



# Pizza Consumption in the U.S.

## What We Eat in America, NHANES 2017-March 2020 Prepandemic

Food Surveys Research Group  
Dietary Data Brief No. 62  
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### Highlights

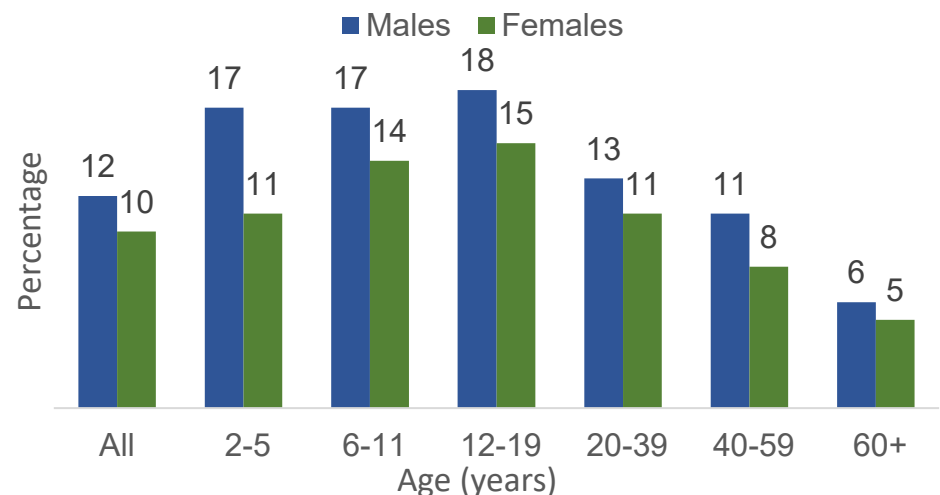
- ▶ On any given day, about 11% of the population consumed pizza.
- ▶ There were no differences in pizza consumption by race/ethnicity or income level.
- ▶ On the day consumed, pizza contributed about 27% to total energy intake, regardless of gender.
- ▶ By age, pizza contributed more to energy intake of adolescents 12-19 years compared to those less than 12 years of age. Pizza contribution to energy intake of 12-19-year-olds was similar to adults.
- ▶ Pizza contributed at least one-quarter to mean daily nutrient intakes of protein, fiber, folate, and calcium and about one-third of total fat, saturated fat, and sodium.
- ▶ Pizza was most likely consumed at lunch and dinner. For adults, the majority of pizza was consumed at dinner. For children, the distribution was similar for lunch and dinner.
- ▶ Over half of pizza was obtained from restaurants and about one-quarter was from grocery stores.
- ▶ On average, males had four and females had three slices of pizza at an eating occasion.

Pizza is a popular go-to option for last-minute meals and get-togethers because it is convenient, affordable and easy to serve. It has also been ranked as the fourth most craved food (1). As a mixed food item, pizza is a good source of many nutrients. However, many of the qualities that make pizza craveable may lead to excess intake of some nutrients that are of public health concern – saturated fat, sodium, and sugar (2). Given its popularity, characterizing who consumes pizza and its contribution to dietary intake of the U.S. population is informative. The purpose of this report is to describe current data on pizza consumption among the U.S. population and its contribution to energy and nutrient intake. For this report, dietary intake data from What We Eat in America, NHANES 2017-March 2020 Prepandemic were used.

### What percentage of the U.S. population consumed pizza on a given day?

On any given day, pizza was consumed by 11% of the population overall (*data not shown*). Children and adolescents (*see definitions, p.8*) had pizza more frequently than adults (*see definitions, p.8*), and the percentage consuming decreased to about 6% among older adults (60+). By age, although the percentages of males who consumed pizza were higher than females, differences were not significant.

