



Sandwich Consumption by Adults in the U.S.

What We Eat In America, NHANES 2009-2012

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Highlights

- ▶ On any given day, 47% of adults ate a sandwich. A larger percentage of men (52%) than women (43%) ate sandwiches.
- ▶ Most sandwiches eaten by adults contained meat, poultry, or fish (79%). The most commonly consumed types of sandwich were cold cut sandwiches (27%), burgers (17%), and poultry sandwiches (12%).
- ▶ Nearly one-half (48%) of all sandwiches were eaten at lunch and about one-third (31%) at dinner. The type of sandwich most commonly consumed varied by eating occasion.
- ▶ The majority (58%) of sandwiches/sandwich ingredients were obtained from a store.
- ▶ Adults who ate a sandwich on the intake day had a higher intake of energy (+278 kcal) than those who did not.
- ▶ Sandwiches made substantial contributions to total intakes of energy (12%), nutrients, and MyPlate food groups/components.

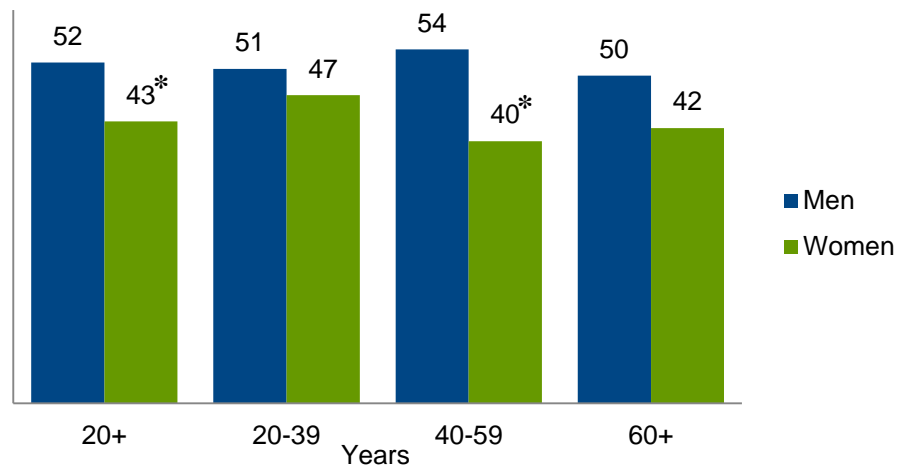
Sandwiches are a mainstay of the American diet, yet few reports providing details about sandwich intakes in the U.S. had been published until recently.¹ Food and nutrient intake data from What We Eat in America (WWEIA), the dietary intake interview component of the National Health and Nutrition Examination Survey (NHANES), make it possible to describe fully the consumption of sandwiches and their contributions to energy and nutrient intakes in the U.S. For this report, the definition of sandwiches includes not only items that were specifically called “sandwiches” but also items like cheeseburgers, hotdogs, and breakfast biscuits (*see definition of “sandwich” on page 8*). Answers to the questions in this report are based on data from WWEIA, NHANES 2009-2012 (*see “Data source” on page 8*).

Among adults, how common is it to eat sandwiches?

On any given day, about one-half (47%) of all adults in the U.S. ate one or more sandwiches.

As shown in figure 1, a higher percentage of men age 20 years and over (52%) than of women the same age (43%) reported sandwiches, largely due to the significant difference seen among those in the age group 40-59 years.

Figure 1. Percentage of individuals reporting sandwiches on any given day, adults age 20+ years, by gender, 2009-2012



*Within age group, percentage differs significantly ($p < 0.001$) by gender based on a two-tailed t-test.



