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UNIT 1 Nutrition Trends

Unit Overview	xx
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- 1. Ultimate Food Fight Erupts as Feds Recook School Lunch Rules**, Nirvi Shah, *Edweek.org*, April 2011
The recent passage of the Healthy, Hunger-Free Kids Act has prompted the USDA to modify the standards for the National School Lunch and Breakfast programs. The new standards for breakfast and lunches served in school cafeterias are addressed in this article. **2**
- 2. Junk Food-Free Vending Machines Go to School**, Nick Leiber, *Bloomberg Businessweek*, January 2011
When policies were tightened to address the junk food available to kids in vending machines, thousands of vending companies fled the school vending market, leaving room for new concepts in healthy vending options. Small companies, many of them start-ups, are going into the vending business to provide healthy food and beverage items sold in vending machines at U.S. schools. **6**
- 3. Pepsi Brings in the Health Police**, Nanette Byrnes, *Bloomberg Businessweek*, January 25, 2010
Pepsico, one of the world's largest food and beverage conglomerates, is attempting to improve the nutrition profile of its traditionally high fat and added sugar "junk food" and beverages. The food giant has made impressive strides in changing its business model to prepare for changes in demand for healthier snacks and beverages. **8**
- 4. Calorie Posting in Chain Restaurants**, Sarah H. Wright, *The NBER Digest*, May 2010
In March 2010 federal health legislation mandated chain restaurants to post calorie content of their menu items. Preliminary studies show that calorie posting positively influences food choices by consumers. If consumers demand lower-calorie items secondary to the calorie posting, then restaurants will have incentive to expand their offerings of lower-calorie items. **10**
- 5. Behind the Brand: McDonald's**, Peter Salisbury, *Ecologist.com*, June 16, 2011
McDonald's is taking strides to improve its image by offering healthier options in the United States and has changed its operations to more ethical and ecofriendly practices in Great Britain and Northern Ireland. McDonald's UK has made great strides to ensure no GM foods are sold at its restaurants. **11**
- 6. Nutrition for Optimum Athletic Performance—The Right Fuel Can Be the Difference**, Ellen Coleman, *Today's Dietitian*, March 2011
More Americans are increasing their activity level to meet or exceed the exercise recommendations published in the Dietary Guidelines. As a result, more people are exercising at the level of "athlete" rather than occasional exerciser. This article addresses how to properly fuel and hydrate for optimal athletic conditioning. **13**
- 7. Snack Attack: Evaluating and Rating Snacks for Athletes**, Christine Rosenbloom, *Nutrition Today*, May/June 2011
Athletes need additional calories and nutrients to support training and optimal performance. As more Americans are choosing to increase their activity level to athletic and endurance conditioning, snacks may be the easiest way to meet the additional nutrient needs. **18**

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.



UNIT 2

Childhood Nutrition

Unit Overview

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- 8. The State of Family Nutrition and Physical Activity: Are We Making Progress?**, *American Dietetic Association and American Dietetic Association Foundation*, 2011

The American Dietetic Association along with its Foundation, published this thorough report of the state of childhood/family nutrition and physical activity.

28

- 9. Underage, Overweight**, *Scientific American*, May 2010

Sugar- and fat-laden foods are marketed directly to children through commercials, as well as indirectly through product placement in movies and video games. An interagency working group from four federal programs has proposed voluntary standards for marketing foods and beverages to children under the age of 17. This is an attempt to help create an environment that helps children make more nutritious food choices.

52

- 10. The Impact of Teachers and Families on Young Children's Eating Behaviors**, Erin K. Eliassen, *Young Children*, March 2011

This article addresses how children's taste perception, food preferences, and eating behaviors are shaped by the role models that surround them. Practical advice is given on how to encourage positive eating behaviors in children.

54

- 11. Engaging Families in the Fight against the Overweight Epidemic among Children**, Mick Coleman, Charlotte Wallinga, and Diane Bales, *Childhood Education*, Spring 2010

This article addresses the overweight epidemic in U.S. children, including the prevalence, consequences, contributing factors, as well as recommendations of how families can be involved in changing the prevalence.

58

- 12. The School Lunch Wars**, Kristen Hinman, *The Wilson Quarterly*, Spring 2011

The quality of meals offered in U.S. schools has become highly scrutinized in the past few years. This article describes the history of the School Lunch Program and offers personal stories of food service professionals attempting to make a difference.

