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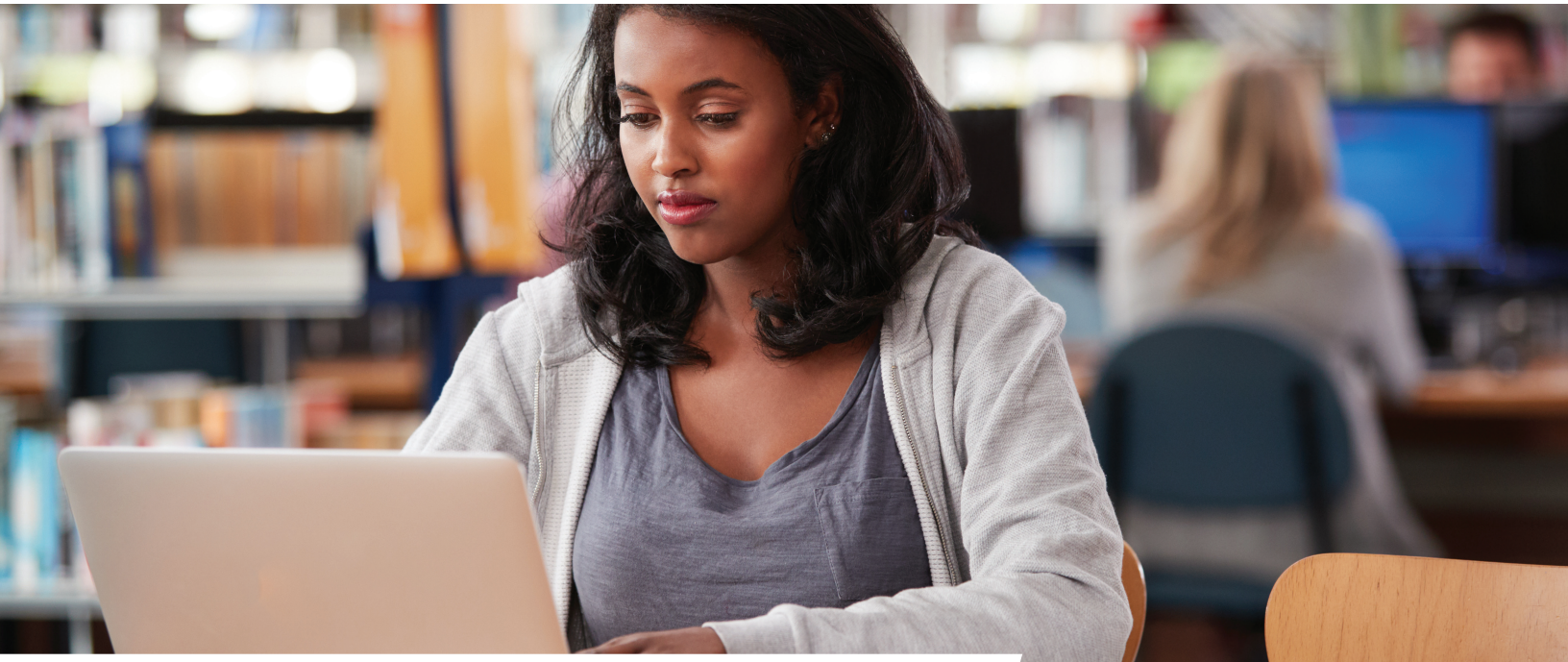

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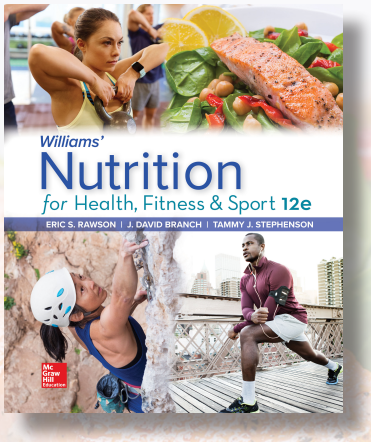
New Features You'll See in *Williams'* Nutrition, 12e