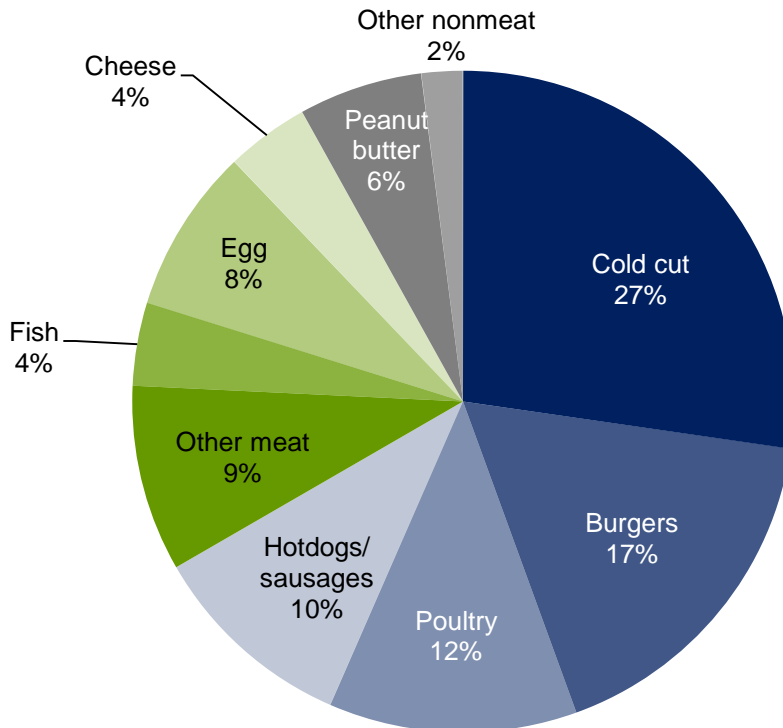
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What type of sandwiches do they eat?

Most sandwiches eaten by adults had meat, poultry, or fish as their primary filling (79%). As shown in figure 2, cold cut sandwiches were the most commonly reported type of sandwich (27%), followed by burgers (17%) and poultry sandwiches (12%; *see definition of “sandwich types” on page 8*).

Figure 2. Distribution of sandwiches by type, adults age 20+ years, 2009-2012



At what eating occasions do adults eat sandwiches, and does the type of sandwich vary by eating occasion?

Among adults, nearly one-half of all sandwiches were eaten at lunch (48%), followed by dinner (31%), breakfast (13%), and snacks (8%; *see definition of “eating occasions” on page 8*).

As shown in table 1, the type of sandwich eaten varied by eating occasion. The most commonly consumed type of sandwich at breakfast contained egg; at lunch, cold cuts; at dinner, burgers; and at snacks, peanut butter.

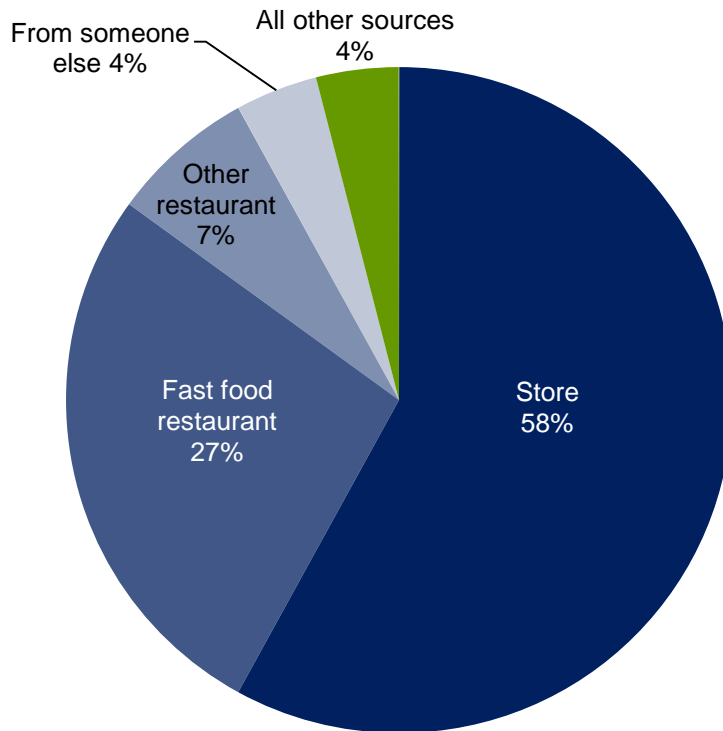
Table 1. Top sandwich choices by eating occasion, adults age 20+ years, 2009-2012

Rank	Eating occasion							
	Breakfast		Lunch		Dinner		Snacks	
	Type	%	Type	%	Type	%	Type	%
1	Egg	44	Cold cut	35	Burgers	27	Peanut butter	17
2	Cold cut	17	Burgers	16	Cold cut	19	Hotdogs/sausages	12
3	Hotdogs/sausages	14	Poultry	13	Other meat	13	Burgers	10
4	Peanut butter	7	Other meat	8	Poultry	13	Poultry	10

From what sources were sandwiches/sandwich ingredients obtained?

