



Nutrition and Health Across the Lifespan:

The Guidelines and Key Recommendations

The Guidelines

Make every bite count with the *Dietary Guidelines for Americans*. Here's how:



Key Recommendations



Follow a healthy dietary pattern at every life stage.

At every life stage—infancy, toddlerhood, childhood, adolescence, adulthood, pregnancy, lactation, and older adulthood—it is never too early or too late to eat healthfully.

- For about the first 6 months of life, exclusively feed infants human milk. Continue to feed infants human milk through at least the first year of life, and longer if desired. Feed infants iron-fortified infant formula during the first year of life when human milk is unavailable. Provide infants with supplemental vitamin D beginning soon after birth.
- At about 6 months, introduce infants to nutrient-dense complementary foods. Introduce infants to potentially allergenic foods along with other complementary foods. Encourage infants and toddlers to consume a variety of foods from all food groups. Include foods rich in iron and zinc, particularly for infants fed human milk.
- From 12 months through older adulthood, follow a healthy dietary pattern across the lifespan to meet nutrient needs, help achieve a healthy body weight, and reduce the risk of chronic disease.



Customize and enjoy nutrientdense food and beverage choices to reflect personal preferences, cultural traditions, and budgetary considerations.

A healthy dietary pattern can benefit all individuals regardless of age, race, or ethnicity, or current health status. The *Dietary*

Guidelines provides a framework intended to be customized to individual needs and preferences, as well as the foodways of the diverse cultures in the United States.

Guideline

Focus on meeting food group needs with nutrient-dense foods and beverages, and stay within calorie limits.

An underlying premise of the *Dietary Guidelines* is that nutritional needs should be met primarily from foods and

beverages—specifically, nutrient-dense foods and beverages. Nutrient-dense foods provide vitamins, minerals, and other health-promoting components and have no or little added sugars, saturated fat, and sodium. A healthy dietary pattern consists of nutrient-dense forms of foods and beverages across all food groups, in recommended amounts, and within calorie limits.

The core elements that make up a healthy dietary pattern include:

- Vegetables of all types—dark green; red and orange; beans, peas, and lentils; starchy; and other vegetables
- Fruits, especially whole fruit
- Grains, at least half of which are whole grain
- Dairy, including fat-free or low-fat milk, yogurt, and cheese, and/or lactose-free versions and fortified soy beverages and yogurt as alternatives
- Protein foods, including lean meats, poultry, and eggs; seafood; beans, peas, and lentils; and nuts, seeds, and soy products
- Oils, including vegetable oils and oils in food, such as seafood and nuts



Limit foods and beverages higher in added sugars, saturated fat, and sodium, and limit alcoholic beverages.

At every life stage, meeting food group recommendations—even with nutrientdense choices—requires most of a person's daily calorie needs and sodium limits. A healthy

dietary pattern doesn't have much room for extra added sugars, saturated fat, or sodium—or for alcoholic beverages. A small amount of added sugars, saturated fat, or sodium can be added to nutrient-dense foods and beverages to help meet food group recommendations, but foods and beverages high in these components should be limited. **Limits are:**

- **Added sugars**—Less than 10 percent of calories per day starting at age 2. Avoid foods and beverages with added sugars for those younger than age 2.
- **Saturated fat**—Less than 10 percent of calories per day starting at age 2.
- **Sodium**—Less than 2,300 milligrams per day—and even less for children younger than age 14.
- Alcoholic beverages—Adults of legal drinking age can choose not to drink or to drink in moderation by limiting intake to 2 drinks or less in a day for men and 1 drink or less in a day for women, when alcohol is consumed. Drinking less is better for health than drinking more. There are some adults who should not drink alcohol, such as women who are pregnant.



Guideline 1 Follow a Healthy Dietary Pattern at Every Life Stage

A fundamental premise of the *Dietary Guidelines* is that almost everyone, no matter an individual's age, race, or ethnicity, or health status, can benefit from shifting food and beverage choices to better support healthy dietary patterns.

Healthy eating starts at birth with the exclusive consumption of human milk, if possible, for about the first 6 months. If human milk is unavailable, infants should be fed an iron-fortified commercial infant formula (i.e., labeled "with iron") regulated by the U.S. Food and Drug Administration (FDA), which are based on standards that ensure nutrient content and safety. Healthy eating continues with the introduction of complementary foods and beverages at about 6 months of age. By 12 months, infants should maintain their healthy eating as they transition to developmentally appropriate foods and beverages. Healthy eating continues in each life stage thereafter. Even though nutrient needs vary across life stages, the foods and beverages that individuals should eat over the lifespan are remarkably consistent.

This chapter provides foundational guidance about maintaining a healthy dietary pattern across each life stage—infancy, toddlerhood, childhood, adolescence, adulthood, pregnancy, lactation, and older adulthood. Because the nutritional needs and transition of infants and toddlers are unique, **Chapter 2** provides a focused discussion on this age group. **Chapters 3**, **4**, **5**, and **6** then provide tailored nutrition information specific to children and adolescents, adults, women who are pregnant or lactating, and older adults, respectively.

What Is a Dietary Pattern?

Over the course of any given day, week, or year, individuals consume foods and beverages¹ in combination—a dietary pattern. A dietary pattern represents the totality of what individuals habitually eat and drink, and the parts of the pattern act synergistically to affect health. As a result, the dietary pattern may better predict overall health status and disease risk than individual foods or nutrients.

A healthy dietary pattern consists of nutrient-dense

forms of foods and beverages across all food groups, in recommended amounts, and within calorie limits. Achieving a healthy dietary pattern at each life stage not only supports health at that point in time, but also supports health in the next life stage and possibly for future generations. If healthy dietary patterns can be established early in life and sustained thereafter, the impact on health could be significant. Establishing and maintaining a healthy dietary pattern can help minimize diet-related chronic disease risk. Conversely, consuming foods and beverages that are not nutrientdense may lead to disease expression in later years. High intakes of such foods (i.e., an unhealthy dietary pattern) throughout the lifespan can increase the risk of developing chronic diseases.

The good news is that at any stage of life, individuals can make efforts to adopt a healthy dietary pattern and improve their health. The Healthy U.S.-Style Dietary Pattern, USDA's primary Dietary Pattern, provides a framework for healthy eating that all Americans can follow. It is based on the types and proportions of foods Americans of all ages, genders, races, and ethnicities typically consume, but in nutrient-dense forms and appropriate amounts.

The Healthy U.S.-Style Dietary Pattern is carried forward from the 2015-2020 Dietary Guidelines for Americans. The 2,000-calorie level of the pattern is shown in
 Table 1-1.
 The Healthy Mediterranean-Style Dietary
 Pattern and the Healthy Vegetarian Dietary Patternalso carried forward from the 2015-2020 Dietary Guidelines for Americans-are variations of the Healthy U.S.-Style Dietary Pattern that have the same core elements. The USDA Dietary Patterns are described in Appendix 3. USDA Dietary Patterns and are meant to be tailored to meet cultural and personal preferences and used as guides to plan and serve meals for individuals, households, and in a variety of institutions and other settings. The Dietary Approaches to Stop Hypertension (DASH) dietary pattern is an example of a healthy dietary pattern and has many of the same characteristics as the Healthy U.S.-Style Dietary Pattern. Additional details on DASH are available at **nhlbi.nih.** gov/health-topics/dash-eating-plan.

¹ If not specified explicitly, references to "foods" refer to "foods and beverages."



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 [®]	Daily Amount^b of Food From Each Group (Vegetable and protein foods subgroup amounts are per week.)
Vegetables (cup eq/day)	2 1/2
	Vegetable Subgroups in Weekly Amounts
Dark-Green Vegetables (cup eq/wk)	1 1⁄2
Red and Orange Vegetables (cup eq/wk)	5 1/2
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 <u>Appendix 3</u> for all calorie levels of the pattern.

Figure 1-1

Examples of Calories in Food Choices That Are Not Nutrient Dense and Calories in Nutrient-Dense Forms of These Foods



Data Source: U.S. Department of Agriculture, Agricultural Research Service. FoodData Central, 2019. <u>fdc.nal.usda.gov</u>.



Figure 1-2 Making Nutrient-Dense Choices: One Food or Beverage At a Time

Every food and beverage choice is an opportunity to move toward a healthy dietary pattern. Small changes in single choices add up and can make a big difference. These are a few examples of realistic, small changes to nutrient-dense choices that can help people adopt healthy dietary patterns.