Title: Williams' Nutrition For Health, Fitness & Sport, 12e

Authors: Eric Rawson, J. David Branch, and Tammy Stephenson

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1 **Chapter 1 —**

- New information on the leading causes of death in the United States with an expanded discussion of those related to diet and/or physical activity
- New Training Tables on current and interesting topics such as *Healthy People 2020* objectives, examples of physical activity options at different intensities, and nutritional quackery
- Reorganization of chapter content to enhance flow and readability
- Physical activity guidelines section updated with the current recommendations and specific examples
- New content on the physical activity habits of Americans with new figure 1.5 map of the United States showing the percentage of the population who are physically inactive in each state
- The most current information available on fitness trackers and heart rate monitors, including a new figure 1.6 showing different options
- Specific recommendations from the *2015–2020 Dietary Guidelines for Americans*, including an expanded discussion of those guidelines

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- Updated Prudent Healthy Diet recommendations based on the most current evidence available, including recommendations that focus on the type of fat consumed, versus just limiting all fat; and general recommendations related to protein intake
- An introduction to ergogenic aids and general advice about their use, with specific details embedded throughout subsequent chapters
- New guidelines on evaluating and understanding different types of research studies and making evidence-based recommendations
- A new Application Exercise based on a case-study scenario
- Innovative Critical Thinking Questions that challenge students to go beyond memorizing content, and to truly apply the material
- New and revised references

2 **Chapter 2**

- Many new and revised tables including table 2.1, reorganized to enhance readability, listing nutrients essential or probably essential to humans; table 2.3 listing the Acceptable Macronutrient Distribution Ranges (AMDRs) for adults; and table 2.4 providing key information about the different food groups and sample serving size equivalents
- New Training Tables on topics including food sources of empty calories, healthy eating on a budget, and limiting sodium intake
- Revised section with new information on how dietary recommendations are set, and a new figure 2.2 showing the relationship between RDAs, AIs, ULs, and others
- New MyPlate content
- Condensed content on the Food Exchange System and an expanded discussion of carbohydrate counting as an alternative
- Updated figure 2.5 demonstrating the concept of nutrient density when comparing two products
- Specific dietary advice based on the most currently available literature and recommendations from evidence-based sources, including significantly revised sections on whole grains, dietary fat, added sugars, and vegetarianism
- New figure 2.11 showing the most current Nutrition Facts panel approved by the U.S. Food and Drug Administration (FDA), with text discussions on what changes were made and advice pertaining to the use of those labels
- New content related to classification and monitoring of dietary supplements with practical advice on how supplements can be a healthy addition to a well-balanced diet
- Introduction of key concepts of sports nutrition with practical recommendations and guidance, including specific examples of precompetition meals
- A new Application Exercise based on a case-study scenario
- New Critical Thinking Questions
- New and revised references

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3 **Chapter 3**

- Enhanced discussion of techniques to measure physical activity and energy expenditure, including the use of various commercial apps
- Updated figures and images
- New and revised references

4 **Chapter 4**

- Removal of Food Exchanges content
- New data on the effectiveness of carbohydrate mouth rinse on resistance exercise performance
- New Training Tables on topics such as simplifying carbohydrate recommendations, carbohydrate recommendations based on energy expenditure, and optimizing dietary fiber intake
- Updated carbohydrate Key Concepts
- Updated data on ergogenic aspects of carbohydrate
- New data on the effects of sugar and fiber ingestion on health
- Updated information on gluten-free diets
- New information on low FODMAP diets
- New and revised references

5 **Chapter 5**

- New information on dietary cholesterol intake from the *2015–2020 Dietary Guidelines for Americans*
- New data on the effects of low-carbohydrate, high-fat diets in endurance athletes
- New Training Tables on the topics of ketogenic diets and endurance exercise performance, low-fat versus high-fat diets for weight loss, the coconut oil dietary fad, the International Olympic Committee (IOC) dietary supplement consensus for athletes, and dietary guidelines to reduce or maintain serum lipid levels
- Updated information on the benefits of a low-fat diet on breast cancer
- New data on the effects of intermittent fasting on weight loss and health
- New data on the effects of omega-3 fat intake on cognitive and muscle functions and health
- New research on ketone supplements
- Updated Key Concepts
- New links to calculators that assess cardiovascular disease risk
- Updated information on low-fat diets and weight loss
- New data on the interactions between different fats, carbohydrate, and heart disease
- New Application Exercise
- New and revised references

6 **Chapter 6**

- Update on the importance of dietary protein during weight loss
- New information on the postexercise anabolic window
- New Training Tables on protein recommendations and creatine supplementation for athletes
- New information on IOC consensus on dietary supplements that can improve performance or alter body composition
- Updated information on creatine supplementation and recovery from injury
- New data on the effects of creatine supplementation on cognitive