**Figure 1. Percentage of U.S. population who consumed pizza on any given day by gender and age, What We Eat in America, NHANES 2017-March 2020 Prepandemic**



SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years



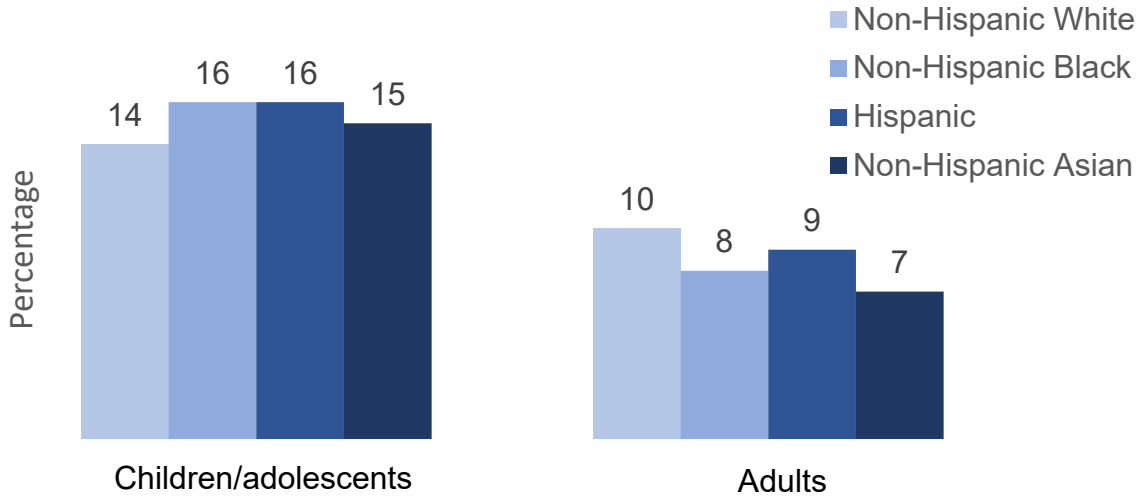
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**Were there differences in pizza consumption by race/ethnicity and income level?**

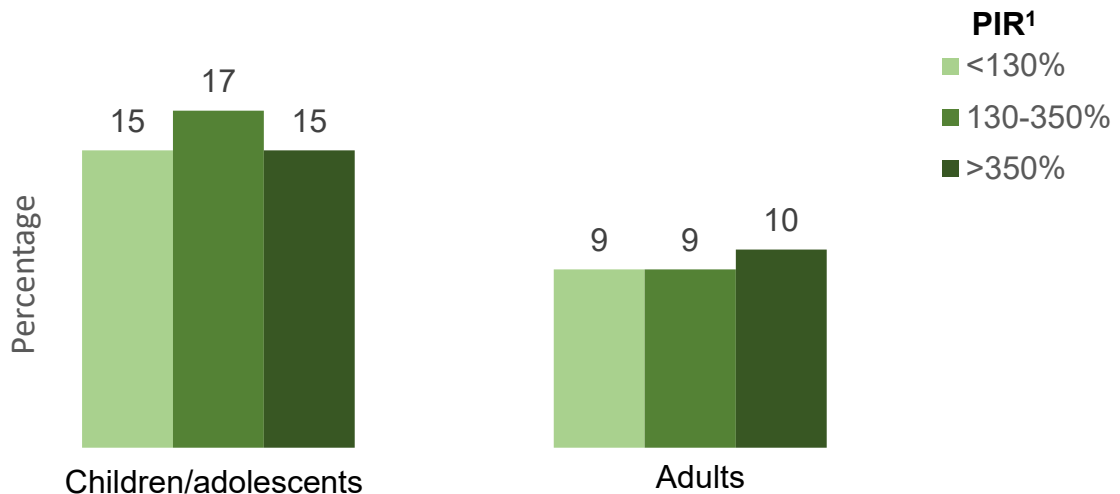
Among both children/adolescents and adults, there were no differences in percentages who consumed pizza by race/ethnicity (Figure 2a) or by income level (Figure 2b).