The Health Benefits of a Healthy Dietary Pattern

Science is the foundation of the *Dietary Guidelines* recommendations on what Americans should eat and drink to promote health, reduce risk of chronic disease, and meet nutrient needs. The science shows that consuming a healthy dietary pattern, meeting food group and nutrient needs with nutrient-dense foods and beverages, and limiting intake of foods and beverages that are not nutrient-dense is related to many health benefits. Science also supports the idea that every life stage provides an opportunity to make food choices that promote health and well-being, achieve and maintain appropriate weight status, and reduce risk of diet-related chronic disease.

The science supporting the *Dietary Guidelines* is extensively documented in the *Scientific Report of the 2020 Dietary Guidelines Advisory Committee*, which describes the state of the science on key topics related to diet and health. Outcomes with Strong or Moderate evidence are provided in **Figure 1-3**. The report is available at **DietaryGuidelines.gov**.

Evidence on the association between dietary patterns and reduced risk of diet-related chronic diseases has expanded in recent years and supports the use of dietary patterns as a foundation for the recommendations in the *Dietary Guidelines for Americans, 2020-2025.* Consistent evidence demonstrates that a healthy dietary pattern is associated with beneficial outcomes for all-cause mortality, cardiovascular disease, overweight and obesity, type 2 diabetes, bone health, and certain types of cancer (breast and colorectal).

Common characteristics of dietary patterns associated with positive health outcomes include relatively higher intake of vegetables, fruits, legumes, whole grains, low- or non-fat dairy, lean meats and poultry, seafood, nuts, and unsaturated vegetable oils, and relatively lower consumption of red and processed meats, sugar-sweetened foods and beverages, and refined grains. The evidence examined showed broad representation across a number of populations and demographic groups. This suggests a consistent association no matter the region or cultural context in which a healthy dietary pattern is consumed. In addition, dietary patterns characterized by higher intake of red and processed meats, sugar-sweetened foods and beverages, and refined grains are, in and of themselves, associated with detrimental health outcomes. These findings are consistent with-and build on-the evidence base that informed the 2015-2020 Dietary Guidelines.

A Healthy Dietary Pattern Supports Appropriate Calorie Levels

The total number of calories a person needs each day varies depending on a number of factors, namely the person's age, sex, height, weight, level of physical activity, and pregnancy or lactation status. Due to reductions in basal metabolic rate that occur with aging, calorie needs generally decrease for adults as they age. In addition, a need to lose, maintain, or gain weight affects how many calories should be consumed. Estimated amounts of calories needed based on age, sex, and level of physical activity are provided in **Appendix 2**. **Estimated Calorie Needs**, and estimated calorie needs relevant for different ages are provided in each life stage chapter. These estimates are based on the Estimated Energy Requirement (EER) equations established by the National Academies of Sciences, Engineering, and Medicine (National Academies) using reference heights (average) and reference weights (healthy) for each age-sex group. These amounts are estimates. The best way to evaluate calorie intake, in comparison to calorie

needs, is by measuring body weight status.

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Rather than focus on weight status at any one point in life, the *Dietary Guidelines* supports healthy weight trajectories at each stage of life—appropriate weight gain during pregnancy and postpartum weight loss, healthy growth and development from infancy through adolescence, weight stability during mid-life, and healthy body composition late in life. Meeting the *Dietary Guidelines* recommendations within calorie needs can help prevent excess weight gain at every life stage and support overall good health.



Figure 1-3

The Science Underlying the *Dietary Guidelines* Demonstrates That Healthy Eating Across the Lifespan Can Promote Health and Reduce Risk of Chronic Disease

Birth Through 23 Months

- Lower risk of overweight and obesity
- Lower risk of type 1 diabetes
- Adequate iron status and lower risk of iron deficiency
- Lower risk of peanut allergy
- Lower risk of asthma

Women Who Are Pregnant or Lactating

- Favorable cognitive development in the child
- Favorable folate status in women during pregnancy and lactation

Children and Adolescents Lower adiposity Lower total and low-density lipoprotein (LDL) cholesterol Adults, Including **Older Adults** Lower risk of all-cause mortality Lower risk of cardiovascular disease • Lower risk of cardiovascular disease mortality Lower total and LDL cholesterol Lower blood pressure Lower risk of obesity Lower body mass index, waist circumference, and body fat • Lower risk of type 2 diabetes • Lower risk of cancers of the breast. colon. and rectum Favorable bone health, including lower risk of hip fracture

NOTE: The 2020 Dietary Guidelines Advisory Committee examined the evidence on diet and health across the lifespan. Evidence is not available for all combinations of exposures and outcomes for the population subgroups presented in this figure. The Committee rated the evidence on diet and health as Strong, Moderate, Limited, or Grade Not Assignable. Only outcomes with Strong or Moderate evidence are included in this table. See the **Committee's Report** for specific graded conclusion statements.

Guideline



Key Dietary Principles

To help people meet the Guidelines and Key Recommendations, the following are important principles when making decisions about nutrientdense food and beverage choices to achieve a healthy dietary pattern.

MEET NUTRITIONAL NEEDS PRIMARILY FROM FOODS AND BEVERAGES

The *Dietary Guidelines* are designed to meet the Recommended Dietary Allowances and Adequate Intakes for essential nutrients, as well as Acceptable Macronutrient Distribution Ranges, all set by the National Academies. An underlying premise of the *Dietary Guidelines* is that nutritional needs should be met primarily from foods and beverages specifically, nutrient-dense foods and beverages. In some cases, when meeting nutrient needs is not otherwise possible, fortified foods and nutrient-containing dietary supplements are useful. It is important to note that the nutrient density and healthfulness of what people eat and drink often is determined ultimately by how a food item, dish, or meal is prepared, at home and away from home or produced by a manufacturer. Based on the U.S. food supply and marketplace, the examples of healthy dietary patterns in this edition are achievable through thoughtful, informed choices one decision, one meal, one day at a time—and consistently over time.

CHOOSE A VARIETY OF OPTIONS FROM EACH FOOD GROUP

Enjoy different foods and beverages within each food group. This can help meet nutrient needs—and also allows for flexibility so that the *Dietary Guidelines* can be tailored to meet cultural and personal preferences. All forms of foods, including fresh, canned, dried, frozen, and 100% juices, in nutrient-dense forms, can be included in healthy dietary patterns.

PAY ATTENTION TO PORTION SIZE

Portion size is a term often used to describe the amount of a food or beverage served or consumed in one eating occasion. It is important to pay attention to portion size when making food and beverage choices, particularly for foods and beverages that are not nutrient-dense. A concept that can help people choose appropriate portions is **serving size**. This term is included on the Nutrition Facts label and refers to the amount of a food or beverage that is customarily consumed—it is not a recommendation of how much to eat or drink. Consuming less than the stated serving size results in consuming fewer calories and other nutrients or food components. Some products may have multiple servings per package.









Most Americans Do Not Follow a Healthy Dietary Pattern

The typical dietary patterns currently consumed by many in the United States do not align with the *Dietary Guidelines* (**Figure 1-4**). The Healthy Eating Index (HEI) is a measure of diet quality that can be used to assess compliance with the *Dietary Guidelines*. For Americans ages 2 and older, HEI-2015 scores indicate that intakes are not consistent with recommendations for a healthy dietary pattern. Average diet quality has slightly improved in the past 10 years, but the average score of 59 (on a scale from 0 to 100) indicates that people have much room for improvement. Differences in overall HEI scores are seen across age, sex, race-ethnic, and income subgroups and by pregnancy and lactation status, though poor diet quality is observed across all groups. With each step closer to a diet that aligns with the core elements of a healthy dietary pattern, HEI scores will increase and risk for chronic disease will decrease.

Figure 1-4

Adherence of the U.S. Population to the *Dietary Guidelines* Across Life Stages, as Measured by Average Total Healthy Eating Index-2015 Scores



NOTE: HEI-2015 total scores are out of 100 possible points. A score of 100 indicates that recommendations on average were met or exceeded. A higher total score indicates a higher quality diet.

Data Source: Analysis of What We Eat in America, NHANES 2015-2016, ages 2 and older, day 1 dietary intake data, weighted.