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processing, concussion, and brain health
- Updated information on the benefits of beta-alanine supplements
- New and revised references

7 **Chapter 7**
- Relevant content on the vitamins with updates based on the most current position paper from the Academy of Nutrition and Dietetics and the American College of Sports Medicine
- Expanded overview of vitamins with a revamped table 7.1 showing a summary of each vitamin
- Updated content with the latest research on the effects of specific vitamins on health and physical activity performance
- New photos to break up the text and provide a visual of good food sources for each vitamin
- A new figure 7.5 showing the role of folate and vitamin B12 in red blood cell formation
- Two new Training Tables, one listing the classification of fat-soluble and water-soluble vitamins and vitamin-like substances, and another providing practical advice about how to read a Supplement Facts label and make prudent vitamin supplement choices
- Specific information on the health aspects of vitamin supplements now integrated within the discussion of each vitamin
- New Multiple Choice and Critical Thinking Questions
- New and revised references

8 **Chapter 8**
- Relevant content on the minerals with updates based on the most current position paper from the Academy of Nutrition and Dietetics and the American College of Sports Medicine
- Expanded overview of minerals with additional content on the difference between major, trace, and possibly essential minerals, including new tables 8.2 and 8.4 summarizing each of the major and trace minerals
- Updated content with the latest research on the effects of specific minerals on health and physical activity performance
- New photos to break up the text and provide a visual of good food sources for each mineral
- Four new Training Tables on topics including factors that increase or decrease calcium absorption, how to reduce one's risk for osteoporosis and improve bone health, common signs and symptoms of iron-deficiency anemia, and a summary of two possibly essential minerals
- New table 8.5 differentiating factors that influence iron bioavailability and an expanded section on iron-deficiency anemia
- A new Application Exercise is provided for students to evaluate minerals with potential ergogenic benefits and to develop informational handouts on one of those minerals
- New Multiple Choice and Critical Thinking Questions
- New and revised references

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Chapter 9

- Revised and updated figures and tables
- Addition of the new American Heart Association blood pressure guidelines
- Five new Training Tables covering the topics of temperature regulation and heat loss; key highlights of the ACSM position stand on exercise and fluid replacement; symptoms of hyponatremia; recommendations pertaining to fluid and carbohydrate intake before, during, and after exercise; and selected benefits of acclimatization
- New Application Exercise
- New Multiple Choice and revised Critical Thinking Questions
- New and revised references

10

Chapter 10

- Modified and updated figures and tables
- Five new Training Tables covering the symptoms of the metabolic syndrome, symptoms of anorexia nervosa, *DSM-V* criteria for bulimia nervosa, behaviors associated with binge eating disorder, and other selected disordered eating or body image disorders
- New Application Exercise
- New Multiple Choice questions
- New and revised references

11

Chapter 11

- Many new or modified figures and tables
- New Nutrition Facts label designed according to the *2015–2020 Dietary Guidelines for Americans*
- New Training Table listing suggestions to reduce overeating and increase physical activity
- New Application Exercise
- New Multiple Choice questions and revised Critical Thinking questions
- New and revised references

12

Chapter 12

- Many new and revised figures and tables
- Expanded discussion of nutrient timing
- Discussion of the proposed role of β-hydroxy-β-methylbutyrate (HMB) in increased muscle protein synthesis and decreased catabolism
- Additional text on the importance of concentric and eccentric contractions to induce muscle hypertrophy
- Expanded discussion of the importance of consistency in time of day for resistance training
- Modified Figure 12.15 to emphasize muscle fiber hypertrophy as the dominant mechanism for muscle growth
- New Table 12.4 listing selected health effects of resistance training
- Discussion of potential cell-signaling "competition" between high volume aerobic and high volume resistance training which might attenuate muscle hypertrophy
- New Application Exercise
- New Multiple Choice questions
- New and revised references

