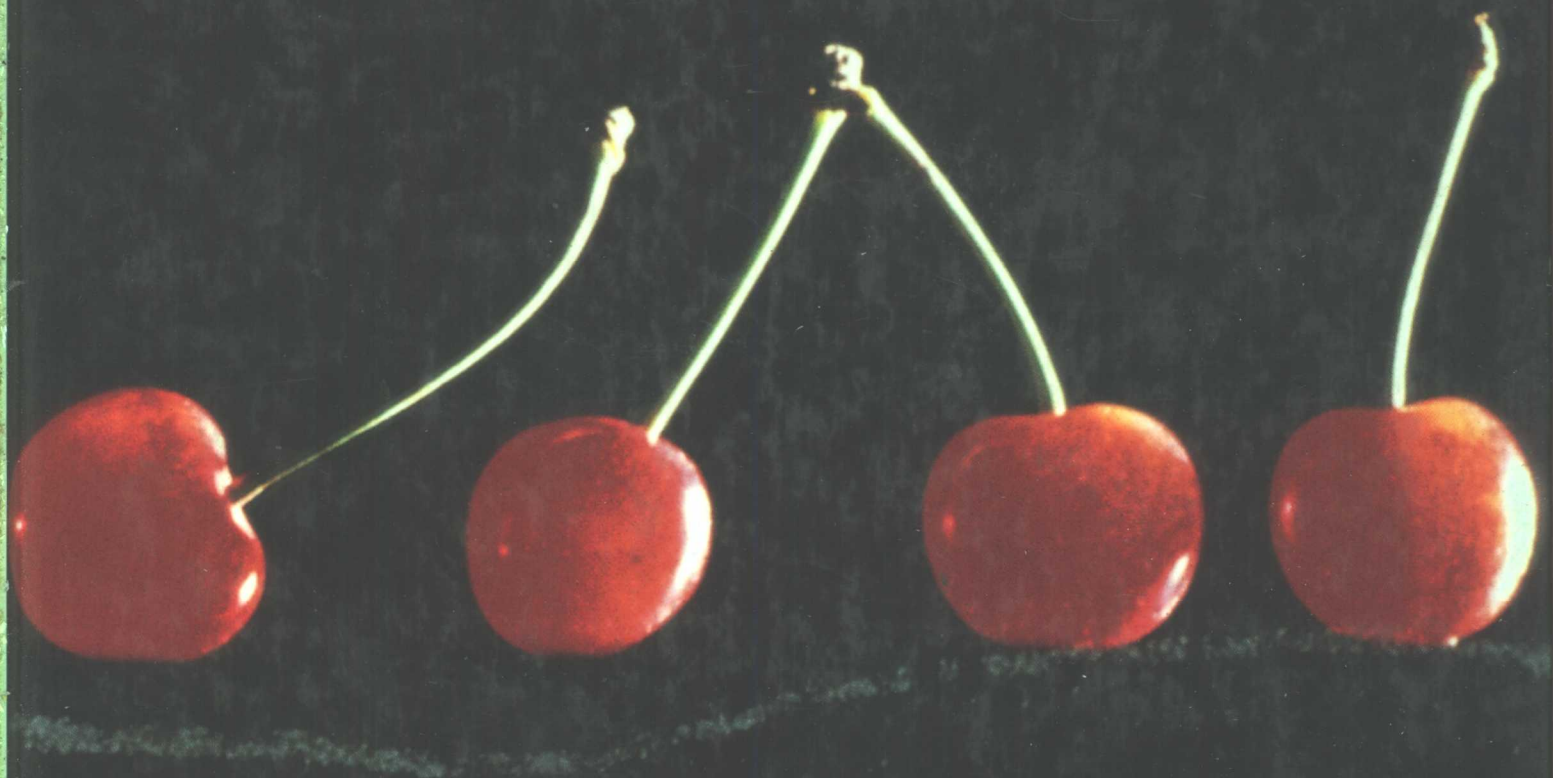


HUMAN NUTRITION



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with 255 illustrations



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P R E F A C E

Almost three decades have passed since the first edition of Guthrie's *Introductory Nutrition* appeared. The science of nutrition has undergone many transitions during the seven editions of that text, as have the needs of both instructors and students. In this new text we sought to maintain those successful familiar elements that characterized previous editions and at the same time to respond to the needs of modern students for an accurate and engaging summary and interpretation of the field of nutrition.