In addition, the high percentage of the population with overweight or obesity suggests that many people in the United States consume foods and beverages that contribute to a calorie imbalance, a situation more likely to occur with low physical activity. As shown in the *Introduction*, **Table I-1**, 74 percent of all adults and 40 percent of all children and youth in the United States have either overweight or obesity.

Even from the youngest ages, almost all Americans should shift to healthier food and beverage choices and consume smaller portions to achieve a healthy dietary pattern within an appropriate number of calories. It is never too early or too late to improve intake and establish a healthy dietary pattern.

Guideline 2

Customize and Enjoy Food and Beverage Choices to Reflect Personal Preferences, Cultural Traditions, and Budgetary Considerations

Eating should be enjoyed, and a healthy dietary pattern can be enjoyable, from early life to older adulthood. The science reviewed to inform the *Dietary Guidelines* represents the diversity of Americans, including all ages and life stages, different racial and ethnic backgrounds, and a range of socioeconomic statuses. A healthy dietary pattern can benefit all individuals regardless of age, race or ethnicity, or current health status.

The Dietary Guidelines provides a framework intended to be customized to fit individual, household, and Federal program participants' preferences, as well as the foodways of the diverse cultures in the United States. The U.S. population is diverse in myriad ways. The Dietary Guidelines framework purposely provides recommendations by food groups and subgroups-not specific foods and beverages-to avoid being prescriptive. This framework approach ensures that people can "make it their own" by selecting healthy foods, beverages, meals, and snacks specific to their needs and preferences.

The food groups include a broad variety of nutrient-dense food and beverage choices. In every setting, across all cultures, and at any age or budget, there are foods and beverages that can fit within the *Dietary Guidelines* framework.







Start with Personal Preferences

Exposure to different types of food is important early in life to better develop a child's interest and willingness to eat and enjoy a variety of foods. Through each life stage that follows, a key starting point for establishing and maintaining a healthy dietary pattern is to ensure that individual and/or family preferences—in nutrient-dense forms—are built into day-to-day choices.

Guideline

Incorporate Cultural Traditions

Cultural background can have significant influence on food and beverage choices. Customizing the *Dietary Guidelines* framework to reflect specific cultures and traditions is an important strategy to help communities across the country eat and enjoy a healthy dietary pattern. Nutrient-dense culturally relevant foods and beverages are part of all of the food groups. Spices and herbs can help flavor foods when reducing added sugars, saturated fat, and sodium, and they also can add to the enjoyment of nutrient-dense foods, dishes, and meals that reflect specific cultures. Relying on the expertise of professionals in nutrition and in specific cultural foodways can help people prepare foods healthfully while retaining heritage.

Consider Budget

Despite a common perception that eating healthfully is expensive, a healthy dietary pattern can be affordable and fit within budgetary constraints. There are a range of strategies that can be used to help individuals and families follow a healthy dietary pattern including advanced planning; considering regional and seasonal food availability; and incorporating a variety of fresh, frozen, dried, and canned options. The USDA Food Plans-Thrifty, Low-Cost, Moderate-Cost, and Liberal-Cost food plans-each represent a nutritious diet at a different cost level. These plans are scheduled to be revised, with an updated Thrifty Food Plan published by the end of 2022 to reflect this edition of the Dietary Guidelines and updated food availability and food cost data.

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Figure 1-5 Customizing the *Dietary Guidelines* Framework

The *Dietary Guidelines* approach of providing a framework–not prescriptive details–ensures that its recommendations can "meet people where they are," from personal preferences to cultural foodways, and including budgetary considerations. The examples below are a sample of the range of options in each food group—to be eaten in nutrient-dense forms. Additional examples are listed under **Table A3-2** in *Appendix 3*.

Vegetables

- **Dark-Green Vegetables:** All fresh, frozen, and canned darkgreen leafy vegetables and broccoli, cooked or raw: for example, amaranth leaves, bok choy, broccoli, chamnamul, chard, collards, kale, mustard greens, poke greens, romaine lettuce, spinach, taro leaves, turnip greens, and watercress.
- **Red and Orange Vegetables:** All fresh, frozen, and canned red and orange vegetables or juice, cooked or raw: for example, calabaza, carrots, red or orange bell peppers, sweet potatoes, tomatoes, 100% tomato juice, and winter squash.
- Beans, Peas, Lentils: All cooked from dry or canned beans, peas, chickpeas, and lentils: for example, black beans, black-eyed peas, bayo beans, chickpeas (garbanzo beans), edamame, kidney beans, lentils, lima beans, mung beans, pigeon peas, pinto beans, and split peas. Does not include green beans or green peas.
- **Starchy Vegetables:** All fresh, frozen, and canned starchy vegetables: for example, breadfruit, burdock root, cassava, corn, jicama, lotus root, lima beans, plantains, white potatoes, salsify, taro root (dasheen or yautia), water chestnuts, yam, and yucca.
- Other Vegetables: All other fresh, frozen, and canned vegetables, cooked or raw: for example, asparagus, avocado, bamboo shoots, beets, bitter melon, Brussels sprouts, cabbage (green, red, napa, savoy), cactus pads (nopales), cauliflower, celery, chayote (mirliton), cucumber, eggplant, green beans, kohlrabi, luffa, mushrooms, okra, onions, radish, rutabaga, seaweed, snow peas, summer squash, tomatillos, and turnips.



Fruits

 All fresh, frozen, canned, and dried fruits and 100% fruit juices: for example, apples, Asian pears, bananas, berries (e.g., blackberries, blueberries, currants, huckleberries, kiwifruit, mulberries, raspberries, and strawberries); citrus fruit (e.g., calamondin, grapefruit, lemons, limes, oranges, and pomelos); cherries, dates, figs, grapes, guava, jackfruit, lychee, mangoes, melons (e.g., cantaloupe, casaba, honeydew, and watermelon); nectarines, papaya, peaches, pears, persimmons, pineapple, plums, pomegranates, raisins, rhubarb, sapote, and soursop.













Figure 1-5 Customizing the Dietary Guidelines Framework (continued)



Grains

- Whole grains: All whole-grain products and whole grains used as ingredients: for example, amaranth, barley (not pearled), brown rice, buckwheat, bulgur, millet, oats, popcorn, quinoa, dark rye, whole-grain cornmeal, whole-wheat bread, whole-wheat chapati, whole-grain cereals and crackers, and wild rice.
- **Refined grains:** All refined-grain products and refined grains used as ingredients: for example, white breads, refined-grain cereals and crackers, corn grits, cream of rice, cream of wheat, barley (pearled), masa, pasta, and white rice. Refined-grain choices should be enriched.



Dairy and Fortified Soy Alternatives

 All fluid, dry, or evaporated milk, including lactose-free and lactose-reduced products and fortified soy beverages (soy milk), buttermilk, yogurt, kefir, frozen yogurt, dairy desserts, and cheeses. Most choices should be fat-free or low-fat. Cream, sour cream, and cream cheese are not included due to their low calcium content.





Dairy

Protein Foods

- **Meats, Poultry, Eggs:** Meats include beef, goat, lamb, pork, and game meat (e.g., bison, moose, elk, deer). Poultry includes chicken, Cornish hens, duck, game birds (e.g., ostrich, pheasant, and quail), goose, and turkey. Organ meats include chitterlings, giblets, gizzard, liver, sweetbreads, tongue, and tripe. Eggs include chicken eggs and other birds' eggs. Meats and poultry should be lean or low-fat.
- **Seafood:** Seafood examples that are lower in methylmercury include: anchovy, black sea bass, catfish, clams, cod, crab, crawfish, flounder, haddock, hake, herring, lobster, mullet, oyster, perch, pollock, salmon, sardine, scallop, shrimp, sole, squid, tilapia, freshwater trout, light tuna, and whiting.
- Nuts, Seeds, Soy Products: Nuts and seeds include all nuts (tree nuts and peanuts), nut butters, seeds (e.g., chia, flax, pumpkin, sesame, and sunflower), and seed butters (e.g., sesame or tahini and sunflower). Soy includes tofu, tempeh, and products made from soy flour, soy protein isolate, and soy concentrate. Nuts should be unsalted.





