



Table 1-1

Healthy U.S.-Style Dietary Pattern at the 2,000-Calorie Level, With Daily or Weekly Amounts From Food Groups, Subgroups, and Components

FOOD GROUP OR SUBGROUP^a	Daily Amount^b of Food From Each Group (Vegetable and protein foods subgroup amounts are per week.)
Vegetables (cup eq/day)	2 ½
	Vegetable Subgroups in Weekly Amounts
Dark-Green Vegetables (cup eq/wk)	1 ½
Red and Orange Vegetables (cup eq/wk)	5 ½
Beans, Peas, Lentils (cup eq/wk)	1 ½
Starchy Vegetables (cup eq/wk)	5
Other Vegetables (cup eq/wk)	4
Fruits (cup eq/day)	2
Grains (ounce eq/day)	6
Whole Grains (ounce eq/day)	≥ 3
Refined Grains (ounce eq/day)	< 3
Dairy (cup eq/day)	3
Protein Foods (ounce eq/day)	5 ½
	Protein Foods Subgroups in Weekly Amounts
Meats, Poultry, Eggs (ounce eq/wk)	26
Seafood (ounce eq/wk)	8
Nuts, Seeds, Soy Products (ounce eq/wk)	5
Oils (grams/day)	27
Limit on Calories for Other Uses (kcal/day)^c	240
Limit on Calories for Other Uses (%/day)	12%

^a Definitions for each food group and subgroup are provided throughout the chapter and are compiled in [Appendix 3](#).

^b Food group amounts shown in cup or ounce equivalents (eq). Oils are shown in grams. Quantity equivalents for each food group are defined in [Appendix 3](#). Amounts will vary for those who need <2,000 or >2,000 calories per day.

^c Foods are assumed to be in nutrient-dense forms, lean or low-fat and prepared with minimal added sugars, refined starches, saturated fat, or sodium. If all food choices to meet food group recommendations are in nutrient-dense forms, a small number of calories remain within the overall limit of the pattern (i.e., limit on calories for other uses). The amount of calories depends on the total calorie level of the pattern and the amounts of food from each food group required to meet nutritional goals. Calories up to the specified limit can be used for added sugars, saturated fat, and/or alcohol, or to eat more than the recommended amount of food in a food group.

NOTE: The total dietary pattern should not exceed *Dietary Guidelines* limits for added sugars, saturated fat, and alcohol; be within the Acceptable Macronutrient Distribution Ranges for protein, carbohydrate, and total fats; and stay within calorie limits. Values are rounded. See [Appendix 3](#) for all calorie levels of the pattern.

BIRTH THROUGH 23 MONTHS

Encourage Infants and Toddlers To Consume a Variety of Complementary Foods and Beverages To Meet Energy and Nutrient Needs

Parents, caregivers, and guardians are encouraged to introduce foods across all the food groups—as described below and carrying forward the principles in [Chapter 1](#)—including items that fit within a family's preferences, cultural traditions, and budget. Complementary foods and beverages should be rich in nutrients, meet calorie and nutrient requirements during this critical period of growth and development, and stay within limits of dietary components such as added sugars and sodium. Although the *Dietary Guidelines* does not provide a recommended dietary pattern for infants ages 6 through 11 months, infants should be on the path to a healthy dietary pattern that is recommended for those ages 12 through 23 months (see [Appendix 3: USDA Dietary Patterns](#)).

In the United States, some dietary components are of public health concern for infants and toddlers. Iron is a dietary component of public health concern for underconsumption among older infants ages 6 through 11 months who are fed primarily human milk and consume inadequate iron from complementary foods. Older infants who are fed primarily human milk also underconsume zinc and protein from complementary foods, and vitamin D, choline, and potassium are notably underconsumed by all older infants. During the second year of life, the dietary components of public health concern for underconsumption are vitamin D, calcium, dietary fiber, and potassium and for overconsumption are added sugars and sodium. Lists of dietary sources of

iron, calcium, potassium, dietary fiber, and vitamin D are available at [DietaryGuidelines.gov](https://www.dietaryguidelines.gov).

INTRODUCE IRON-RICH FOODS TO INFANTS STARTING AT ABOUT 6 MONTHS OLD

Iron-rich foods (e.g., meats and seafood rich in heme iron and iron-fortified infant cereals) are important components of the infant's diet from age 6 through 11 months to maintain adequate iron status, which supports neurologic development and immune function. Infants are typically born with body stores of iron adequate for about the first 6 months of life, depending on gestational age, maternal iron status, and timing of umbilical cord clamping. By age 6 months, however, infants require an external source of iron apart from human milk.

