

# Appendix 2.

## Estimated Calorie Needs per Day, by Age, Sex, & Physical Activity Level

The total number of calories a person needs each day varies depending on a number of factors, including the person's age, sex, height, weight, and level of physical activity. In addition, a need to lose, maintain, or gain weight and other factors affect how many calories should be consumed. Estimated amounts of calories needed to maintain calorie balance for various age and sex groups at three different levels of physical activity are provided in **Table A2-1**. These estimates are based on the Estimated Energy Requirements (EER) equations, using reference heights

(average) and reference weights (healthy) for each age-sex group. For children and adolescents, reference height and weight vary. For adults, the reference man is 5 feet 10 inches tall and weighs 154 pounds. The reference woman is 5 feet 4 inches tall and weighs 126 pounds.

Estimates range from 1,600 to 2,400 calories per day for adult women and 2,000 to 3,000 calories per day for adult men. Within each age and sex category, the low end of the range is for sedentary individuals; the high end of the range is for active individuals. Due to reductions

in basal metabolic rate that occur with aging, calorie needs generally decrease for adults as they age. Estimated needs for young children range from 1,000 to 2,000 calories per day, and the range for older children and adolescents varies substantially from 1,400 to 3,200 calories per day, with boys generally having higher calorie needs than girls. These are only estimates, and approximations of individual calorie needs can be aided with online tools such as those available at [www.supertracker.usda.gov](http://www.supertracker.usda.gov).

**Table A2-1. Estimated Calorie Needs per Day, by Age, Sex, & Physical Activity Level**

Males				Females <sup>[d]</sup>			
Age	Sedentary <sup>[a]</sup>	Moderately Active <sup>[b]</sup>	Active <sup>[c]</sup>	Age	Sedentary <sup>[a]</sup>	Moderately Active <sup>[b]</sup>	Active <sup>[c]</sup>
2	1,000	1,000	1,000	2	1,000	1,000	1,000
3	1,000	1,400	1,400	3	1,000	1,200	1,400
4	1,200	1,400	1,600	4	1,200	1,400	1,400
5	1,200	1,400	1,600	5	1,200	1,400	1,600
6	1,400	1,600	1,800	6	1,200	1,400	1,600
7	1,400	1,600	1,800	7	1,200	1,600	1,800
8	1,400	1,600	2,000	8	1,400	1,600	1,800

## Males

Age	Sedentary <sup>[a]</sup>	Moderately Active <sup>[b]</sup>	Active <sup>[c]</sup>
9	1,600	1,800	2,000
10	1,600	1,800	2,200
11	1,800	2,000	2,200
12	1,800	2,200	2,400
13	2,000	2,200	2,600
14	2,000	2,400	2,800
15	2,200	2,600	3,000
16	2,400	2,800	3,200
17	2,400	2,800	3,200
18	2,400	2,800	3,200
19-20	2,600	2,800	3,000
21-25	2,400	2,800	3,000
26-30	2,400	2,600	3,000
31-35	2,400	2,600	3,000
36-40	2,400	2,600	2,800
41-45	2,200	2,600	2,800
46-50	2,200	2,400	2,800
51-55	2,200	2,400	2,800
56-60	2,200	2,400	2,600
61-65	2,000	2,400	2,600
66-70	2,000	2,200	2,600
71-75	2,000	2,200	2,600
76 & Up	2,000	2,200	2,400

## Females<sup>[d]</sup>

Age	Sedentary <sup>[a]</sup>	Moderately Active <sup>[b]</sup>	Active <sup>[c]</sup>
9	1,400	1,600	1,800
10	1,400	1,800	2,000
11	1,600	1,800	2,000
12	1,600	2,000	2,200
13	1,600	2,000	2,200
14	1,800	2,000	2,400
15	1,800	2,000	2,400
16	1,800	2,000	2,400
17	1,800	2,000	2,400
18	1,800	2,000	2,400
19-20	2,000	2,200	2,400
21-25	2,000	2,200	2,400
26-30	1,800	2,000	2,400
31-35	1,800	2,000	2,200
36-40	1,800	2,000	2,200
41-45	1,800	2,000	2,200
46-50	1,800	2,000	2,200
51-55	1,600	1,800	2,200
56-60	1,600	1,800	2,200
61-65	1,600	1,800	2,000
66-70	1,600	1,800	2,000
71-75	1,600	1,800	2,000
76 & Up	1,600	1,800	2,000

[a] Sedentary means a lifestyle that includes only the physical activity of independent living.

[b] Moderately Active means a lifestyle that includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, in addition to the activities of independent living.