**Figure 2a. Percentage of U.S. population who consumed pizza on any given day by race/ethnicity, What We Eat in America, NHANES 2017-March 2020 Prepandemic**



SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years

**Figure 2b. Percentage of the U.S. population who consumed pizza on any given day by income level<sup>1</sup>, What We Eat in America, NHANES 2017-March 2020 Prepandemic**



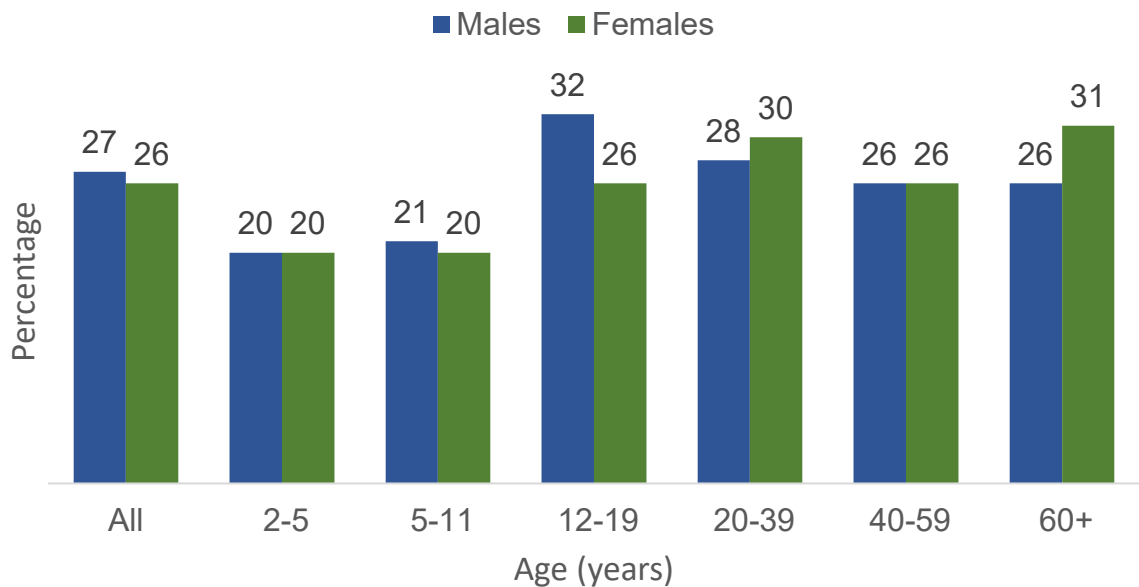
<sup>1</sup>Poverty Income Ratio (PIR): the ratio of family income to poverty guide expressed as a percentage (3).

SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years

**For consumers of pizza, what percentage of daily energy came from pizza?**

Overall, pizza contributed about 27% to total energy intake of pizza consumers on the intake day. By age, the energy contribution from pizza did not differ between males and females. However, when males and females were considered together, the contribution of pizza to energy intake was significantly higher among those 12-19 years compared to those 2-5 and 6-11 years (*data not shown*).

**Figure 3. Percentage contribution of pizza to total daily energy intake among pizza consumers, What We Eat in America, NHANES 2017-March 2020 Prepandemic**