65

- 13. Kids Who Won't Eat**, Kelley King Heyworth, *Parents*, January 2011

This article includes personal stories of children and adolescents as they restrict foods and become malnourished. Also included are tips on how to nurture a healthy eater.

69

- 14. Healthy Food Looks Serious: How Children Interpret Packaged Food Products**, Charlene D. Elliott, *Canadian Journal of Communication*, 2009

The latest trends in marketing foods to kids follow the concept of "fun food," which emphasizes play, interactivity, artificiality, and distinctly different concepts from traditional "grown-up" foods. Food is being positioned as fun and eating as entertainment by marketing among the food industry. This article demonstrates how these marketing ploys are interpreted by a group of kids in first to sixth grades.

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UNIT 3

Nutrients

Unit Overview

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- 15. Getting Enough?: What You Don't Eat Can Hurt You**, Bonnie Liebman, *Nutrition Action Healthletter*, September 2010

Too often the resounding message about nutrition and our diets is that we eat too much of the "bad stuff." An important message that is underpublished is that our diets commonly lack certain vitamins and minerals that are beneficial. This article provides practical information about consuming adequate potassium, vitamin D, magnesium, and vitamin B12.

86

- 16. Vitamins, Supplements: New Evidence Shows They Can't Compete with Mother Nature**, *Consumer Reports on Health*, February 2010
There is very little (well-researched) evidence that supports the use of vitamin and mineral supplements in health promotion and prevention. Most studies show no benefit or actual harm to humans. Most major health organizations and associations support consuming nutrients from nutrient-dense foods rather than supplements. This brief review discusses the latest on supplement vs. food as the best source for nutrients. **93**
- 17. Which Pills Work?**, Melinda Wenner Moyer, *ScientificAmerican.com*, February 2011
The Institute of Medicine concluded that vitamin D supplements are unnecessary for most Americans and potentially harmful. Epidemiological studies support vitamin D supplementation, however, clinical trials have not found the same results. **94**
- 18. Keeping a Lid on Salt: Not So Easy**, Nanci Hellmich, *USA Today*, April 28, 2010
The recommendation to reduce dietary sodium is not new; however, the U.S. Dietary Guidelines is now recommending that all Americans can benefit from consuming less sodium. The complicating factor: Sodium is in so many of foods commonly eaten in the United States. Hellmich reviews the topic and explains why the suggestion is controversial. **95**
- 19. Seafood Showdown: Fatty Acids vs. Heavy Metals**, Julie Hanus, UTNE, June 1, 2010
This brief article discusses some of the potential benefits of omega-3 fatty acids and how to consume these beneficial fats with decreased risk of consuming heavy metals and toxins. **97**



UNIT 4 Diet and Disease

Unit Overview **98**

- 20. We Will Be What We Eat**, Meryl Davids Landau, *US News & World Report*, February 2010
If the U.S. population continues to eat the "typical American diet," our country will see higher risk for and prevalence of osteoporosis, heart disease, hypertension, insulin resistance, dementia, arthritis, and certain cancers. This article addresses how foods and diet play a role in these diseases. **101**
- 21. Sugar Overload: Curbing America's Sweet Tooth**, *Nutrition Action Healthletter*, January/February 2010
This cover story in the *Nutrition Action Healthletter* is a comprehensive view of the role of added sugar in obesity, diabetes, visceral fat, gout, overeating, and blood pressure. The article also contains lists of quantities of added sugar in commonly consumed foods and beverages. **104**
- 22. Fructose Sweeteners May Hike Blood Pressure**, Janet Raloff, *Science News*, July 2, 2010
Fructose sweeteners, a major source of added sugar in the U.S. diet, may have a role in the increasing rates of hypertension in the United States. A group of nephrologists (kidney specialists) conducted a study in humans to investigate if high-fructose sweeteners affect the likelihood of developing hypertension. **111**
- 23. Role of Sugar Intake in Beverages on Overweight and Health**, Max Lafontan, *Nutrition Today*, November/December 2010
Evidence from epidemiological studies has suggested an association between drinking sugar-sweetened beverages and being overweight. This article reviews the health impact of drinking sugar-laden beverages and the mechanism of action. **113**