Caregivers of infants exclusively fed human milk should talk with their pediatric care provider about whether there may be a need for infants supplementation with iron before age 6 months. A complementary food source of iron beginning at about 6 months is particularly important for infants fed human milk because the iron content of human milk is low and maternal iron intake during lactation does not increase its content. In the United States, an estimated 77 percent of infants fed human milk have inadequate iron intake during the second half of infancy, highlighting the importance of introducing iron-rich foods starting at age 6 months.

Infants receiving most of their milk feeds as iron-fortified infant formula are likely to need less iron from complementary foods beginning at 6 months of age. After



WOMEN WHO ARE PREGNANT OR LACTATING

Current Intakes

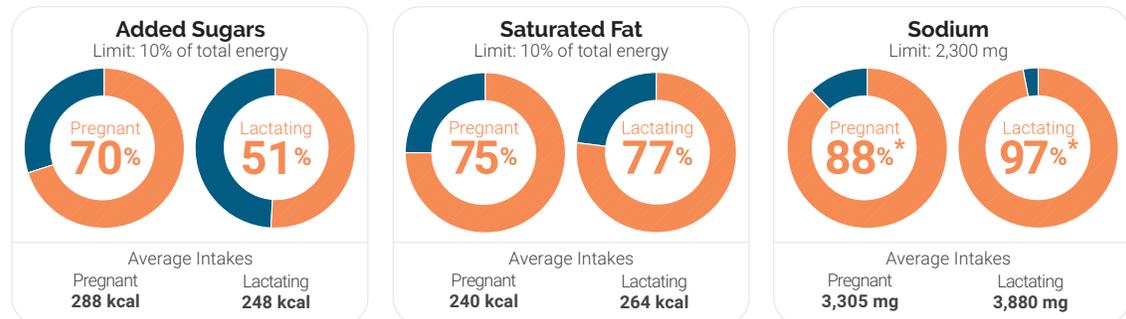
Figures 5-1 and 5-2 highlight the dietary intakes of women who are pregnant or lactating, including the Healthy Eating Index-2015 score, which is an overall measure of how intakes align with the *Dietary Guidelines*, as well as information on the components of a healthy diet—specifically, the food groups. Figure 5-1 displays the average intakes of the food groups compared to the range of recommended intakes at the calorie levels most relevant to these life stages.

Figure 5-1

Current Intakes: Women Who Are Pregnant or Lactating



Percent Exceeding Limits of Added Sugars, Saturated Fat, and Sodium



*NOTE: Estimates may be less precise than others due to small sample size and/or large relative standard error.

Data Sources: Average Intakes and HEI-2015 Scores: Analysis of What We Eat in America, NHANES 2013-2016, women ages 20-44, day 1 dietary intake data, weighted. Recommended Intake Ranges: Healthy U.S.-Style Dietary Patterns (see Appendix 3). Percent Exceeding Limits: What We Eat in America, NHANES 2013-2016, 2 days dietary intake data, weighted.

“The most common breaks in weak bones are in the wrist, spine, and hip.”

When Bones Break

There is some natural bone loss as women and men age. As we grow older, bones can break or weaken if we don't take steps to keep them strong. The most common breaks in weak bones are in the wrist, spine, and hip.

Broken bones in your spine can be painful and very slow to heal. People with weak bones in their spine gradually lose height and their posture becomes hunched over. Over time a bent spine can make it hard to walk or even sit up.

Broken hips are a very serious problem as we age. They greatly increase the risk of death, especially during the year after they break.

People who break a hip might not recover for months or even years. Because they often cannot care for themselves, they are more likely to have to live in a nursing home.



ALLERGIES & NUTRITION

There are three primary diseases and disorders that may be defined as allergic diseases according to the National Institutes of Health: asthma, eczema (atopic dermatitis) and food allergy. Asthma is a chronic disease with episodes of airway narrowing resulting in wheezing, coughing and shortness of breath. Eczema is a non-contagious skin disorder characterized by dry, itchy skin and blisters. Food allergy is a condition that affects almost 5 percent of children and adults in the United States. With a food allergy, the immune system reacts abnormally to the food or food component and may produce a life-threatening response. While all three conditions may require medication and other interventions, nutrition may play a vital role in improving the body's response to asthma, eczema and, of course, food allergies. Consultation with a clinical, registered dietician is highly recommended if one of the three conditions is diagnosed.