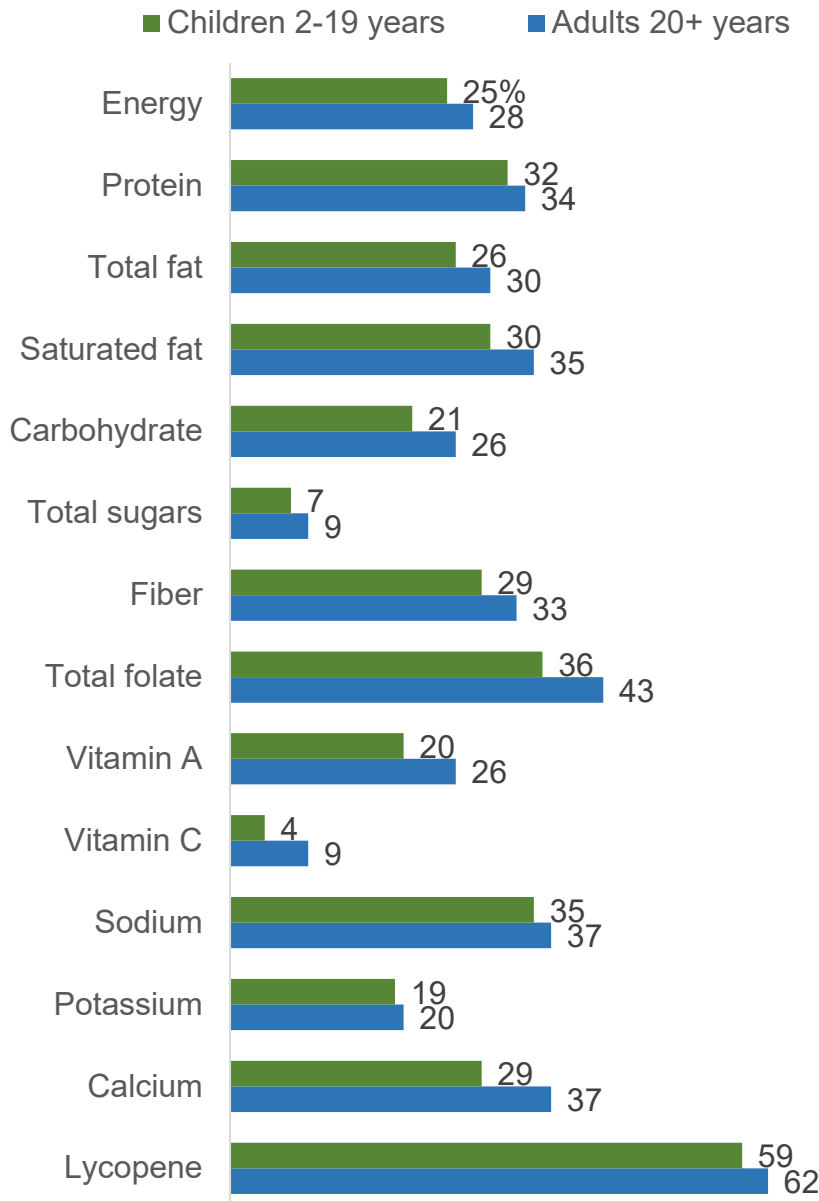


SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years

### What percentage of daily nutrient intake was contributed by pizza?

Figure 4 illustrates the nutrient contribution of pizza to total intakes of pizza consumers. Pizza contributed at least one-quarter to intake of most nutrient shown (Figure 4). About one-third of total intakes of protein, fiber, folate and calcium were from pizza. Pizza also contributed one-third or more to total intakes of thiamin, iron, zinc, and selenium (*data not shown*). However, pizza also accounted for about one-third of total intake of nutrients that the Dietary Guidelines for Americans recommend limiting – total fat, saturated fat, and sodium (2).

**Figure 4. Percentage contribution of pizza to mean daily nutrient intake of pizza consumers, What We Eat in America, NHANES 2017-March 2020 Prepandemic**