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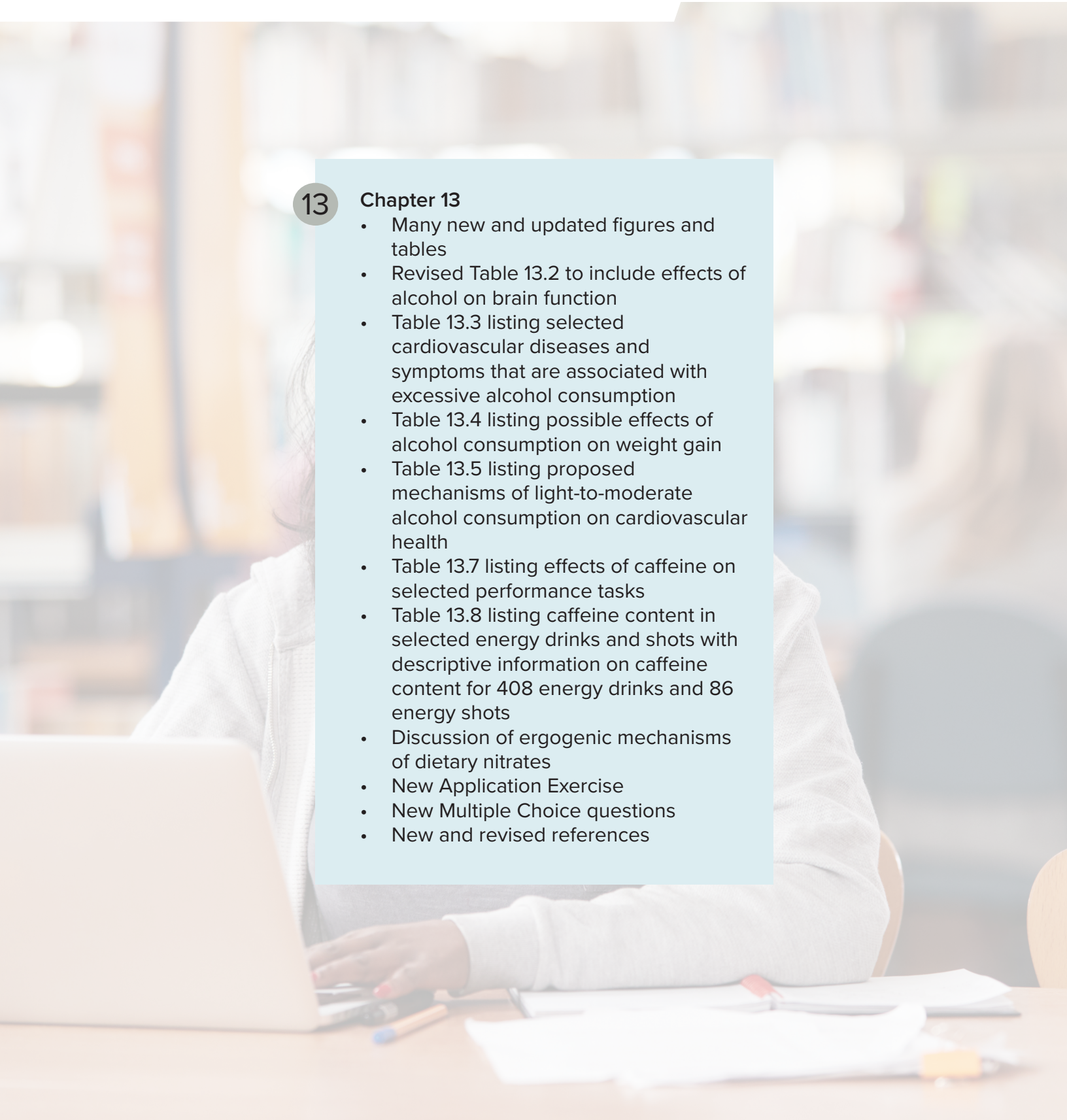

13

Chapter 13

- Many new and updated figures and tables
- Revised Table 13.2 to include effects of alcohol on brain function
- Table 13.3 listing selected cardiovascular diseases and symptoms that are associated with excessive alcohol consumption
- Table 13.4 listing possible effects of alcohol consumption on weight gain
- Table 13.5 listing proposed mechanisms of light-to-moderate alcohol consumption on cardiovascular health
- Table 13.7 listing effects of caffeine on selected performance tasks
- Table 13.8 listing caffeine content in selected energy drinks and shots with descriptive information on caffeine content for 408 energy drinks and 86 energy shots
- Discussion of ergogenic mechanisms of dietary nitrates
- New Application Exercise
- New Multiple Choice questions
- New and revised references