Asthma is a chronic, long-term disease that interferes with the ability to move air into and out of the lungs. The airways may become inflamed and narrowed causing wheezing, coughing, shortness of breath and chest tightness. An asthma attack is when these symptoms worsen. Genetics and environment may play a factor, but the underlying cause of asthma is unknown. Triggers vary by individual and may include dust, pollen, certain medications, infections and tobacco smoke. The diagnosis of asthma is made through physical examination and medical history, lung function tests and allergy skin or blood tests. Treatments include avoiding triggers, short-term relief and control medicines and proper nutrition. While there is no diet that will eliminate asthma symptoms, eating to maintain a healthy weight, consuming plenty of fruits and vegetables, avoiding allergy-triggering foods, increasing vitamin D intake and avoiding sulfites such as those in wine, pickles, shrimp and dried fruits are recommended. Restricting salt and eating foods rich in omega-3 fatty acids such as cold-water fish may also reduce asthma symptoms. Consultation with a registered dietician is recommended once a diagnosis is established.

Eczema or atopic dermatitis is a non-contagious inflammatory skin condition causing dry, itchy skin that may weep fluid if the rash is scratched. Bacterial, fungal and viral infections may occur in individuals with eczema. Eczema affects almost 1/3 of the U.S. population, mostly children and young adults. Both genetic and environmental factors may contribute to eczema development. Food allergies are associated with 30 percent of children with atopic dermatitis and many also have asthma and other respiratory allergies. Treatment involves medications, appropriate skin care, avoiding triggers such as pollen, emotional stress, skin contact with known allergens, and avoiding foods known to be allergic to the individual.

Food is defined as any substance intended for human consumption and includes beverages, chewing gum, food additives, dietary supplements and processed, semi-processed and raw foods. Some allergens cause a reaction only when eaten raw, while some cause a reaction whether raw or cooked. Foods that are similar to a known food allergen may also cause an allergic reaction. A reaction may occur after years of consuming a certain food with no problems. Individuals may outgrow certain food allergies or may receive therapy to eliminate a reaction. Peanut allergies and allergic reactions to shell fish are present in between 1.1 and 2 percent of the population.

There is no cure for food allergy, but experimental immunotherapies may decrease symptoms. Avoiding the food that causes the allergic reaction is the most effective