Guideline 3



Focus on Meeting Food Group Needs With Nutrient-Dense Foods and Beverages, and Stay Within Calorie Limits

The *Dietary Guidelines* include recommendations for food groups—vegetables, fruits, grains, dairy, and protein foods eaten at an appropriate calorie level and in forms with limited amounts of added sugars, saturated fat, and sodium. Science shows that these same core elements of a healthy dietary pattern are consistent across each life stage.

However, as shown in **Figure 1-6**, when compared to the Healthy U.S.-Style Dietary Pattern, most Americans have substantial room for improvement:

- More than 80 percent have dietary patterns that are low in vegetables, fruits, and dairy.
- More than half of the population is meeting or exceeding total grain and total protein foods recommendations, but are not meeting the recommendations for the subgroups within each of these food groups.

Figure 1-6

Dietary Intakes Compared to Recommendations: Percent of the U.S. Population Ages 1 and Older Who Are Below and At or Above Each Dietary Goal



***NOTE:** Recommended daily intake of whole grains is to be at least half of total grain consumption, and the limit for refined grains is to be no more than half of total grain consumption.

Data Source: Analysis of What We Eat in America, NHANES 2013-2016, ages 1 and older, 2 days dietary intake data, weighted. *Recommended Intake Ranges*: Healthy U.S.-Style Dietary Patterns (see *Appendix 3*).

Learn More:

Table A3-2in Appendix3 provides the foodgroup-based HealthyU.S.-Style DietaryPattern as a sampleframework. Informationon what counts as acup- or ounce-equivalentis also provided underthis table in footnote c.



About Beans, Peas, and Lentils

"Beans, peas, and lentils" is a new name for the vegetable subgroup formerly called "legumes (beans and peas)." Beans, peas, and lentils, which also are known as pulses, include the dried edible seeds of legumes. The foods in this vegetable subgroup have not changed. However, the new name of the subgroup more accurately reflects the category of foods included. Beans include varieties such as kidney beans, pinto beans, white beans, black beans, lima beans, and fava beans. Also included are dried peas (e.g., chickpeas, black-eyed peas, pigeon peas, and split peas) and lentils. Edamame, which is the soybean in the pod, is counted in the beans, peas, and lentils subgroup even though it is eaten fresh and not dried.

Because beans, peas, and lentils have a similar nutrient profile to foods in both the vegetable group and the protein foods group, they may be thought of as either a vegetable or a protein food when aiming to meet recommended intakes.

Green peas and green (string) beans are not counted in the beans, peas, and lentils subgroup because the nutrient content of these vegetables is more similar to vegetables in other subgroups. Green peas, which are not dried before consumption, are grouped with starchy vegetables and green beans are in the other vegetables subgroup, which includes onions, iceberg lettuce, celery, and cabbage. Generally, foods made from processed soybeans are a part of the nuts, seeds and soy products protein foods subgroup. The following sections use the Healthy U.S.-Style Dietary Pattern to show how people can make shifts in their choices to achieve a healthy dietary pattern. Information on the amounts to consume—in cup and ounce equivalents—for each life stage is discussed in the subsequent life stage chapters and **Appendix 3. USDA Dietary Patterns**.

Guideline

Eating an appropriate mix of foods from the food groups and subgroups—within an appropriate calorie level—is important to promote health at each life stage. Each of the food groups and their subgroups provides an array of nutrients, and the amounts recommended reflect eating patterns that have been associated with positive health outcomes. Foods from all of the food groups should be eaten in nutrient-dense forms. The following sections describe special considerations related to each food group.

Vegetables

Healthy dietary patterns include a variety of vegetables from all five vegetable subgroups—dark green; red and orange; beans, peas, and lentils; starchy; and other. These include all fresh, frozen, canned, and dried options in cooked or raw forms, including 100% vegetable juices. Vegetables in their nutrient-dense forms have limited additions such as salt, butter, or creamy sauces. Examples of vegetables in each of the subgroups are available in **Appendix 3**.

Almost 90 percent of the U.S. population does not meet the recommendation for vegetables. In addition, with few exceptions, the U.S. population does not meet intake recommendations for any of the vegetable subgroups. About 45 percent of all vegetables are eaten as a separate food item; about 40 percent as part of a mixed dish; and the remainder are mostly consumed as snack foods and condiments. Vegetables, when consumed on their own, are generally consumed in forms with additional sodium either from salt added in cooking or added sauces such as soy sauce or bottled stir-fry sauces. Many vegetables are consumed as part of mixed dishes like sandwiches, pasta with a tomato-based sauce, or casseroles that may have other ingredients that are sources of saturated fat and/or sodium.

For most individuals, following a healthy eating pattern will require an increase in total vegetable intake and from all vegetable subgroups, shifting to nutrient-dense forms, and an increase in the variety of different vegetables consumed over time. Vegetables can be part of many types of mixed dishes, from burgers, sandwiches, and tacos, to pizza, stews, pasta dishes, grain-based casseroles, and soups. Strategies to increase vegetable intake include increasing the vegetable content of mixed dishes or eating less of a main dish to allow for more vegetables as side dishes—keeping these nutrient dense.

Fruits

The fruit food group includes whole fruits and 100% fruit juice. Whole fruits include fresh, canned, frozen, and dried forms. Whole fruits can be eaten in various forms, such as cut, sliced, diced, or cubed. At least half of the recommended amount of fruit should come from whole fruit, rather than 100% juice. When juices are consumed, they should be 100% juice and always pasteurized or 100% juice diluted with water (without added sugars). Also, when selecting canned fruit, choose options that are canned with 100% juice or options lowest in added sugars.

About 80 percent of the U.S. population does not meet fruit recommendations. Over 60 percent of all fruit intake comes from whole forms—fresh, canned, frozen, or dried—or 100% juice. Fruit is generally consumed in nutrient-dense forms such as plain bananas, apples, oranges, or grapes. However, some fruit is consumed as part of foods that may not be nutrient-dense, such as fruit pie or similar desserts.

Most people would benefit from increasing their intake of fruit, mostly as whole fruits in nutrient-dense forms. A wide variety of fruits are available in the U.S. marketplace, some year-round and others seasonally. Strategies to help achieve this shift include choosing more whole fruits as snacks and including them in meals.

Grains

Healthy dietary patterns include whole grains and limit the intake of refined grains. At least half of total grains should be whole grains. Individuals who eat refined grains should choose enriched grains. Individuals who consume all of their grains as whole grains should include some that have been fortified with folic acid. Grain-based foods in nutrient-dense forms limit the additions of added sugars, saturated fat, and sodium.

A food is a 100% whole-grain food if the only grains it contains are whole grains. A 1 ounce-equivalent of 100% whole grains has 16 grams of whole grains. The recommendation to consume at least half of total grains as whole grains can be met in a number of ways.

• Choose 100% whole-grain foods for at least half of all grains consumed. The relative amount of whole grain in the food can be inferred by the placement of the grain in the ingredient list. The whole grain should be the first ingredient—or the second ingredient after water. For foods with multiple whole-grain ingredients, they should appear near the beginning of the ingredient list.



Guideline

• Choose products with at least 50 percent of the total weight as whole-grain ingredients. If a food has at least 8 grams of whole grains per ounce-equivalent then half of the grains are whole-grain ingredients.

Most Americans meet recommendations for total grain intakes, although 98 percent fall below recommendations for whole grains and 74 percent exceed limits for refined grains. Almost half of all intake of refined grains is from mixed dishes, such as sandwiches, burgers, tacos, pizza, macaroni and cheese, and spaghetti with meatballs. About 20 percent of intake of refined grains comes from snacks and sweets, including crackers, pretzels, cakes, cookies, and other grain desserts. The remaining refined grains are generally eaten as separate food items, such as pancakes, cereals, breads, tortillas, pasta, or rice. About 60 percent of whole-grain intake in the United States is from individual food items, mostly cereals and crackers, rather than mixed dishes. Grains are generally consumed in forms with higher amounts of sodium (e.g., breads, tortillas, crackers) and added sugars (e.g., grainbased desserts, many ready-to-eat breakfast cereals) rather than the nutrient-dense forms. Further, grains are often consumed as part of mixed dishes, such as pasta dishes, casseroles, and sandwiches that may have other ingredients that are not in nutrient-dense forms.