- 24. When the Liver Gets Fatty**, *Harvard Health Letter*, January 2011
Obesity and diabetes can cause excessive fat deposits in the liver. Nonalcoholic fatty liver disease affects an estimated 70–90% of obese people with type 2 diabetes. This article describes nonalcoholic liver disease, its diagnosis, and possible treatments. 117
- 25. Nutrition and Immunity: Balancing Diet and Immune Function**, Susan S. Percival, *Nutrition Today*, January/February 2011
Proper nutrition and balanced nutrient intake is required for our immune system to function optimally. This article describes the complex immune response and how nutrient deficiencies impair our immune system. 120

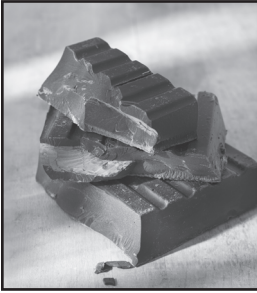


UNIT 5

Obesity and Weight Control

Unit Overview 126

- 26. How to Fix the Obesity Crisis**, David H. Freedman, *Scientific American*, February 2011
The cause of our obesity crisis is multifactorial, as are the solutions to the problem. This article describes possible solutions to decrease the prevalence of obesity, including behavior focused interventions and changes in public policy. 128
- 27. The Fat Plateau**, *The Economist*, January 23, 2010
Study published in *Journal of the American Medical Association* found that obesity rates from 1998 to 2008 increased at a higher rate than 2008–2010. The common assumption is that obesity rates will continue to escalate at a constant rate; however current research suggests that obesity rates are slowing. Although this data is promising, it is a decline in obesity rates that is desperately needed. 133
- 28. The Hungry Brain**, Dan Hurley, *Discover*, June 2011
The reward mechanism and pleasure sensation of consuming energy-dense food is wired in our brain as a primal method of survival and a way to make us feel good. This article describes the physiology of how the brain impacts our food choices. 135
- 29. In Your Face: How the Food Industry Drives Us to Eat**, Bonnie Liebman, and Kelly Brownell, *Nutrition Action Healthletter*, May 2010
Kelly Brownell, professor of Psychology at Yale University and co-founder of the Rudd Center for Food Policy and Obesity, gives a lively interview with Bonnie Liebman of *Nutrition Action Healthletter*. Brownell addresses the issues of the U.S. toxic food environment, addictive foods, who shares responsibility, and recommendations for change. 140
- 30. Birth Weight Strongly Linked to Obesity**, Nanci Hellmich, *USA Today*, August 2010
Research conducted at Children’s Hospital in Boston and Columbia University suggests a link between excessive weight gain during pregnancy and risk of obesity in the child later in life. Women who gain an average of 50 lbs during pregnancy are more likely to have higher birth weight babies, which may increase the child’s risk of becoming obese later in life. 144
- 31. Eating Disorders in an Obesogenic Environment**, Joyce A. Corsica, and Megan M. Hood, *Journal of the American Dietetic Association*, July 2011
Although most national attention on nutrition and optimal health revolves around the obesity epidemic, a sector of the U.S. population suffers with voluntary food restriction and inadequate nutrient intake. This article addresses how people with eating disorders are impacted by our obesogenic environment. 145



UNIT 6

Health Claims

Unit Overview

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- 32. The Scoop on Chocolate: Is Chocolate Really Healthy?**, Hara Estroff Marano, *Psychology Today*, March/April 2011

Can it be true? Something that tastes so good can also be beneficial to our health? This article summarizes the research that supports chocolate as a heart-healthy brain food. The history of chocolate as a health food is also described.

152

- 33. The Benefits of Flax**, *Consumer Reports on Health*, April 2009

Flax seeds are a natural source of fiber, protein, magnesium, and thiamin, but are marketed mostly for their omega-3 fatty acids. This article will address the benefits and possible negative consequences of consuming flax seed oil supplements and answer the question "Which is better, fish oil or flax seed oil supplements?"

154

- 34. Brain Boosters: Some Nutritional Supplements Provide Real Food for Thought**, Janet Raloff, *Science News*, February 26, 2011

Caffeine, caffeine derivatives, glucose, ginkgo biloba, Chinese ginseng, and Cocoa flavanols are on the "mental menu" as improving brain function. Many products are available that boast of improved energy and mental clarity to combat fatigue.