By far the most common source from which sandwiches or their ingredients were obtained was a store, followed by fast-food restaurant and other restaurant (*figure 3; see definition of “source” on page 8*).

Figure 3. Distribution of sandwiches by source, adults age 20+ years, 2009-2012

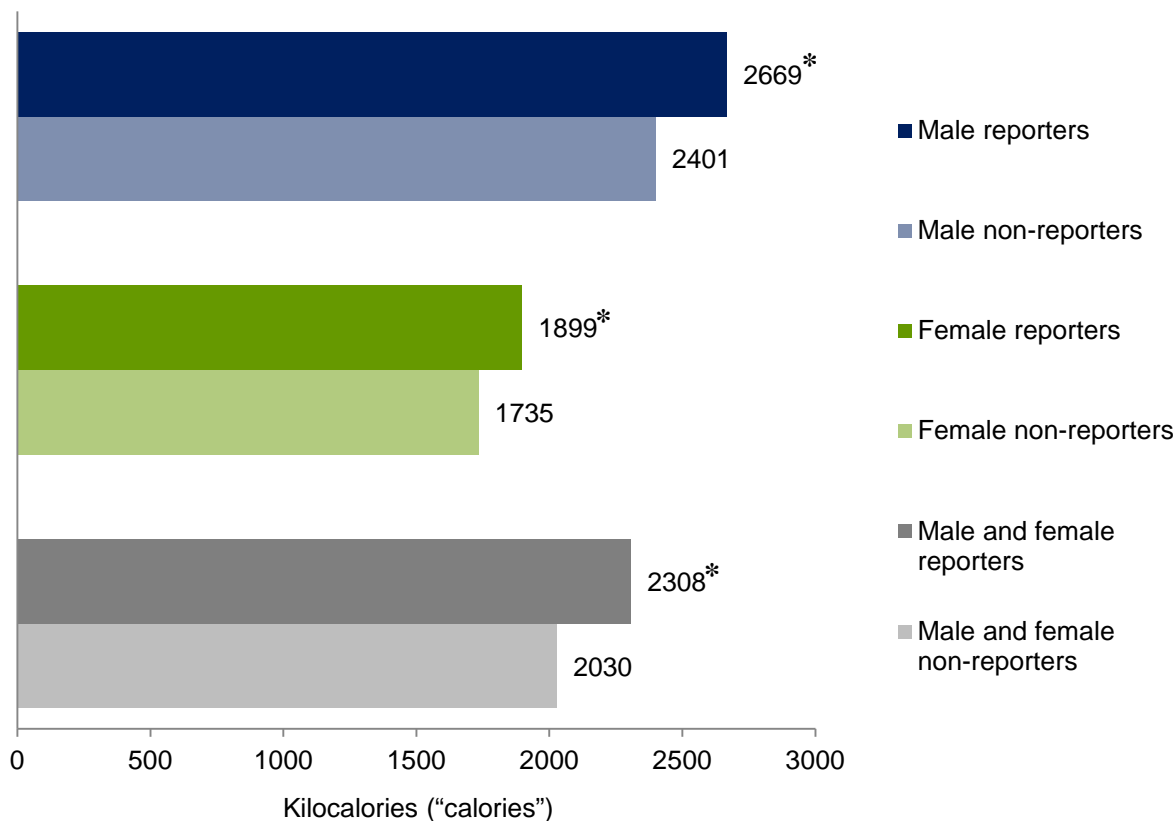


The source of sandwiches varied considerably by type of sandwich. Fast food restaurants provided about one-half of the burgers (59%) and poultry sandwiches (46%) consumed by adults, whereas over three-fourths (76%) of cold cut sandwiches or their ingredients were obtained from a store.

How much difference do sandwiches make in adults' daily energy intake?

The average daily intake of energy from all foods and beverages was 2,540 kilocalories (“calories;” *see definition on page 8*) for men and 1,806 kilocalories for women. As shown in figure 4, individuals who ate a sandwich on the intake day (sandwich reporters; *see definition on page 8*) had a higher energy intake than those who did not eat a sandwich (non-reporters). On average, this difference was 268 kilocalories for men and 164 kilocalories for women (278 kilocalories for all adults together).