Shifting from refined to whole-grain versions of commonly consumed foods—such as from white to 100% whole-wheat breads, and white to brown rice where culturally appropriate—would increase whole-grain intakes and lower refined grain intakes to help meet recommendations. Additionally, shifting to more nutrientdense forms of grains, such as ready-to-eat breakfast cereals with less sugar, will help meet healthy dietary patterns. With careful planning, limited amounts of salt, butter, or sources of added sugars can be used to make



some grain-based foods more palatable while staying within calorie and nutrient limits, but most grains should be eaten in their most nutrient-dense forms. Reducing intakes of cakes, cookies, and other grain desserts will also support reducing refined grain intakes and staying within calorie needs.

Dairy and Fortified Soy Alternatives

Healthy dietary patterns feature dairy, including fat-free and low-fat (1%) milk, yogurt, and cheese. Individuals who are lactose intolerant can choose low-lactose and lactose-free dairy products. For individuals who choose dairy alternatives, fortified soy beverages (commonly known as "soy milk") and soy yogurt—which are fortified with calcium, vitamin A, and vitamin D—are included as part of the dairy group because they are similar to milk and yogurt based on nutrient composition and in their use in meals.

Other products sold as "milks" but made from plants (e.g., almond, rice, coconut, oat, and hemp "milks") may contain calcium and be consumed as a source of calcium, but they are not included as part of the dairy group because their overall nutritional content is not similar to dairy milk and fortified soy beverages. Therefore, consuming these beverages does not contribute to meeting the dairy group recommendation.

About 90 percent of the U.S. population does not meet dairy recommendations. The percent of Americans who drink milk as a beverage on a given day is 65 percent among young children, 34 percent in adolescents, and about 20 percent for adults. Dairy is generally consumed in forms with higher amounts of sodium (e.g., cheeses as part of mixed dishes such as sandwiches, pizza, and pasta dishes) and saturated fat (e.g., higher fat milks and yogurts) and can be a source of added sugars such as flavored milk, ice cream, and sweetened yogurts.

Most individuals would benefit by increasing intake of dairy in fat-free or low-fat forms, whether from milk

(including lactose-free milk), yogurt, and cheese, or from fortified soy beverages or soy yogurt. Strategies to increase dairy intake include drinking fat-free or low-fat milk or a fortified soy beverage with meals or incorporating unsweetened fat-free or low-fat yogurt into breakfast or snacks.

Protein Foods

Healthy dietary patterns include a variety of protein foods in nutrient-dense forms. The protein foods group comprises a broad group of foods from both animal and plant sources, and includes several subgroups: meats, poultry, and eggs; seafood; and nuts, seeds, and soy products. As noted previously, beans, peas, and lentils may be considered a part of the protein foods group as well as the vegetable group. Protein also is found in some foods from other food groups, such as dairy. Meats and poultry vary in fat content and include both fresh and processed forms. Most intake of meats and poultry should be from fresh, frozen, or canned, and in lean forms (e.g., chicken breast or ground turkey) versus processed meats (e.g., hot dogs, sausages, ham, luncheon meats).

A healthy vegetarian dietary pattern can be achieved by incorporating protein foods from plants. Compared with the Healthy U.S.-Style Dietary Pattern, the Healthy Vegetarian Dietary Pattern is higher in soy products (particularly tofu and other processed soy products); beans, peas, and lentils; nuts and seeds; and whole grains. Inclusion of dairy and eggs make this an example of a lacto-ovo vegetarian pattern. Meats, poultry, and seafood are not included.

Seafood, which includes fish and shellfish, is a protein foods subgroup that provides beneficial fatty acids (e.g., eicosapentaenoic acid [EPA] and docosahexaenoic acid [DHA]). In addition, mercury, in the form of methylmercury, is found in seafood in varying levels. The U.S. Food and Drug Administration (FDA) and the U.S. Environmental Protection Agency (EPA) provide joint advice regarding seafood consumption to limit methylmercury exposure for women who might become or are pregnant or lactating and young children.² Seafood choices higher in EPA and DHA and lower in methylmercury are encouraged. Seafood varieties commonly consumed in the United States that are higher in EPA and DHA and lower in methylmercury include salmon, anchovies, sardines, Pacific oysters, and trout. Tilapia, shrimp, catfish, crab, and flounder are commonly consumed varieties that also are lower in methylmercury.

Intakes of protein foods are close to the target amounts, but many Americans do not meet recommendations for specific protein subgroups. About three-quarters of Americans meet or exceed the recommendation for meats, poultry, and eggs. However, almost 90 percent do not meet the recommendation for seafood and more than half do not meet the recommendation for nuts, seeds, and soy products. Slightly less than half (43%) of all protein foods are consumed as a separate food item, such as a chicken breast, a steak, an egg, a fish

² Available at FDA.gov/fishadvice and EPA.gov/fishadvice.

filet, or peanuts. About the same proportion are consumed as part of a mixed dish (48%), with the largest amount from sandwiches including burgers and tacos. Protein foods are generally consumed in forms with higher amounts of saturated fat or sodium and often part of mixed dishes (e.g., sandwiches, casseroles, pasta dishes) that include other ingredients that are not in nutrient-dense forms.

Guideline

Shifts are needed within the protein foods group to add variety to subgroup intakes. Selecting from the seafood subgroup or the beans, peas, and lentils subgroup more often could help meet recommendations while still ensuring adequate protein consumption. Replacing processed or high-fat meats (e.g., hot dogs, sausages, bacon) with seafood could help lower intake of saturated fat and sodium, nutrients that are often consumed in excess of recommended limits. Replacing processed or high-fat meats with beans, peas, and lentils would have similar benefits, as well as increasing dietary fiber, a dietary component of public health concern.

Follow Food Safety Recommendations

An important part of healthy eating is keeping food safe. Individuals in their own homes can help keep food safe by following safe food handling practices. Four basic food safety principles work together to reduce the risk of foodborne illness—Clean, Separate, Cook, and Chill.



Some eating behaviors, such as consuming raw, undercooked, or unpasteurized food products, increase the risk of contracting a foodborne illness. Populations at increased risk of foodborne illness, or those preparing food for them, should use extra caution. These include women who are pregnant, young children, and older adults. Specific guidance for these life stages is discussed in subsequent chapters. Individuals with weakened immune systems are also at increased risk for foodborne illness. More information about food safety is available at:

- Your Gateway to Food Safety: foodsafety.gov
- USDA Food Safety Education campaigns: fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/teachothers/fsis-educational-campaigns
- Fight BAC!®: fightbac.org and for Babies and Toddlers: fightbac.org/kids/
- CDC 4 Steps to Food Safety: cdc.gov/foodsafety
- FDA: Buy, Store & Serve Safe Food at fda.gov/food/consumers/buy-store-serve-safe-food



Guideline

Oils

Oils are important to consider as part of a healthy dietary pattern as they provide essential fatty acids. Commonly consumed oils include canola, corn, olive, peanut, safflower, soybean, and sunflower oils. Oils also are naturally present in nuts, seeds, seafood, olives, and avocados. The fat in some tropical plants, such as coconut oil, palm kernel oil, and palm oil, are not included in the oils category because they contain a higher percentage of saturated fat than do other oils.

Strategies to shift intake include cooking with vegetable oil in place of fats high in saturated fat, including butter, shortening, lard, or coconut oil. However, some foods, such as desserts and sweet snacks, that are prepared with oils instead of fats high in saturated fat are still high in added sugars, and are thus not a nutrient-dense food choice.

Beverages

When choosing beverages in a healthy dietary pattern, both the calories and nutrients that they provide are important considerations. Beverages that are calorie-free—especially water—or that contribute beneficial nutrients, such as fat-free and low-fat milk and 100% juice, should be the primary beverages consumed. Coffee, tea, and flavored waters also are options, but the most nutrient-dense options for these beverages include little, if any, sweeteners or cream. For discussion on sugar-sweetened beverages or alcohol, see "Added Sugars" and "Alcoholic Beverages," respectively.

CAFFEINE

Caffeine is a dietary component that functions in the body as a stimulant. Most intake of caffeine in the United States comes from coffee, tea, and soda. Caffeine is a substance that is Generally Recognized as Safe (GRAS) in cola-type beverages by the Food and Drug Administration (FDA). For healthy adults, the FDA has cited 400 milligrams per day of caffeine as an amount not generally associated with dangerous, negative effects. Additional information related to caffeine is provided in subsequent life stage chapters.

