical evaluations reviewed by physicians or dietitians for that condition. Because laboratory test results are not always available in nonhospital settings, changes in appetite, intake, and weight are the most viable screening factors. Physical changes and signs of malnutrition should always be noted during assessments and reassessments.
7. A current nutrition care manual or textbook should be used to write dietary modifications. Comprehensive lists are not included with this book.
8. Evidence-based guides provide predictable types of interventions over multiple visits. Identify and use relevant guidelines, such as those at http://www.andeal.org/default.cfm
9. Except where specifically noted for children, nutrition therapy plans in this book are for adults over the age of 18.
10. Vitamin and mineral supplements are needed in cases of a documented or likely deficiency. However, in large doses, they may cause food–drug interactions. Note all supplements when planning meals and nourishments to avoid

excessive intakes. Athletes, women, elderly individuals, and vegetarians tend to take vitamin and mineral supplements more often than other individuals.

11. Food from a healthy, varied diet is the best "nutritional medicine." Evidence points to the benefits of whole foods for their nutrient–chemical mix. A well-balanced diet follows the U.S. Department of Agriculture MyPlate food guidance system. Various ethnic, vegetarian, pediatric, geriatric, and diabetes food guides are available for menu planning and design.
12. With awareness of the interacting roles of diet and nutrients with genes and vice versa, greater emphasis has been placed on personalized nutrition counseling. It is no longer acceptable to prescribe a "one size fits all" nutrition plan. When genetic testing is available, the skilled RDN must provide advice that considers the ethical, legal, economic, and social implications for the patient/client and family.
13. Ethics, cultural sensitivity, and a concern for patient rights should be practiced at all times. When known, the wishes and advanced directives of the patient are to be followed, even if they preclude the administration of artificial nutrition.
14. Interesting and varied websites have been included for additional insights into various diseases, conditions, and nutritional interventions.
15. It is essential to use the current standardized nutrition language, as terms and definitions may change as the profession evolves. Access the latest information at http://www.eatright.org/NCP/. The electronic version (eNCPT) provides access to the terminology and many countries have translated the standardized terminology into their own language.

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COMMON ABBREVIATIONS

A_{1c}	A_{1c} test (glycosylated hemoglobin)
AA	amino acid
abd	abdomen, abdominal
ADIME	assessment-diagnosis-intervention-monitoring-evaluation
ABW	average body weight
ACE	angiotensin-converting enzyme
ACO	affordable care organization
ACTH	adrenocorticotropic hormone
Alb	albumin
ALP	alkaline phosphatase
ALT	alanine aminotransferase
amts	amounts
ARF	acute renal failure
ASHD	atherosclerotic heart disease
AST	aspartate aminotransferase
ATP	adenosine triphosphate
BCAAs	branched-chain amino acids
BEE	basal energy expenditure
BF	breastfeeding
BMR	basal metabolic rate
BP	blood pressure
BS	blood sugar
BSA	body surface area
BUN	blood urea nitrogen
BW	body weight
bx	biopsy
c	cup(s)
C	coffee
CA	cancer
Ca^{++}	calcium
CABG	coronary artery bypass grafting
CBC	complete blood count
CF	cystic fibrosis
CHD	cardiovascular heart disease
CHF	congestive heart failure
CHI	creatinine-height index
CHO	carbohydrate
Chol	cholesterol
Cl^{-}	chloride
CNS	central nervous system
CO_2	carbon dioxide
CPK	creatine phosphokinase
CPR	cardiopulmonary resuscitation
CrCl	creatine clearance
CRP	C-reactive protein
CT	computed tomography
Cu	copper
CVA	cerebrovascular accident
DAT	diet as tolerated
dec	decreased
decaf	decaffeinated
def	deficiency
DJD	degenerative joint disease
dL	deciliter
DM	diabetes mellitus
DNA	deoxyribonucleic acid
DOB	date of birth
DRI	dietary reference intakes
DV	daily value
D5W	5% dextrose solution in water
EAA	essential amino acid
ECG, EKG	electrocardiogram
EEG	electroencephalogram
EFAs	essential fatty acids
Elec	electrolytes
EN	enteral nutrition
eNCPT	electronic nutrition terminology reference manual
ESRD	end-stage renal disease
ETOH	ethanol/ethyl alcohol
Fe^{++}	iron
F & V	fruits and vegetables
FSH	follicle-stimulating hormone
FTT	failure to thrive
FUO	fever of unknown origin
G, g	gram(s)
GA	gestational age
GBD	gallbladder disease
GE	gastroenteritis
gest	gestational
GFR	glomerular filtration rate
GI	gastrointestinal
Gluc	glucose
GN	glomerular nephritis
GTT	glucose tolerance test
H&H	hemoglobin and hematocrit
HbA_{1c}	hemoglobin A_{1c} test
HBV	high biological value
HBW	healthy body weight
HCl	hydrochloric acid
Hct	hematocrit
HDL	high-density lipoprotein
HEN	home enteral nutrition
HLP	hyperlipoproteinemia or hyperlipidemia
HPN	home parenteral nutrition
HTN	hypertension
Ht	height
I	infant
I&O	intake and output
IBD	inflammatory bowel disease
IBS	irritable bowel syndrome
IBW	ideal body weight
IEM	inborn error of metabolism
INR	international normalized ratio (coagulation)
IU	international units
IUD	intrauterine device
IV	intravenous
K^{+}	potassium
kcal	food kilocalories
kg	kilogram(s)
L	liter(s)
lb	pound(s)