Figure 4. Mean energy intake by sandwich reporting status, adults age 20+ years, 2009-2012

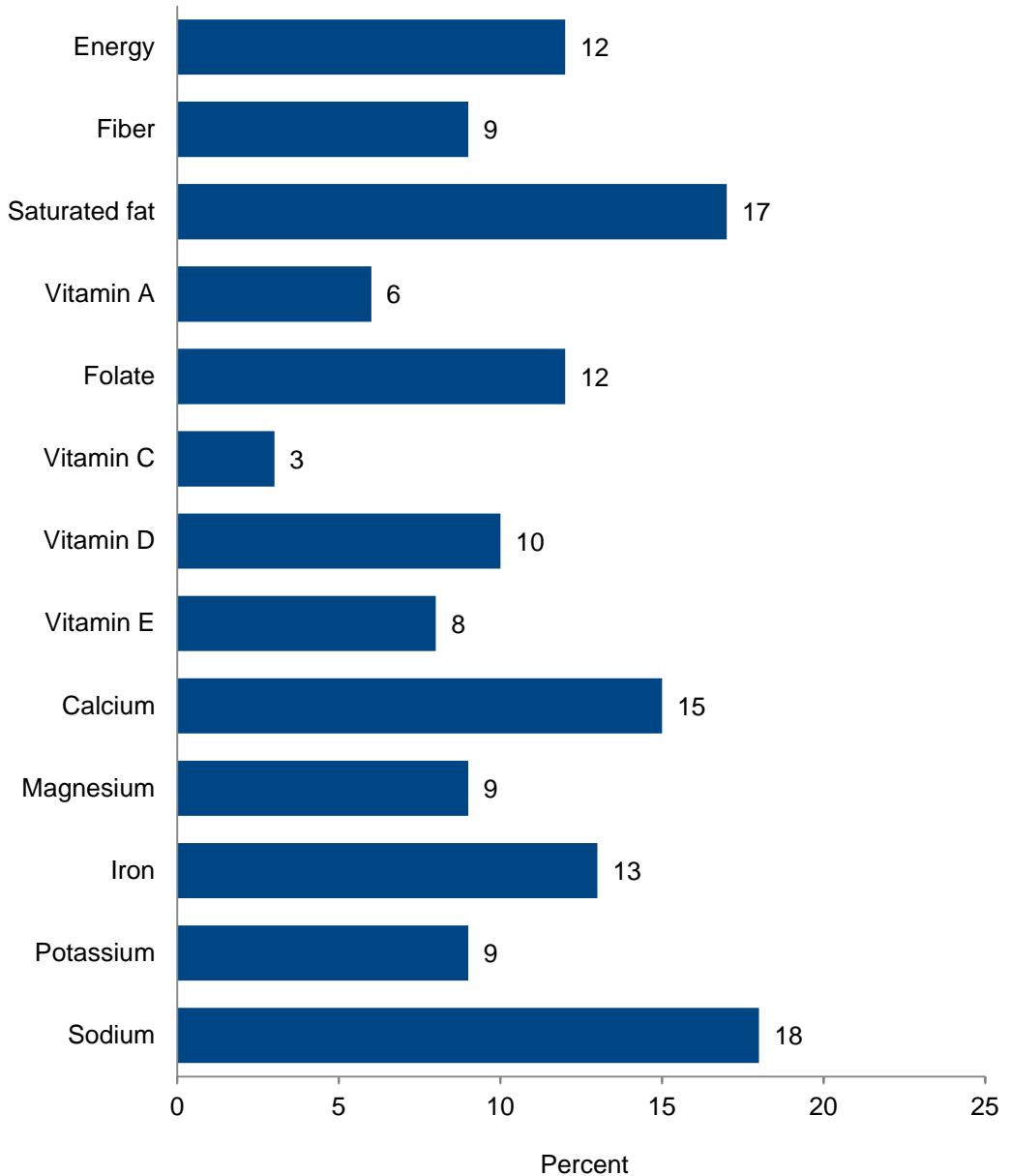


*Within gender, intake differs significantly ($p < 0.001$) between sandwich reporters and non-reporters based on a two-tailed *t*-test.

How much do sandwiches contribute to adults' intakes of energy and nutrients?

As shown in figure 5, sandwiches contribute 12% of all energy (calories) consumed by U.S. adults. Sandwiches make substantial contributions to some nutrients that adults tend to consume in lower-than-recommended amounts (such as calcium) and also to other nutrients that adults tend to consume in higher-than-recommended amounts (such as such as saturated fat and sodium).²⁻⁵

Figure 5. Percentage of total intake of energy and selected nutrients contributed by sandwiches, adults age 20+ years, 2009-2012



How much do sandwiches contribute to adults' intakes of MyPlate food groups/components?