Beverages and Added Sugars

Examples of beverages that often have added sugars are regular soda (i.e., not sugar-free), fruit drinks, sports drinks, energy drinks, sweetened waters, and coffee and tea beverages with added sugars. Coffee and tea beverages from restaurants can contain many extra calories because of the addition of cream or milk and sugar. See below for examples of 12-ounce beverages showing the added sugars and total calories.

Drink (12-ounce serving)	Total Calories	Added Sugars (Grams)	Added Sugars (Tea- spoons)
Plain Water	0	0	0
Unsweetened Tea	0	0	0
Sports Drinks	97	20	5
Cafe Mocha	290	21	5
Chai Tea Latte	180	23	5 ½
Sweetened Tea	115	29	7
Regular Soda	156	37	9
Lemonade	171	43	10
Fruit Drinks	238	59	14

Data Source: U.S. Department of Agriculture, Agricultural Research Service. 2020. USDA Food and Nutrient Database for Dietary Studies and USDA Food Patterns Equivalents Database 2017-2018. Food Surveys Research Group Home Page, ars.usda. gov/nea/bhnrc/fsrg.





Guideline

Dietary Components of Public Health Concern for Underconsumption

Current inadequate intake of nutrient-dense foods and beverages across food groups has resulted in underconsumption of some nutrients and dietary components. Calcium, potassium, dietary fiber, and vitamin D are considered dietary components of public health concern for the general U.S. population because low intakes are associated with health concerns. Additional dietary components that are underconsumed during specific life stages are highlighted in subsequent chapters.

If a healthy dietary pattern is consumed, amounts of calcium, potassium, and dietary fiber can meet recommendations. Individuals should be encouraged to make shifts to increase the intake of vegetables, fruits, beans, whole grains, and dairy to move intakes of these underconsumed dietary components closer to recommendations. In some cases, fortified foods and dietary supplements may be useful in providing one or more nutrients that otherwise may be consumed in less than recommended amounts. Vitamin D recommendations are harder to achieve through natural sources from diet alone and would require consuming foods and beverages fortified with vitamin D. In many cases, taking a vitamin D supplement may be appropriate especially when sunlight exposure is limited due to climate or the use of sunscreen. Lists of dietary sources of calcium, potassium, dietary fiber, and vitamin D are available at **DietaryGuidelines.gov**.



Guideline 4 Limit Foods and Beverages Higher in Added Sugars, Saturated Fat, and Sodium, and Limit Alcoholic Beverages

A healthy dietary pattern is designed to meet food group and nutrient recommendations while staying within calorie needs. Additionally, a healthy dietary pattern is designed to not exceed the Tolerable Upper Intake Level (UL) or Chronic Disease Risk Reduction (CDRR) level for nutrients. To achieve these goals, the pattern is based on consuming foods and beverages in their nutrient-dense forms—forms with the least amounts of added sugars, saturated fat, and sodium.

Most of the calories a person needs to eat each day—around 85 percent—are needed to meet food group recommendations healthfully, in nutrient-dense forms. The remaining calories—around 15 percent—are calories available for other uses, including for added sugars or saturated fat beyond the small amounts found in nutrient-dense forms of foods and beverages within the pattern, to consume more than the recommended amount of a food group, or for alcoholic beverages. This equates to 250 to 350 remaining calories for calorie patterns appropriate for most Americans.

Figure 1-7

The 85-15 Guide: Percentage of Calories Needed To Meet Food Group Needs With Nutrient-Dense Choices and Percentage Left for Other Uses





Figure 1-8 Making Nutrient-Dense Choices: One Meal At a Time

Slight changes to individual parts of a meal can make a big difference. This meal shows examples of small shifts to more nutrient-dense choices that significantly improve the nutritional profile of the meal overall while delivering on taste and satisfaction.





Figure 1-9 Making Healthy Choices: One Day At a Time

Small changes to more nutrient-dense, single food and beverage choices that, when combined, become a nutrientdense meal, can lead to a whole day made up of nutrient-dense meals and snacks. The following example, which comes in under 2,000 calories, shows how people can make thoughtful choices that meet their food group needs, stay within limits, and, importantly, that they can enjoy.





BREAKFAST

Total calories: 375

- Banana-Walnut Overnight Oats (350 calories):
 - » Oats (½ cup raw)
 - » Low-fat, plain Greek yogurt (¼ cup)
 - » Fat-free milk (¼ cup)
 - » Banana (½ banana)
 - » Walnuts (4 nuts)
 - » Honey (1 tsp)
- Coffee (25 calories):
 - » Coffee (1 cup)
 - » Fat-free milk (¼ cup)

LUNCH

Total calories: 715

- Chicken Burrito Bowl (710 calories)
 - » Brown rice (1 cup)
 - » Romaine lettuce (½ cup)
 - » Black beans, low sodium (⅓ cup)
 - » Grilled chicken with spice rub (2 ounces)
 - » Grilled vegetables (1/3 cup)
 - » Sliced avocado (5 slices)
 - » Fresh salsa/pico de gallo (¼ cup)
 - » Reduced-fat cheese (1/3 cup)
 - » Jalapeño (5 slices)
- lced Tea, No Sugar (16 ounces) (5 calories)





The nutrient density and healthfulness of what people eat and drink often is determined ultimately by how a food item, dish or meal is prepared, at home and away from home, or produced by a manufacturer. Based on the U.S. food supply and marketplace, the examples of healthy dietary patterns in this edition are achievable through thoughtful, informed choices one decision, one meal, one day at a time—and consistently over time.





DINNER

Total calories: 585

- Oven-Roasted Tilapia and Vegetables With Pasta (510 calories)
 - » Tilapia (4 ounces)
 - » Broccoli (½ cup)
 - » Carrots (⅓ cup)
 - » Summer squash (1/3 cup)
 - » Pasta (¾ cup cooked)
 - » Garlic-herb oil (1 Tbsp)
- Orange (1 medium) (75 calories)
- Sparkling Water(8 ounces) (0 calories)

SNACKS

Total calories: 300

- Air-Popped Popcorn (2 cups) (60 calories)
- Yogurt and Peaches (240 calories)
 - » Plain, low-fat Greek yogurt (1 cup yogurt)
 - » Canned peaches packed in 100% juice (½ cup)

TOTAL CALORIES FOR THE DAY: 2,000 As such, a nutrient-dense diet, where most nutritional needs are met by 85% of the calories consumed, offers a small amount of leeway to add minimal amounts of added sugars or saturated fat to the diet. For example, one way to use remaining calories is to add small amounts of added sugars or saturated fat to *some* nutrient-dense foods to help make some foods more palatable while working towards meeting food group recommendations—for example, oatmeal with a small amount of brown sugar or vegetables prepared with small amounts of butter. However, to achieve a healthy dietary pattern, all (or mostly all) food group recommendations should be met with foods and beverages that are in nutrient-dense forms.

A healthy dietary pattern has little room available for foods and beverages high in added sugars, saturated fat, and/or sodium. Intakes of foods and beverages high in these components should be limited. These foods and beverages should be occasional choices consumed in small portions.

While intakes of added sugars, saturated fat, and sodium should be limited, the guidance below is intended to allow programs and individuals to have some flexibility to choose a healthy dietary pattern within calorie limits that fits personal preferences and cultural traditions—and allows day-to-day flexibility to support a healthy dietary pattern over time. Additionally, if alcoholic beverages are consumed, intakes should be within the limits described in this chapter, and calories should be accounted for to keep total calorie intake at an appropriate level.

Added Sugars

A healthy dietary pattern limits added sugars to less than 10 percent of calories per day. Added sugars can help with preservation; contribute to functional attributes such as viscosity, texture, body, color, and browning capability, and/or help improve the palatability of some nutrient-dense foods. In fact, the nutrientdense choices included in the Healthy U.S.-Style Dietary Pattern are based on availability in the U.S. food supply and include 17-50 calories from added sugars, or 1.5-2 percent of total calories.

Foods and beverages high in calories from added sugars should be limited to help achieve healthy dietary patterns within calorie limits. When added sugars in foods and beverages exceed 10 percent of calories, a healthy dietary pattern within calories limits is very difficult to achieve. Most Americans have less than 8 percent of calories available for added sugars, including the added sugars inherent to a healthy dietary pattern. The limit for added sugars is based on the following assumptions:









- Most calorie levels have less than 15 percent of calories remaining after meeting food group recommendations through nutrient-dense choices.
- Approximately half of remaining calories are consumed as saturated fat and half consumed as added sugars.
- Total saturated fat intakes meet the recommendation for less than 10 percent of total calorie intake.
- No alcoholic beverages are consumed.
- Overall calorie intake does not exceed intake needs to maintain or achieve a healthy weight.