Agencies & Associations

- 415 Academy of Nutrition & Dietetics**
120 South Riverside Plaza
Chicago, IL 60606-6995
312-899-0040
800-877-1600
media@eatright.org
www.eatright.org
Serves the public through the promotion of optimal nutrition, health, and well-being. Formerly the American Dietetic Association.
Patricia M. Babjak, Chief Executive Officer
- 416 American Academy of Pain Medicine**
1705 Edgewater Drive
Orlando, FL 32804
800-917-1619
Fax: 407-749-0714
info@painmed.org
www.painmed.org
The AAPM is a medical specialty society representing physicians and healthcare professionals practicing in the field of pain medicine. Its mission is to promote and advance pain care, education, training, advocacy, and research.
W. Michael Hooten, MD, President
Farshad M. Ahadian, MD, Treasurer
- 417 American Celiac Society**
266 Midway Drive
River Ridge, LA 70123
www.americanceliciasociety.org
Promotes education, research, and mutual support for people with dietary disorders.
Annette Bentley, President
James Bentley, Vice President
- 418 American Chronic Pain Association**
11936 West 119th Street
Overland Park, KS 66213-2216
913-991-4740
acpa@theacpa.org
www.theacpa.org
The ACPA facilitates peer support and education for individuals with chronic pain in its many forms, in order to increase quality of life. Also raises awareness among the healthcare community, and with policy makers.
Kathy Sapp, Chief Executive Officer
Scott Farmer, Chief Operating Officer
- 419 American College of Gastroenterology**
6400 Goldsboro Road
Bethesda, MD 20817
www.gi.org
ACG serves clinical and scientific information needs of member physicians and surgeons, who specialize in digestive and related disorders. Emphasis is on scholarly practice, teaching and research.
David A. Greenwald, MD, FACG, President
Amy S. Oxentenko, MD, FACG, Secretary
- 420 American Gastroenterological Association**
4930 Del Ray Avenue
Bethesda, MD 20814
301-654-2055
Fax: 301-654-5920
member@gastro.org
www.gastro.org
AGA fosters the development and application of the science of gastroenterology by providing leadership and aid including patient care, research, teaching, continuing education, scientific communication and matters of national health policy.
Tom Serena, Chief Executive Officer
Nancy Chill, Vice President, Business Development
- 421 American Hemochromatosis Society**
PO Box 950871
Lake Mary, FL 32795-0871
407-829-4488
888-655-4766
mail@americanhs.org
www.americanhs.org
Educates the public, the medical community and the media by distributing the most current information available on hereditary hemochromatosis (HH) including DNA screening for HH and pediatric HH; also facilitates patient empowerment through an online network.
Sandra Thomas, President
- 422 American Neurogastroenterology & Motility Society**
45685 Harmony Lane
Belleville, MI 48111
734-699-1130
Fax: 734-699-1136
admin@motilitysociety.org
www.motilitysociety.org
Promotes research and sponsors professional education seminars about gastrointestinal motility topics including disorders of esophageal, gastric, small intestinal, and colonic function; and sponsors biennial meetings (even years), symposia and courses.
John Pandolfino, MD, President
Lori Ennis, Executive Director
- 423 American Pancreatic Association**
2508 West 71st Street
Prairie Village, KS 66208
913-402-7102
apa@apapancreas.org
www.american-pancreatic-association.org
Provides forum for presentation of scientific research related to the pancreas.
O. Joe Hines, MD, President
Ashok Saluja, Secretary-Treasurer
- 424 American Society for Gastrointestinal Endoscopy**
3300 Woodcreek Drive
Downers Grove, IL 60515
630-573-0600
800-353-2743
Fax: 630-963-8332
info@asge.org
www.asge.org
ASGE provides information, training, and practice guidelines about gastrointestinal endoscopic techniques.
Douglas K. Rex, MD, MASGE, President
Donald J. Palmisano, JD, CAE, Chief Executive Officer
- 425 American Society for Parenteral and Enteral Nutrition (ASPEN)**
8401 Colesville Road
Silver Spring, MD 20910
301-587-6315
Fax: 301-587-2365
aspennutritioncare.org
www.nutritioncare.org
Offers information and continuing medical education to professionals involved in the care of parenterally and enterally fed patients. Membership includes complimentary subscriptions to two peer reviewed journals.
Wanda Johnson, Chief Executive Officer
Joanne Kieffer, Senior Director, Finance
- 426 Association of Gastrointestinal Motility Disorders**
140 Pleasant Street
Lexington, MA 02421
781-275-1300
info@agmdhope.org
www.agmdhope.org
A non-profit international organization which serves as an integral educational resource concerning digestive motility diseases and disorders. Also functions as an important information base for members of the medical and scientific communities. Also provides a forum for patients suffering from digestive motility diseases and disorders as well as their families and members of the medical, scientific, and nutritional communities.
Mary Angela DeGrazia-DiTucci, President
- 427 Canadian Celiac Association**
1450 Meyerside Drive
Mississauga, Ontario, L5T-2N5
905-507-6208
800-363-7296
info@celiac.ca
www.celiac.ca
A national organization dedicated to providing services and support to persons with celiac disease and dermatitis herpetiformis through programs of awareness, advocacy, education, and research.
Janet Bolton, President
Melissa Secord, Executive Director
- 428 Celiac Society**
www.celiacsociety.com
Volunteer organization seeking to raise awareness about and provide information on celiac disease and other gluten-related disorders.
- 429 Centers for Medicare & Medicaid Services**
7500 Security Boulevard
Baltimore, MD 21244
www.cms.gov

A scripted, visual presentation covers basic bone biology, osteoporosis risk factors, diagnosis, prevention and treatment. Available as a slide presentation or power point CD Rom.

- 1245 PACE I**
Arthritis Foundation
PO Box 6996 800-207-8633
Alpharetta, GA 30023-6996
- 1246 PACE II**
Arthritis Foundation
PO Box 6996 800-207-8633
Alpharetta, GA 30023-6996 www.arthritis.com
- 1247 Pathways to Better Living**
Arthritis Foundation
PO Box 6996 800-207-8633
Alpharetta, GA 30023-6996 www.arthritis.com
- 1248 Patient Education Video**
National Osteoporosis Foundation
1150 17th Street, NW 202-223-2226
Washington, DC 20036-1292 800-221-4222
info@nof.org
www.nof.org
- Discusses treatment, exercise, nutrition and coping strategies for those already diagnosed with osteoporosis.
- 1249 Pool Exercise Program**
Arthritis Foundation Distribution Center
PO Box 6996 800-207-8633
Alpharetta, GA 30023-6996 www.arthritis.com
- This video features water exercises that will help you increase and maintain joint flexibility, strengthen and tone muscles, and increase endurance. All exercises are performed in water at chest level. No swimming skills are necessary.