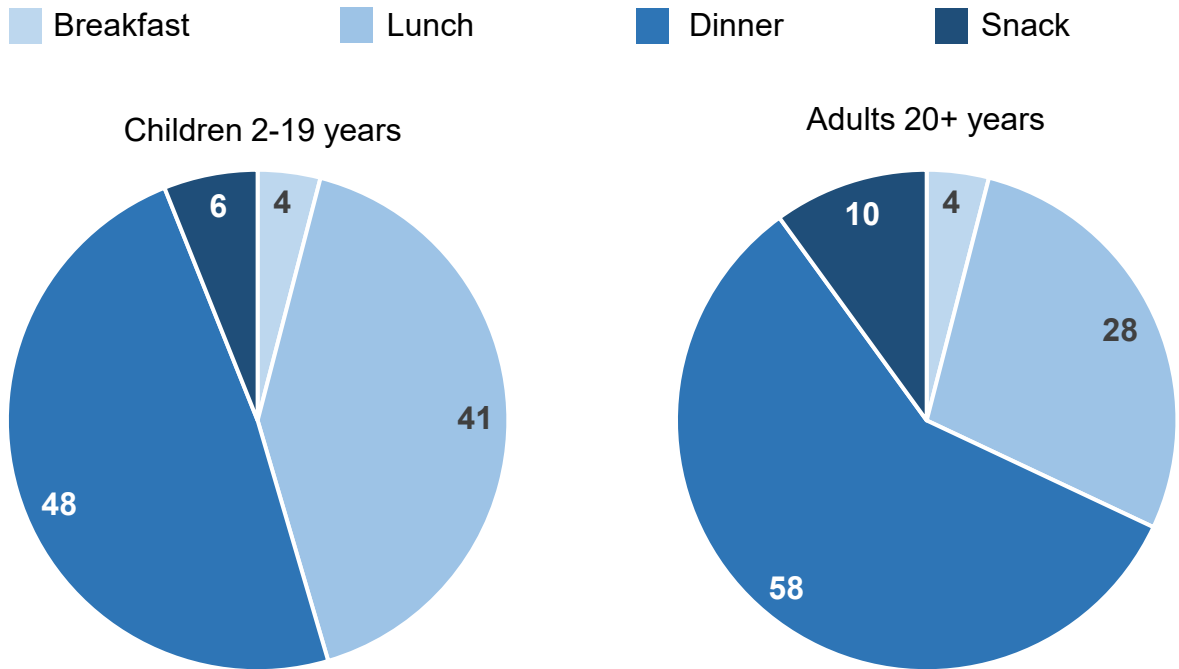


SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years

**At what eating occasion was pizza consumed by children and adults?**

Almost 90% of pizza was consumed at lunch and dinner. Among children and adolescents, 41% of pizza intake was at lunch and 48% was at dinner. In contrast, adults consumed pizza more frequently at dinner. Snacks accounted for 4% of pizza intake.

**Figure 5. Percentage of pizza consumed by eating occasion among children and adults, What We Eat in America, NHANES 2017-March 2020 Prepandemic**



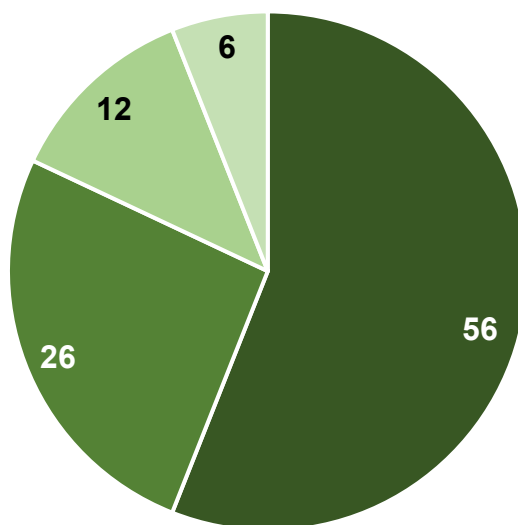
SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years

### Where was pizza obtained?

Over half of the pizza consumed was from a restaurant, which included both take-out or sit-down establishments. The grocery store was the source (*see definition of source, p.8*) of about one-quarter of pizza which may have been frozen pizza, ingredients for a homemade pizza, or a cooked slice from a counter. Pizza obtained at school or daycare was primarily consumed at lunch by children and adolescents. A small percentage (6%) of pizza consumed was obtained from “Other” sources such as a sport or entertainment facility or a convenience store