[c] Active means a lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the activities of independent living.

[d] Estimates for females do not include women who are pregnant or breastfeeding.

**SOURCE:** Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington (DC): The National Academies Press; 2002.

**Table A3-1. Healthy U.S.-Style Eating Pattern: Recommended Amounts of Food From Each Food Group at 12 Calorie Levels**

Calorie Level of Pattern <sup>[a]</sup>	1,000	1,200	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200
Food Group <sup>[b]</sup>	Daily Amount <sup>[c]</sup> of Food From Each Group (vegetable and protein foods subgroup amounts are per week)											
Vegetables	1 c-eq	1½ c-eq	1½ c-eq	2 c-eq	2½ c-eq	2½ c-eq	3 c-eq	3 c-eq	3½ c-eq	3½ c-eq	4 c-eq	4 c-eq
Dark-Green Vegetables (c-eq/wk)	½	1	1	1½	1½	1½	2	2	2½	2½	2½	2½
Red & Orange Vegetables (c-eq/wk)	2½	3	3	4	5½	5½	6	6	7	7	7½	7½
Legumes (Beans & Peas) (c-eq/wk)	½	½	½	1	1½	1½	2	2	2½	2½	3	3
Starchy Vegetables (c-eq/wk)	2	3½	3½	4	5	5	6	6	7	7	8	8
Other Vegetables (c-eq/wk)	1½	2½	2½	3½	4	4	5	5	5½	5½	7	7
Fruits	1 c-eq	1 c-eq	1½ c-eq	1½ c-eq	1½ c-eq	2 c-eq	2 c-eq	2 c-eq	2 c-eq	2½ c-eq	2½ c-eq	2½ c-eq
Grains	3 oz-eq	4 oz-eq	5 oz-eq	5 oz-eq	6 oz-eq	6 oz-eq	7 oz-eq	8 oz-eq	9 oz-eq	10 oz-eq	10 oz-eq	10 oz-eq
Whole Grains <sup>[d]</sup> (oz-eq/day)	1½	2	2½	3	3	3	3½	4	4½	5	5	5
Refined Grains (oz-eq/day)	1½	2	2½	2	3	3	3½	4	4½	5	5	5

Table A3-1. (continued...)

## Healthy U.S.-Style Eating Pattern: Recommended Amounts of Food From Each Food Group at 12 Calorie Levels

Calorie Level of Pattern <sup>[a]</sup>	1,000	1,200	1,400	1,600	1,800	2,000	2,200	2,400	2,600	2,800	3,000	3,200
<b>Food Group<sup>[b]</sup></b>	<b>Daily Amount<sup>[c]</sup> of Food From Each Group (vegetable and protein foods subgroup amounts are per week)</b>											
<b>Dairy</b>	2 c-eq	2½ c-eq	2½ c-eq	3 c-eq	3 c-eq	3 c-eq	3 c-eq	3 c-eq	3 c-eq	3 c-eq	3 c-eq	3 c-eq
<b>Protein Foods</b>	2 oz-eq	3 oz-eq	4 oz-eq	5 oz-eq	5 oz-eq	5½ oz-eq	6 oz-eq	6½ oz-eq	6½ oz-eq	7 oz-eq	7 oz-eq	7 oz-eq
Seafood (oz-eq/wk)	3	4	6	8	8	8	9	10	10	10	10	10
Meats, Poultry, Eggs (oz-eq/wk)	10	14	19	23	23	26	28	31	31	33	33	33
Nuts Seeds, Soy Products (oz-eq/wk)	2	2	3	4	4	5	5	5	5	6	6	6
<b>Oils</b>	15 g	17 g	17 g	22 g	24 g	27 g	29 g	31 g	34 g	36 g	44 g	51 g
<b>Limit on Calories for Other Uses, Calories (% of Calories)<sup>[e,f]</sup></b>	150 (15%)	100 (8%)	110 (8%)	130 (8%)	170 (9%)	270 (14%)	280 (13%)	350 (15%)	380 (15%)	400 (14%)	470 (16%)	610 (19%)

[a] Food intake patterns at 1,000, 1,200, and 1,400 calories are designed to meet the nutritional needs of 2- to 8-year-old children. Patterns from 1,600 to 3,200 calories are designed to meet the nutritional needs of children 9 years and older and adults. If a child 4 to 8 years of age needs more calories and, therefore, is following a pattern at 1,600 calories or more, his/her recommended amount from the dairy group should be 2.5 cups per day. Children 9 years and older and adults should not use the 1,000-, 1,200-, or 1,400-calorie patterns.