Web Sites

- 1250 American Juvenile Arthritis Organization**
www.arthritis.com
Serves the special needs of young people with arthritis and their families. Provides information, inspiration and advocacy.
- 1251 Arthritis Foundation**
www.arthritis.org
Provides services to help through information, referrals, speakers bureaus, forums, self-help courses, and various support groups and programs nationwide.
- 1252 Dietary Guidelines for Americans**
www.dietaryguidelines.gov
Publishes the Dietary Guidelines for Americans, a guide providing nutritional advice to promote health and prevent disease. Updated versions of the Dietary Guidelines are released by the US Departments of Agriculture (USDA) and Health & Human Services (HHS) every five years.
- 1253 Everyday Health**
www.everydayhealth.com
Aims to provide evidence-based health information from physicians and healthcare providers.
- 1254 FamilyDoctor.org**
www.familydoctor.org
Medical advice and information provided by the American Academy of Family Physicians. Resources include a medical dictionary, a symptom checker tool, a BMI calculator, and medication information.
- 1255 Healing Well**
www.healingwell.com
An online health resource guide to medical news, chat, information and articles, newsgroups and message boards, books, disease-related web sites, medical directories, and more for patients, friends, and family coping with disabling diseases, disorders, or chronic illnesses.
- 1256 Health Finder**
www.healthfinder.gov
- 1257 Healthline**
www.healthline.com
Provides medical and health articles and information.
- 1258 Healthlink USA**
www.healthlinkusa.com
Health information concerning treatment, cures, prevention, diagnosis, risk factors, research, support groups, email lists, personal stories and much more. Updated regularly.
- 1259 MedicineNet**
www.medicinenet.com
An online resource for consumers providing easy-to-read, authoritative medical and health information.
- 1260 MedlinePlus**
www.medlineplus.gov
A service of the National Library of Medicine, MedlinePlus is an online resource providing health and wellness information in both English and Spanish.
- 1261 Medscape**
www.medscape.com
Medscape offers specialists, primary care physicians, and other health professionals the Web's most robust and integrated medical information and educational tools.
- 1262 MyPlate**
www.myplate.gov
Created and managed by the US Department of Agriculture's Center for Nutrition Policy & Promotion, MyPlate is a dietary guide providing resources and recipes to promote healthy eating for all Americans.
- 1263 NIH Osteoporosis and Related Bone Disease**
www.niams.nih.gov/Health_Info/Bone
Provides patients, health professionals, and the public with an important link to resources and information on metabolic bone diseases. The center is dedicated to increasing the awareness, knowledge, and understanding of physicians, health professionals, patients, underserved and at-risk populations, and the general public about the prevention, early detection, and treatment of osteoporosis and related bone diseases.
- 1264 National Arthritis & Musculoskeletal & Skin Diseases Information Clearinghouse**
www.niams.nih.gov
The mission of the National Institute of Arthritis and Musculoskeletal and Skin Diseases is to support research into the causes, treatment, and prevention of arthritis and musculoskeletal and skin diseases; the training of basic and clinical scientists to carry out this research; and the dissemination of information on research progress in these diseases.
- 1265 National Osteoporosis Foundation**
www.nof.org
The National Osteoporosis Foundation is dedicated to preventing osteoporosis, promoting strong bones, and reducing human suffering through education, advocacy and research.
- 1266 Nutrition.gov**
www.nutrition.gov
Sponsored by the United States Department of Agriculture (USDA), Nutrition.gov offers information on topics in food and nutrition, including healthy eating, physical activity, and food safety.
- 1267 Science Daily**
www.sciencedaily.com
Provides information on the latest news and research in science, health, the environment, and technology.
- 1268 The Nutrition Source**
hsph.harvard.edu/nutritionsource
From the Harvard T.H. Chan School of Public Health, The Nutrition Source provides news, information, and guidance for nutrition and healthy eating.