Based on the assumptions above, an individual who needs 2,000 calories per day (based on age, sex, and physical activity level) has less than 7 percent of calories available for added sugars. Individuals who need 2,800 calories per day or less have less than 8 percent of calories available for added sugars. Individuals who need more than 3,000 calories may have a total of 9 to 10 percent of calories available for added sugars. In this portion of the population that requires high calorie intake, an upper limit of 10 percent of calories from added sugars may be consumed while still meeting food group recommendations in nutrientdense forms. The 10 percent added sugar limit allows for flexibility in food choices over time but also requires careful planning. For example, if one chooses to eat less than the allotted amount of calories for saturated fat, 10 percent of added sugars may fit in a healthy dietary pattern.

Added sugars account on average for almost 270 calories—or more than 13 percent of total calories—per day in the U.S. population. As shown in **Figure 1-10**, the major sources of added sugars in typical U.S. diets are sugar-sweetened beverages, desserts and sweet snacks, sweetened coffee and tea, and candy. Together, these food categories make up more than half of the intake of all added sugars while contributing very little to food group recommendations.

Individuals have many potential options for reducing the intake of added sugars, including reducing the intake of major sources of added sugars. Strategies include reducing portions, consuming these items less often, and selecting options low in added sugars. For those with a weight loss goal, limiting intake of foods and beverages high in added sugars is a strategy to help reduce calorie intake.

It should be noted that replacing added sugars with low- and no-calorie sweeteners may reduce calorie intake in the short-term and aid in weight management, yet questions remain about their effectiveness as a long-term weight management strategy. For additional information about high-intensity sweeteners permitted for use in food in the United States, see <u>fda.gov/food/</u> food-additives-petitions/high-intensity-sweeteners.

Figure 1-10

Top Sources and Average Intakes of Added Sugars: U.S. Population Ages 1 and Older



Data Source: Analysis of What We Eat in America, NHANES, 2013-2016, ages 1 and older, 2 days dietary intake data, weighted.





Saturated Fat

For those 2 years and older, intake of saturated fat should be limited to less than 10 percent of calories per day by replacing them with unsaturated fats, particularly polyunsaturated fats. Although some saturated fat is inherent in foods (e.g., high-fat meat), some sources are added (e.g., butter on toast). Similar to added sugars, some of the nutrient-dense choices included in the Healthy U.S.-Style Dietary Pattern include saturated fat. Approximately 5 percent of total calories inherent to the nutrient-dense foods in the Healthy U.S.-Style Dietary Pattern are from saturated fat from sources such as lean meat, poultry, and eggs; nuts and seeds; grains; and saturated fatty acids in oils. As such, there is little room to include additional saturated fat in a healthy dietary pattern while staying within limits for saturated fat and total calories.

Current average intakes of saturated fat are 11 percent of calories. Only 23 percent of individuals consume amounts of saturated fat consistent with the limit of less than 10 percent of calories. The main sources of saturated fat in the U.S. diet include sandwiches, including burgers, tacos, and burritos; desserts and sweet snacks; and rice, pasta, and other grain-based mixed dishes (**Figure 1-11**). Saturated fat is commonly found in higher amounts in high-fat meat, full-fat dairy products (e.g., whole milk, ice cream, cheese), butter, coconut oil, and palm kernel and palm oil. Strategies to lower saturated fat intake include reducing intakes of dessert and sweet snacks by consuming smaller portion sizes and eating these foods less often. Additional strategies include reading food labels to choose packaged foods lower in saturated fats and choosing lower fat forms of foods and beverages (e.g., fat-free or low-fat milk instead of 2 percent or whole milk; lean rather than fatty cuts of meat). When cooking and purchasing meals, select lean meat and lower fat cheese in place of high-fat meats and regular cheese-or replace them with ingredients with oils, such as nuts, seeds, or avocado. Cook and purchase products made with oils higher in polyunsaturated and monounsaturated fat (e.g., canola, corn, olive, peanut, safflower, soybean, and sunflower) rather than butter, shortening, or coconut or palm oils.

A note on *trans* fats and dietary cholesterol: The National Academies recommends that *trans* fat and dietary cholesterol consumption to be as low as possible without compromising the nutritional adequacy of the diet. The USDA Dietary Patterns are limited in *trans* fats and low in dietary cholesterol. Cholesterol and a small amount of *trans* fat occur naturally in some animal source foods. As of June 2018, partially hydrogenated oils (PHOs), the major source of artificial *trans* fat in the food supply, are no longer Generally Recognized as Safe (GRAS). Therefore, PHOs are no longer added to foods.



Figure 1-11

Top Sources and Average Intakes of Saturated Fat: U.S. Population Ages 1 and Older



Data Source: Analysis of What We Eat in America, NHANES, 2013-2016, ages 1 and older, 2 days dietary intake data, weighted.

Sodium

Sodium is an essential nutrient primarily consumed as salt (sodium chloride). Healthy eating patterns limit sodium to the Chronic Disease Risk Reduction (CDRR) levels defined by the National Academies— 1,200 mg/day for ages 1 through 3; 1,500 mg/day for ages 4 through 8; 1,800 mg/day for ages 9 through 13; and 2,300 mg/day for all other age groups. The CDRR for sodium was established using evidence of the benefit of reducing sodium intake on cardiovascular risk and hypertension risk.

As a food ingredient, sodium is used in multiple ways, including curing meat, baking, as a thickening agent, as a flavor enhancer, as a preservative, and to retain moisture. The nutrient-dense choices in the Healthy U.S.-Style Dietary Pattern provide approximately 60-100 percent of the age-specific CDRR for sodium across calorie levels with amounts ranging from about 1,000 to 2,200 mg. For most calorie levels and at most ages, there is very little room for food choices that are high in sodium.

Average intakes of sodium are high across the U.S. population compared to the CDRRs. Average intakes for those ages 1 and older is 3,393 milligrams per day, with a range of about 2,000 to 5,000 mg per day. Only a small proportion of total sodium intake is from sodium inherent in foods or from salt added in home cooking or at the table. Most sodium consumed in the United States comes from salt added during commercial food processing and preparation, including foods prepared at restaurants.

Sodium is found in foods from almost all food categories across the food supply (**Figure 1-12**), including mixed dishes such as sandwiches, burgers, and tacos; rice, pasta, and grain dishes; pizza; meat, poultry, and seafood dishes; and soups. Calorie intake is highly associated with sodium intake (i.e., the more foods and beverages people consume, the more sodium they tend to consume).

Because sodium is found in so many foods, multiple strategies should be implemented to reduce sodium intake to the recommended limits. Careful choices are needed in all food groups to reduce intake. Strategies to lower sodium intake include cooking at home more often; using the Nutrition Facts label to choose products with less sodium, reduced sodium, or no-salt-added, etc.; and flavoring foods with herbs and spices instead of salt based on personal and cultural foodways.



Figure 1-12



Top Sources and Average Intakes of Sodium: U.S. Population Ages 1 and Older



Data Source: Analysis of What We Eat in America, NHANES, 2013-2016, ages 1 and older, 2 days dietary intake data, weighted.



Nutrition Facts Label

The Nutrition Facts label on packaged foods and beverages is a tool for making informed and healthy food choices. For the first time in more than 20 years, the U.S. Food and Drug Administration (FDA) has updated the Nutrition Facts label. There are a number of key changes to the label including:

Nutrition Fa	cts
8 servings per container Serving size 2/3 cup	(55g)
Amount per serving 2	30
% Dail	y Value*
Total Fat 8g	10%
Saturated Fat 1g	5%
<i>Trans</i> Fat 0g	
Cholesterol Omg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mog	10%
	20%
Iron 9mg	20%
Botacoium 225mg	40%
Polassium 235mg	0%
* The % Daily Value (DV) tells you how much a a serving of food contributes to a daily diet. 2, a day is used for general nutrition advice.	nutrient in 000 calories

The serving size information is now in large, bold font and has been updated to better reflect the amount that people typically eat and drink.