LBM	lean body mass
LBV	low biological value
LBW	low birth weight
LCT	long-chain triglycerides
LDH	lactate dehydrogenase
LDL	low-density lipoproteins
LE	lupus erythematosus
LGA	large for gestational age
LH	luteinizing hormone
lytes	electrolytes
M	milk
MAC	midarm circumference
MAMC	midarm muscle circumference
MAO	monoamine oxidase
MCH	mean cell hemoglobin
MCT	medium-chain triglycerides
MCV	mean cell volume
Mg^{++}	magnesium
mg	milligram(s)
µg	microgram(s)
MI	myocardial infarction
mm	millimeter(s)
MODS	multiple organ dysfunction syndrome
MSG	monosodium glutamate
MUFA	monounsaturated fatty acids
N&V	nausea and vomiting
N	nitrogen
Na	sodium
NCEP	National Cholesterol Education Program
NCP	Nutrition Care Process
NEC	necrotizing enterocolitis
NG	nasogastric
NPO	nil per os (nothing by mouth)
NSI	Nutrition Screening Initiative
O_2	oxygen
OP	outpatient
OT	occupational therapist
oz	ounce(s)
P	phosphorus
PAD	peripheral artery disease
PCMH	patient-centered medical home
PCM	protein-calorie malnutrition
PEM	protein-energy malnutrition
pCO_2	partial pressure of carbon dioxide
PG	pregnant, pregnancy
PKU	phenylketonuria
PN	parenteral nutrition
pO_2	partial pressure of oxygen
PRN	pro re nata (as needed)
Prot	protein
PT	prothrombin time; physical therapy
PTH	parathormone
PUFA	polyunsaturated fatty acid(s)
RAST	radioallergosorbent test
RBC	red blood cell count
RDA	recommended dietary allowance (specific)
RDS	respiratory distress syndrome
REE	resting energy expenditure
RQ	respiratory quotient
RRT	renal replacement therapy
Rx	treatment
SFA	saturated fatty acids
SGA	small for gestational age
SI	small intestine
SIADH	syndrome of inappropriate antidiuretic hormone
SIDS	sudden infant death syndrome
SOB	shortness of breath
Sx	symptoms
t, tsp	teaspoon(s)
T, tbsp	tablespoon(s)
TB	tuberculosis
TF	tube feeding; tube fed
TIBC	total iron-binding capacity
TLC	total lymphocyte count
TPN	total parenteral nutrition
Trig	triglycerides
TSF	triceps skinfold
UA	uric acid
UTI	urinary tract infection
UUN	urinary urea nitrogen
VMA	vanillylmandelic acid
VO_{2max}	maximum oxygen intake
WBC	white blood cell count
WNL	within normal limits
Zn	zinc

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