155

- 35. Influencing Food Choices: Nutrition Labeling, Health Claims, and Front-of-the-Package Labeling**, Kathleen L. Cappellano, *Nutrition Today*, November/December 2009

Although nutrition labels and health claims on packaged foods have been used in the United States for over 20 years, information on these foods is still considered confusing by many Americans. A number of professional organizations and trade associations have developed systems to help consumers interpret the information on food labels and health claims. This article highlights several Internet resources that address nutrition labeling, and health claims.

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UNIT 7

Food Safety and Technology

Unit Overview

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- 36. Genetic Engineering for Good**, Erik Vance, *utne.com*, January/February 2011

Genetically modifying our food crops is a controversial topic, however, there are benefits to altering crops to increase the world's food supply to meet the demand of its growing population.

166

- 37. Food Fight**, Brendan Borrell, *Scientific American*, April 2011

This article describes the work and career of Roger Beachy, a renowned expert on genetically modified crops who now heads the National Institute of Food and Agriculture at the USDA.

168

- 38. H₂ Uh–Oh: Do You Need to Filter Your Water?**, *Nutrition Action Healthletter*, June 2010

An estimated 19.5 million illnesses occur each year in the United States due to microorganisms in our water. How do viruses, bacteria, and protozoa get into our drinking water? What are the potential consequences of chemical compounds and contaminants in our water supply? What can we do to protect ourselves? Answers to all of these questions are addressed in this article.

171

- 39. Inside the Meat Lab**, Jeffrey Bartholet, *Scientific American*, June 2011

How would the world's food supply and agriculture change if we could harvest meat in a petri dish? Several labs are working to perfect techniques to grow beef, chicken, and lamb tissue in a chemistry lab.

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The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.



UNIT 8

Hunger, Nutrition, and Sustainability

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40. Divided We Eat , Lisa Miller, <i>Newsweek</i> , November 29, 2010 As food prices climb much faster than our economic recovery, more families are faced with the challenge of living a food insecure existence. This article describes how families of differing socioeconomic levels approach food selection.	184
41. Address Health Disparities in American Indians , Elaine Kovacs, and Melissa Ip, <i>Today's Dietitians</i> , June 2011 Obesity, diabetes, and food insecurity are prevalent in Native American communities. This article addresses these disparities and provides guidance and possible solutions.	187
42. Rising Prices on the Menu: Higher Food Prices May Be Here to Stay , Thomas Helbling, and Shaun Roache, <i>Finance and Government</i> , March 2011 The price of food is impacted by many different factors. Policies and laws affecting agriculture, government subsidies, imports/exports, and global food supply are factors that impact the price and supply of food.	190
43. Can Low-Income Americans Afford a Healthy Diet? , Adam Drewnowski, and Petra Eichelsdoerfer, <i>Nutrition Today</i> , November/December 2009 Americans have been lacking in obtaining and preparing nutrient-dense foods. This article reviews the current state of adequate nutrition for low-income populations with guidance as to how to address nutrition status among income disparities.	193
44. Tackling Undernutrition the Right Way , Gary R. Gleason, <i>Nutrition Today</i> , September/October 2010 Undernutrition and inadequate access to food affects more than 360 million children and is implicated in 3.5 million deaths of children in underdeveloped countries. Researchers and professionals who work in international policy are pushing for a change in this worldwide discrepancy of food availability.	197
45. Food Stamps for Good Food , Melanie Mason, <i>The Nation</i> , March 2011 This article depicts the realities of feeding a family on food acquired with the help of the Supplemental Nutrition Assistance Program. It describes the history and prevalence of the use of SNAP, the program formally known as food stamps.	201
46. Fixing the Global Nitrogen Problem , Alan R. Townsend, and Robert W. Howarth, <i>Scientific American</i> , February 2010 Current conventional agricultural techniques depend on nitrogen-based fertilizers for crop production; however, as the use of these chemical fertilizers spreads to other countries, it is posing threats to our health and the health of our ecosystems. This article describes the history of nitrogen-based fertilizers and the damage that results from too much nitrogen in our atmosphere and provides suggestions of how we can curtail the damage.	204
47. Perennial Grains: Food Security for the Future , Jerry D. Glover, and John P. Reganold, <i>Issues in Science and Technology</i> , Winter 2010 Agricultural grain crops are annuals, meaning the plants must be planted each year from seed and the plants cleared from the fields at the end of the growing season. Plant geneticists are now able to develop perennial grain plants that could have significant ecological, environmental, and health benefits.	209
Test-Your-Knowledge Form	214