Nutrition & Cardiovascular Diseases

Foods and Nutrients – Adults (data based on NHANES 2009–10)

- Whole Grains - Average consumption was 1.1 servings per day by white men and women and 0.8 servings per day by black men and women, with only between 7% and 10% of white and black adults meeting guidelines of ≥3 servings per day. Average whole grain consumption by Mexican Americans was ≈2 servings per day, with 27% to 29% consuming ≥3 servings per day.

- Fruit - Average fruit consumption ranged from 1.2 to 1.9 servings per day in these sex and race or ethnic subgroups: 11% to 13% of whites, 7% to 8% of blacks, and 14% of Mexican Americans met guidelines of ≥2 cups per day. When 100% fruit juices were included, the number of servings increased, and the proportions of adults consuming ≥2 cups per day approximately doubled in whites and Mexican Americans and nearly quadrupled in blacks.

- Vegetables - Average vegetable consumption ranged from 1.3 to 2.2 servings per day; 6% to 8% of whites, 2% to 5% of blacks, and 2 to 4% of Mexican Americans consumed ≥2.5 cups per day. The inclusion of vegetable juices and sauces generally produced little change in these consumption patterns.

- Fish & Shellfish - Average consumption of fish and shellfish was lowest among Mexican American and white women (1.2 and 1.4 servings per week, respectively) and highest among black women (2.1 servings per week); ≈72% to 78% of all adults in each sex and race or ethnic subgroup consumed <2 servings per week.

- Nuts, Legumes & Seeds - Average consumption of nuts, legumes, and seeds was ≈2.5 servings per week among whites and blacks and 5 to 8 servings per week among Mexican Americans. Approximately 22% of whites, 18% of blacks, and 40% of Mexican Americans met guidelines of ≥4 servings per week.

- Processed Meats - Average consumption of processed meats was lowest among Mexican American women (1.2 servings per week) and highest among black men (3.3 servings per week). Between 49% (black men) and 75% (Mexican American women) of adults consumed 2 or fewer servings per week.

- Sugar-Sweetened Beverages - Average consumption of sugar-sweetened beverages ranged from ≈6 servings per week among white women to 12 servings per week among Mexican American men. Women generally consumed less than men. From 29% (Mexican American men) to 68% (white women) of adults consumed no more than 36 oz (4.5 8-oz servings) per week.

- Sweets & Bakery Desserts - Average consumption of sweets and bakery desserts ranged from ≈4.5 servings per day (Mexican Americans) to 7 servings per day (white women). Approximately two thirds of white women and more than half of all other sex and race groups consumed >2.5 servings per week.

- Sodium - Only 5% to 7% of whites, 6% to 12% of blacks, and 10% of Mexican Americans consumed <2.3 g of sodium per day.
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Foods and Nutrients – Children and Teenagers (data based on NHANES 2009–10)

- **Whole Grains** - Average whole grain consumption was low, <1 serving per day in all age and sex groups, with <7% of all children in different age and sex subgroups meeting guidelines of ≥3 servings per day.
- **Fruit** - Average fruit consumption was low and decreased with age: 1.6 to 1.7 servings per day in younger boys and girls (5–9 years of age), 1.3 servings per day in adolescent boys and girls (10–14 years of age), and 0.9 to 1.2 servings per day in teenage boys and girls (15–19 years of age).
- **Vegetables** - Average vegetable consumption was low, ranging from 0.8 to 1.3 servings per day, with at most 3% of children in different age and sex subgroups meeting guidelines of ≥2.5 cups per day.
- **Fish & Shellfish** - Average consumption of fish and shellfish was low, ranging between 0.3 and 0.9 servings per week in all age and sex groups. Among all ages, only 5% to 11% of youth consumed ≥2 servings per week.
- **Nuts, Legumes & Seeds** - Average consumption of nuts, legumes, and seeds ranged from 1.4 to 1.9 servings per week among different age and sex groups. Only between 11% and 14% of children in different age and sex subgroups consumed ≥4 servings per week.
- **Processed Meats** - Average consumption of processed meats ranged from ≈2 to 3 servings per week; was generally higher than the average consumption of nuts, legumes, and seeds; and was up to 8 times higher than the average consumption of fish and shellfish. Approximately 40% and 50% of children consumed >2 servings per week.
- **Sugar-Sweetened Beverages** - Average consumption of sugar-sweetened beverages was higher in boys than in girls and increased with age, from ≈7 to 8 servings per week in 5- to 9-year-olds, 9 to 10 servings per week in 10- to 14-year-olds, and 13 to 16 servings per week in 15- to 19-year-olds.
- **Sweets & Bakery Desserts** - Average consumption of sweets and bakery desserts was ≈9 to 10 servings per week in 5- to 9-year-olds, 7 to 8 servings per week in 10- to 14-year-olds, and 5 to 8 servings per week in 15- to 19-year-olds. From 61% (boys 15–19 years of age) to 79% (girls 5–9 years of age) of youths consumed >2.5 servings per week.
- **Sodium** - Average consumption of sodium ranged from 3.3 to 3.5 g/d. Only between 2% and 9% of children in different age and sex subgroups consumed <2.3 g/d.