MyPlate⁶ is a graphic representation designed to help consumers make healthier food choices, emphasizing the fruit, vegetable, grain, protein foods, and dairy groups.

Sandwiches contribute considerable proportions of adults' total intakes of many MyPlate components, notably protein foods (especially cured meat), cheese, grains, oils, and solid fats (*table 2*). Though sandwiches accounted for similar *percentages* of the overall intakes of refined and whole grains, the total *amount* of refined grains consumed was more than five times that of whole grains.

Table 2. Percentage of total intake of selected MyPlate food groups/components contributed by sandwiches, adults age 20+ years, 2009-2012

MyPlate food group/component*	Percent
Vegetables	7
Red/orange vegetables	11
“Other” vegetables*	12
Protein foods	23
Meat	26
Cured meat	59
Poultry	13
Eggs	13
Seafood	8
Nuts, seeds, soy	11
Dairy	14
Cheese	29
Grains	20
Whole grains	19
Refined grains	20
Oils	15
Solid fats	15

*See definition on page 8.

Definitions

Eating occasions: Eating occasions with the following English and Spanish names were grouped together: breakfast, desayuno, and almuerzo; lunch, brunch, and comida; dinner, supper, and cena; and snack, drink, merienda, entre comida, botana, bocadillo, tentempie, bebida, and items consumed over an extended period of time.

Kilocalories: Scientific unit used in reporting the energy content of food; shortened to “calories” in casual usage in the U.S.

MyPlate food groups/components: Most MyPlate food groups and components used in this report are defined in reference 7. A definition of “other” vegetables is given below. For this analysis, beans and peas (legumes) were included in the vegetables group and, consequently, excluded from protein foods. Soy milk was included in the dairy group and, consequently, excluded from the “nuts, seeds, soy” subgroup of protein foods.

“Other” vegetables: Includes vegetables other than those classified as dark green, red/orange, starchy, or beans and peas (legumes), as defined in reference 7. Some examples of “other” vegetables are cucumber, green pepper, lettuce (iceberg and others not classified as dark green), and onion.

Reporter/non-reporter: An adult who ate a sandwich on the intake day is considered to be a “reporter,” whereas one who did not eat a sandwich is a “non-reporter.” Many people classified as non-reporters in this analysis may consume sandwiches on some days, even though they did not eat one on the intake day.

Sandwich: For this analysis, the definition of “sandwich” included not only sandwiches represented in the dietary data by a single food code (these were often fast-food items, such as “Cheeseburger with tomato and/or catsup, on bun”) but also those represented by two or more food codes that were linked and identified as a “sandwich combination” (for example, bread, bacon, tomato, lettuce, and mayonnaise).

Sandwich types: Each sandwich was classified according to its primary filling, usually a protein food. Egg sandwiches included all sandwiches containing egg, even if they also contained some meat. Cheese sandwiches excluded sandwiches that also contained meat, poultry, fish, meat alternates, or egg.

Source of sandwiches/ingredients: For each food/beverage reported, survey participants were asked “Where did you get this (NAME OF FOOD) or most of the ingredients for this (NAME OF FOOD)?” Response options included store (2011-2012: store - grocery/supermarket, store - convenience type, and store - no additional information), fast food/pizza restaurant, restaurant with waiter/waitress, from someone else or as a gift, school cafeteria (2011-2012: in a K-12 school), other cafeteria (2011-2012: not in a K-12 school), child care center, sport/recreation/entertainment facility, street vendor/vending truck, grown/caught by you or someone you know, vending machine, and more than 15 other options.

Data source

Estimates in this report are based on one day of dietary intake data collected in What We Eat in America (WWEIA), the dietary intake interview component of the National Health and Nutrition Examination Survey (NHANES), in 2009-2012. Dietary data were collected in person using the 5-step USDA Automated Multiple-Pass Method (AMPM) for the 24-hour recall. A total of 10,563 individuals age 20 years and older (5,183 men and 5,380 women) provided complete and reliable dietary intake data. Sample weights were applied in all analyses to produce nationally representative estimates. USDA’s Food and Nutrient Database for Dietary Studies (FNDDS) was used in calculating intakes of energy and nutrients, and USDA’s Food Patterns Equivalents Database (FPED) was used in calculating intakes of MyPlate components.

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