[b] Foods in each group and subgroup are:

• Vegetables

- Dark-green vegetables: All fresh, frozen, and canned dark-green leafy vegetables and broccoli, cooked or raw: for example, broccoli; spinach; romaine; kale; collard, turnip, and mustard greens.
- Red and orange vegetables: All fresh, frozen, and canned red and orange vegetables or juice, cooked or raw: for example, tomatoes, tomato juice, red peppers, carrots, sweet potatoes, winter squash, and pumpkin.
- Legumes (beans and peas): All cooked from dry or canned beans and peas: for example, kidney beans, white beans, black beans, lentils, chickpeas, pinto beans, split peas, and edamame (green soybeans). Does not include green beans or green peas.

- Starchy vegetables: All fresh, frozen, and canned starchy vegetables; for example, white potatoes, corn, green peas, green lima beans, plantains, and cassava.
- Other vegetables: All other fresh, frozen, and canned vegetables, cooked or raw; for example, iceberg lettuce, green beans, onions, cucumbers, cabbage, celery, zucchini, mushrooms, and green peppers.
- Fruits
  - All fresh, frozen, canned, and dried fruits and fruit juices; for example, oranges and orange juice, apples and apple juice, bananas, grapes, melons, berries, and raisins.
- Grains
  - Whole grains: All whole-grain products and whole grains used as ingredients; for example, whole-wheat bread, whole-grain cereals and crackers, oatmeal, quinoa, popcorn, and brown rice.
  - Refined grains: All refined-grain products and refined grains used as ingredients; for example, white breads, refined grain cereals and crackers, pasta, and white rice. Refined grain choices should be enriched.
- Dairy
  - All milk, including lactose-free and lactose-reduced products and fortified soy beverages (soymilk), yogurt, 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.
- Protein Foods
  - All seafood, meats, poultry, eggs, soy products, nuts, and seeds. Meats and poultry should be lean or low-fat and nuts should be unsalted. Legumes (beans and peas) can be considered part of this group as well as the vegetable group, but should be counted in one group only.

**[c]** Food group amounts shown in cup-(c) or ounce-equivalents (oz-eq). Oils are shown in grams (g). Quantity equivalents for each food group are:

- Vegetables and fruits, 1 cup-equivalent is: 1 cup raw or cooked vegetable or fruit, 1 cup vegetable or fruit juice, 2 cups leafy salad greens, ½ cup dried fruit or vegetable.
- Grains, 1 ounce-equivalent is: ½ cup cooked rice, pasta, or cereal; 1 ounce dry pasta or rice; 1 medium (1 ounce) slice bread; 1 ounce of ready-to-eat cereal (about 1 cup of flaked cereal).
- Dairy, 1 cup-equivalent is: 1 cup milk, yogurt, or fortified soymilk; 1½ ounces natural cheese such as cheddar cheese or 2 ounces of processed cheese.
- Protein Foods, 1 ounce-equivalent is: 1 ounce lean meat, poultry, or seafood; 1 egg; ¼ cup cooked beans or tofu; 1 Tbsp peanut butter; ½ ounce nuts or seeds.

**[d]** Amounts of whole grains in the Patterns for children are less than the minimum of 3 oz-eq in all Patterns recommended for adults.

**[e]** All foods are assumed to be in nutrient-dense forms, lean or low-fat and prepared without added fats, sugars, refined starches, or salt. If all food choices to meet food group recommendations are in nutrient-dense forms, a small number of calories remain within the overall calorie limit of the Pattern (i.e., limit on calories for other uses). The number of these calories depends on the overall calorie limit in the Pattern and the amounts of food from each food group required to meet nutritional goals. Nutritional goals are higher for the 1,200- to 1,600-calorie Patterns than for the 1,000-calorie Pattern, so the limit on calories for other uses is lower in the 1,200- to 1,600-calorie Patterns. Calories up to the specified limit can be used for added sugars, added refined starches, solid fats, alcohol, or to eat more than the recommended amount of food in a food group. The overall eating Pattern also should not exceed the limits of less than 10 percent of calories from added sugars and less than 10 percent of calories from saturated fats. At most calorie levels, amounts that can be accommodated are less than these limits. For adults of legal drinking age who choose to drink alcohol, a limit of up to 1 drink per day for women and up to 2 drinks per day for men within limits on calories for other uses applies (see Appendix 9. Alcohol for additional guidance); and calories from protein, carbohydrate, and total fats should be within the Acceptable Macronutrient Distribution Ranges (AMDRs).

**[f]** Values are rounded.