Energy Balance

- Average daily caloric intake in the US is about 2,500 calories in adult men and 1,800 calories in adult women. In children and teenagers, average caloric intake is higher in boys than in girls and increases with age in boys.
- The average US adult gains approximately 1 lb per year.
- Data from NHANES indicate that between 1971 and 2004, average total energy consumption among US adults increased 22% in women (from 1,542–1,886 kcal/d) and 10% in men (from 2,450–2,693 kcal/d).

Effects on Cardiovascular Risk Factors & Outcomes

- Dietary habits affect multiple CV risk factors, including both established risk factors (systolic and diastolic blood pressure, LDL cholesterol levels, HDL cholesterol levels, glucose levels, and obesity/weight gain) and novel risk factors (e.g., inflammation, cardiac arrhythmias, endothelial cell function, triglyceride levels, lipoprotein[a] levels, and heart rate).
- A DASH dietary pattern with low sodium reduced systolic blood pressure by 7.1 mm Hg in adults without hypertension, and by 11.5 mm Hg in adults with hypertension.
- For each 2% of calories from trans fat was associated with a 23% higher risk of coronary heart disease.
- Each daily serving of fruits or vegetables was associated with a 4% lower risk of CHD and a 5% lower risk of stroke.
- Greater whole grain intake (2.5 compared with 0.2 servings per day) was associated with a 21% lower risk of CVD events, with similar estimates for specific CVD outcomes such as heart disease, stroke and fatal CVD.
- Fish consumption was associated with significantly lower risk of CHD mortality. In contrast, each 50-g serving per day of processed meats (eg, sausage, bacon, hot dogs, deli meats) was associated with higher incidence of both coronary heart disease and diabetes mellitus.
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Cost

- Prices for foods eaten at home increased 4.8% in 2011 while prices for foods eaten away from home increased by 1.9%.
- The proportion of total US food expenditures for meals outside the home, as a share of total food dollars, increased from 27% in 1961 to 40% in 1981 to 49% in 2011.
- The proportion of sales of meals and snacks from fast food restaurants compared with total meals and snacks away from home increased from 5% in 1958 to 29% in 1982 to 36% in 2011.
- Each year, >$33 billion in medical costs and $9 billion in lost productivity resulting from heart disease, cancer, stroke, and diabetes mellitus are attributed to poor nutrition.

![Total US food expenditures away from home and at home, 1977 and 2007](image)

Source: Data derived from Davis et al. America’s Eating Habits: Changes and Consequences.

For additional information, charts and tables, see [Heart Disease & Stroke Statistics - 2014 Update](link).

Additional charts may be downloaded directly from the online publication at: [http://circ.ahajournals.org/lookup/doi/10.1161/CIR.0b013e31828124ad](http://circ.ahajournals.org/lookup/doi/10.1161/CIR.0b013e31828124ad) Or at: [www.heart.org/statistics](http://www.heart.org/statistics)

The American Heart Association requests that this document be cited as follows:

If you have questions about statistics or any points made in the 2014 Statistical Update, please contact the American Heart Association National Center, Office of Science & Medicine at statistics@heart.org. Please direct all media inquiries to News Media Relations at inquiries@heart.org or 214-706-1173.

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