APPROACH

Human Nutrition provides a comprehensive, sound, and thoroughly updated account of nutrition principles and their application for students engaged in their first systematic study of nutrition. We sought advice from experienced and successful teachers using a variety of creative approaches to address the needs of modern students. We also incorporated valuable recommendations provided in critical reviews by recognized experts in nutrition and applied normal nutrition. The material is presented in a user-friendly, easily readable, and attractive format with care taken so that complex and intricate relationships are neither distorted nor oversimplified. Dr. Andrew Scott provided invaluable assistance to ensure that the writing style was fresh and interesting while keeping the content scientifically accurate.

AUDIENCE

Students on campuses today are an exceedingly diverse group, representing many ethnic and racial backgrounds, with varying levels of maturity and a variable range of life experiences. We have presented the basic life science concepts on which an understanding of nutrition builds in a manner relevant for the student who wishes solely to become a well-informed consumer or who plans to pursue a career in nutrition or the related health sciences. The students of today face many new challenges and are constantly bombarded with nutrition information in print and in electronic media and from entrepreneurs who wish to capitalize on the current awareness of nutrition and its relationship to health and wellness. This text is designed to provide the student with the basic competence to interpret these ever-changing and increasingly complex messages and to make well-informed decisions that will shape their lives and their careers.

NEW FEATURES

Human Nutrition incorporates many new features to capture student interest and enhance learning.

Design

A modern, full-color design and almost 300 new illustrations and photographs provide visual appeal. The larger type and page size add to the ease of readability.

Illustrations

Formulas for nutrients are presented in relevant chapters, and metabolic and synthetic pathways are introduced throughout the text for students with a background in the life sciences and the intellectual curiosity to explore their application to nutrition. At the same time, students without that expertise are introduced to the basic processes and concepts in clear, nonthreatening prose.

Expanded Content

- A new chapter on food safety is included. The successful application of nutrition requires a knowledge not only of the types and combinations of foods needed to furnish required nutrients, but also of proper food handling and preparation techniques to ensure quality and safety.
- The text also addresses a number of nutrition topics that receive or are likely to receive popular attention as they relate to the maintenance of health and prevention of disability such as trans fatty acids, omega-3 fatty acids, carotenoids, synthetic lipids, artificial sweeteners, pseudovitamins, vitamin-related compounds, and biotechnology.
- The chapter on trace minerals is expanded to reflect recent advances in the field and to include many conditionally essential minerals and representative food values.

Overviews

Three overview sections summarize the principles of digestion, absorption, and excretion and distinguishing features of vitamins and minerals. These overviews help students review their understanding of the material they learned previously or provide conceptual framework for uninitiated students.

Personalized Learning And Critical Analysis

A new end-of-chapter section of personal diet activities directs students to apply material and analyze and evaluate aspects of their own diet. Dr. Michael Kelley from San Diego State University provided invaluable assistance in the development of these activities.

Issues And Opinions Boxes

The Issues and Opinions box at the end of each chapter contains timely and often controversial aspects of nutrition that are related to topics discussed in the text. In many cases the topics highlighted in this section are too tentative to include in the textual material and/or are receiving wide media attention.

Latest Findings From Dietary Surveys

Data from the most recent national survey, National Health and Nutrition Examination Survey (NHANES) III on nutrient intakes of various segments of the population, are used throughout the text and summarized in Appendix K.

Documentation

Each chapter contains references for important core concepts and/or recent scientific findings on various topics, which enable the student and instructor to explore and evaluate original resources.

PEDAGOGICAL AIDS

In addition to the new pedagogical features mentioned above, this edition contains a number of proven and successful learning aids to assist student learning.

Chapter Summaries

These "By Now You Should Know" sections are a series of summary statements that emphasize key concepts and applications of the principles of the topics discussed.

Study Questions

Questions at the end of each chapter allow students to evaluate their understanding of the material and direct them to sections for further study or analysis.