Calories are displayed in larger, bolder font.

Some Daily Values have been updated. The percent Daily Value (%DV) shows how much a nutrient in a serving of food contributes to a total daily diet. Five percent or less is low; 20 percent or more is high.

Added sugars, vitamin D, and potassium are now listed.

Along with the updated design, the Nutrition Facts label helps support healthy dietary patterns by providing information on nutrients of public health concern—dietary fiber, vitamin D, calcium, iron, and potassium—and on dietary components to limit, such as added sugars, saturated fat, and sodium.

More information on the Nutrition Facts label is available at: <u>fda.gov/</u> NewNutritionFactsLabel.

Menu Nutrition Labeling

Americans eat and drink about one-third of their calories from foods prepared away from home. Usually, these foods provide more calories, saturated fat, and sodium than meals prepared at home. To help individuals make informed and healthy decisions, many food establishments and chain restaurants list calories in foods or beverages on menus or menu boards and additional nutrition information is available upon request. More information is available at **fda.gov/CaloriesOnTheMenu**.



Alcoholic Beverages

The *Dietary Guidelines* does not recommend that individuals who do not drink alcohol start drinking for any reason. There are also some people who should not drink at all, such as if they are pregnant or might be pregnant; under the legal age for drinking; if they have certain medical conditions or are taking certain medications that can interact with alcohol; and if they are recovering from an alcohol use disorder or if they are unable to control the amount they drink. If adults age 21 years and older choose to drink alcoholic beverages, drinking less is better for health than drinking more.

Evidence indicates that, among those who drink, higher average alcohol consumption is associated with an increased risk of death from all causes compared with lower average alcohol consumption. Alcohol misuse or consuming alcohol in excess of recommendations increases risk of several other conditions such as liver disease, cardiovascular disease, injuries, and alcohol use disorders.

For the purposes of evaluating amounts of alcohol that may be consumed, the Dietary Guidelines defines drink equivalents. One alcoholic drink equivalent is defined as containing 14 grams (0.6 fl oz) of pure alcohol. The following count as one alcoholic drink equivalent: 12 fluid ounces of regular beer (5% alcohol), 5 fluid ounces of wine (12% alcohol), or 1.5 fluid ounces of 80 proof distilled spirits (40% alcohol). To help Americans move toward a healthy dietary pattern and minimize risks associated with drinking, adults of legal drinking age can choose not to drink or to drink in moderation by limiting intakes to 2 drinks or less in a day for men and 1 drink or less in a day for women, on days when alcohol is consumed. This is not intended as an average over several days, but rather the amount consumed on any single day. Binge drinking,³ defined as 5 or more drinks for the typical adult male or 4 or more drinks for

the typical adult female in about 2 hours, should be avoided. Emerging evidence suggests that even drinking within the recommended limits may increase the overall risk of death from various causes, such as from several types of cancer and some forms of cardiovascular disease. Alcohol has been found to increase risk for cancer, and for some types of cancer, the risk increases even at low levels of alcohol consumption (less than 1 drink in a day). Caution, therefore, is recommended.

Alcoholic beverages are not a component of the USDA Dietary Patterns. The amount of alcohol and calories in beverages varies and should be accounted for within the limits of healthy dietary patterns, so that calorie limits are not exceeded (see "Calories in Alcoholic Beverages").

Approximately 60 percent of adults report alcoholic beverage consumption in the past month. Of those, approximately 30 percent binge drink, sometimes multiple times per month. During days when men and women consume alcohol, their consumption typically exceeds current guidance. Among adults, including those who do not drink, alcoholic beverages contribute approximately 5 percent of calorie intake (3 to 4% of calories for women and 5 to 7% for men); this translates into approximately 9 percent of calories among those who drink. As such, among those who drink, alcoholic beverages, alone, account for most of the calories that remain after meeting food group recommendations in nutrient-dense forms—leaving very few calories for added sugars or saturated fat.

Adults who choose to drink, and are not among the individuals listed above who should not drink, are encouraged to limit daily intakes to align with the *Dietary Guidelines*—and to consider calories from alcoholic beverages so as not to exceed daily calorie limits.

³ More information is available at niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking.

Calories in Alcoholic Beverages

Alcoholic beverages supply calories but few nutrients, and calories from alcoholic beverages should be accounted for to keep total calorie intake at an appropriate level. Alcoholic beverages may contain calories from both alcohol and other ingredients, such as soda, juice, and added sugars. It is important to consider ingredients and portion size. The range of calories in cocktails varies widely depending on serving size and ingredients. Examples of calories contained in alcoholic beverages include: 12 fluid ounces of regular
beer (5% alcohol):
about 150 calories5 fluid ounces of wine
(12% alcohol):
about 120 calories1.5 fluid ounces of
80 proof distilled spirits
(40% alcohol): about 100 calories7 fluid ounces of a
rum (40% alcohol) and
cola: about 190 calories

More information on calories in alcoholic beverages is available at **rethinkingdrinking.niaaa.nih.gov/Tools/ Calculators/calorie-calculator.aspx**.



Support Healthy Dietary Patterns for All Americans

Everyone has a role to play to support access to healthy foods and beverages in multiple settings nationwide where people live, learn, work, play, and gather. Having access to healthy, safe, and affordable food is crucial for an individual to achieve a healthy dietary pattern. Concerted efforts within communities, businesses and industries, organizations, government, and other segments of society are needed to support individuals and families in making lifestyle choices that align with the *Dietary Guidelines*.

Food manufacturers and retail establishments can support Americans in achieving a healthy dietary pattern by providing healthy options in all the places where foods and beverages are purchased. During the past few decades, food products and menus have evolved substantially in response to consumer demand and public health concerns. Food reformulation and menu and retail modification opportunities include offering more vegetables, fruits, whole grains, low-fat and fat-free dairy, and a greater variety of protein foods that are nutrient dense, while also reducing sodium and added sugars, reducing saturated fat and replacing it with unsaturated fats, and reducing added refined starches. Portion sizes also can be reduced to help individuals make choices that better fit within their calorie needs. Food manufacturers are encouraged to consider the entire composition of the food or beverage, and not just individual nutrients or ingredients when developing or reformulating products.

Similarly, when developing or modifying menus, establishments can consider the range of offerings both within and across food groups and other dietary components to determine whether the healthy options offered reflect the proportions in healthy dietary patterns. In taking these actions, care should be taken to assess any potential unintended consequences so that as changes are made to better align with the *Dietary Guidelines*, undesirable changes are not introduced. For example, a change made to reduce the amount of added sugars in a product should not come at the expense of increasing the amount of saturated fat or sodium.

Food access is influenced by diverse factors, such as proximity to food retail outlets (e.g., the number and

types of stores in an area), ability to prepare one's own meals or eat independently, and the availability of personal or public transportation. The underlying socioeconomic characteristics of a neighborhood also may influence an individual's ability to access foods to support healthy eating patterns.

In 2019, 10.5 percent of households were food insecure at least some time during the year. Food insecurity occurs when access to nutritionally adequate and safe food is limited or uncertain. Food insecurity can be temporary or persist over time, preventing individuals and families from following a healthy dietary pattern that aligns with the Dietary Guidelines. The prevalence of food insecurity typically rises during times of economic downturn as households experience greater hardship. Government and nongovernment nutrition assistance programs help alleviate food insecurity and play an essential role by providing food, meals, and educational resources so that participants can make healthy food choices within their budget. Chapters 2, 3, 4, 5, and 6 highlight examples of these resources at each life stage.

As discussed in subsequent chapters, everyone has an important role in leading disease prevention efforts within their organizations and communities to make healthy eating an organizational and societal norm. Changes at multiple levels of society are needed, and these changes, in combination and over time, can have a meaningful impact on the health of current and future generations.

Looking Toward the Life Stages

This chapter has provided guidance about the fundamentals of a healthy dietary pattern. These fundamentals are remarkably consistent across life stages, even though each stage also has its own specific nutrition considerations. The following chapters build on this chapter and take a closer look at each of the life stages: <u>Chapter 2</u> provides a focused discussion of the unique nutritional needs of infants and toddlers. <u>Chapters 3, 4, 5, and 6</u> present recommended dietary patterns, describe current nutrition intakes, and provide tailored nutrition information specific to children and adolescents, adults, women who are pregnant or lactating, and older adults, respectively.