**Figure 6. Source of pizza consumed by U.S. population, What We Eat in America, NHANES 2017-March 2020 Prepandemic**

■ Restaurant ■ Grocery store ■ School/Daycare ■ Other

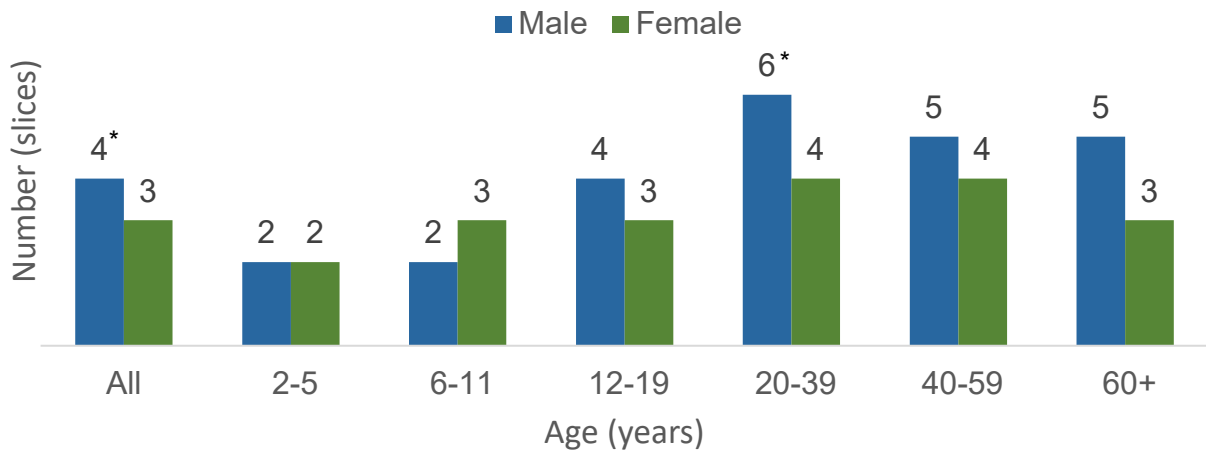


SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years

## How many slices<sup>1</sup> of pizza are consumed at an eating occasion?

Overall, males had four and females had three slices of pizza (*see definition of a slice, p.8*) at an eating occasion ( $P<0.001$ ). Among adults and adolescents 12-19 years, males consumed more slices than females, although differences were only significant among those 20-39 years of age. By age, those 2-5 consumed less pizza than those 6-19 years ( $P<0.001$ ) (*data not shown*). There were no differences among adults by age.

**Figure 6. Number of pizza slices consumed at an eating occasion by age and gender, What We Eat in America, NHANES 2017-March 2020 Prepandemic**



\*Average slices consumed by males significantly higher than females,  $P<0.001$

<sup>1</sup>One slice of pizza is approximately 1/6 of 14-inch fast food/restaurant cheese pizza with a regular crust (7).

SOURCE: WWEIA, NHANES 2017-March 2020 Prepandemic, day 1, 2+ years

## Definitions

**Children and adolescents:** Includes participants 2-19 years. Children are 2-11 years; adolescents are 12-19 years.

**Adults:** Includes participants 20 years and older.

**Family income (as percentage of poverty level):** the ratio of family income to poverty guidelines expressed as a percentage. The Department of Health and Human Services' poverty guidelines were used as the poverty measure to calculate the ratio (3).

**Source of food:** During the dietary interview, participants are asked for each food item they report "Where did you get this/most of the ingredients for this [foodname]". They are given a list of 28 options as well as the option to specify an "Other" source not listed (4).

**Slice of pizza:** The reference for a slice of pizza was the gram weight of one slice of a 14-inch fast food/restaurant cheese pizza with a regular crust (7).

## Data source

Estimates in this data brief are based on one day of dietary intake data from WWEIA, NHANES 2017-2020 Prepandemic (6). Day 1 dietary data were collected in person using the 5-step USDA Automated Multiple-Pass Method for the 24-hour recall. A total of 13,444 individuals 2 years of age and older (6,689 males and 6,755 females) provided complete and reliable dietary intake data. Children and adolescents included 4,990 individuals 2-19 years (2,530 males and 2,460 females). Adults included 8,454 individuals 20 years and older (4,129 males and 4,325 females). In the race-specific analyses (see page 2), 244 individuals who were multi-racial or of a racial group other than those listed were excluded. Likewise, in the income-specific analyses (also on page 2), 317 individuals with missing family income information were excluded. Sample weights were applied in all analyses to produce nationally representative estimates. Flagged estimates(†) may be less precise due to small sample size and/or large relative standard error, and therefore should be interpreted with caution. Energy and nutrient intakes were estimated using the 2017-2018 and 2019-2020 versions of USDA's Food and Nutrient Database for Dietary Studies (7).



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## Suggested citation

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