Additional Readings

Suggested readings at the end of the chapter allow students to delve more deeply into topics of interest. We were careful to include only those references that are easily accessible in many libraries. Occasionally we included one or two classic references for students who wish to obtain a historical account of the topic under discussion, but primarily the listing contains the most recent and relevant articles on the subject.

Glossary

The glossary contains definitions of all key terms found in bold print throughout the text and many italicized terms. With over 1000 entries, the glossary reflects the comprehensive nature of the text and enhances its overall usefulness.

Appendixes

Human Nutrition contains 12 appendixes that are valuable resources for the student.

- A. **Chemistry and Life.** This summarizes important principles of chemistry as they apply to nutrition and all life processes.
- B. **Daily Values.** Values established by the FDA as standards for nutrient labeling purposes.
- C. **Recommended Nutrient Intakes for Canadians.** The latest values of recommended levels of dietary nutrients for Canadians are provided.
- D. **Nutrient Analysis: Instructions for Keeping Food Records.** This appendix guides students through the process of recording their food intake in sufficient detail to enable further meaningful analysis.
- E. **Food Composition Tables.** Nutrient composition of commonly consumed foods in the United States is presented.
- F. **Food Composition Tables for Canadians.** This table lists nutrient composition of common Canadian foods with nutrient values different from their United States counterparts. This appendix serves as an adjunct to Appendix E for Canadian students.
- G. **Food Sources of Nutrients in Relation to the U.S. RDAs.** This appendix serves as a quick reference for identification of excellent and good food sources of nutrients.
- H. **Exchange System Lists.** Lists of foods with comparable amounts of energy-yielding nutrients are presented to assist the student in interpreting many popular diets in the lay literature.
- I. **Standards for Triceps Skinfold Measurements.** Standards currently used to interpret skinfold measurements in national surveys and in research studies are provided.
- J. **Selected Sources of Reliable Nutrition Information.** This resource lists professional and governmental sources where the interested student can locate sound nutrition information on a variety of topics.
- K. **Selected Health and Nutrition Examination Survey III Data.** The major findings on nutrient intakes from the latest Health and Nutrition Examination Survey (1989-1991) conducted by the U.S. Department of Health and Human Services are summarized.
- L. **Food Frequency Questionnaire for Calcium Intake Estimation.** A rapid assessment tool for students to estimate daily calcium intake.

ANCILLARY MATERIALS

Instructor's Manual And Test Bank

Prepared by Robin S. Bagby, MEd, RD, of The Pennsylvania State University, this excellent resource contains the following practical features: chapter objectives; chapter outlines; lecture enhancements; critical analysis exercises; lists of current media resources; and self-assessments. A Test Bank of approximately 1000 examination questions includes multiple choice, true/false, matching, and essay questions. Transparency masters highlight key illustrations and charts from the text.

Computerized Test Bank

Qualified adopters of the text receive a computerized test bank package compatible with IBM or Macintosh computers. This advanced-feature test generator allows instructors to add, delete, or edit questions; save and reload tests; and print different versions of each test.

Nutrient Analysis Software

Mosby offers easy-to-use interactive software to allow students to input food intake and physical activities to determine total kcalories consumed and expended in multiple 24-hour periods.

Transparency Acetates

Full-color transparency acetates feature key illustrations from the text with large, easy-to-read labels.

Audiovisual Resources

Qualified adopters may choose from an excellent selection of videotapes and videodiscs. The *Mosby Multimedia Library: Nutrition II Teaching Videodisc* offers almost 50 animations of important physiologic processes, 280 colorful still images, and several short video clips that will help students apply nutrition concepts.

NUTRI-NEWS

Mosby offers a 16-page semiannual nutrition update with expert opinions on late-breaking or controversial nutrition topics.

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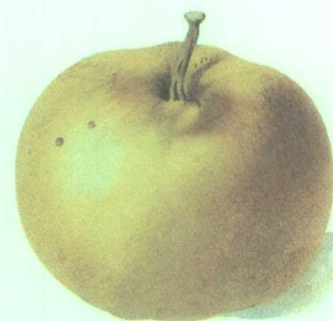
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