



Food Surveys Research Group  
Dietary Data Brief No. 28  
July 2020

# Meeting Dietary Guidelines Recommendations: Older Adults

What We Eat in America, NHANES 2013-2016

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## Highlights

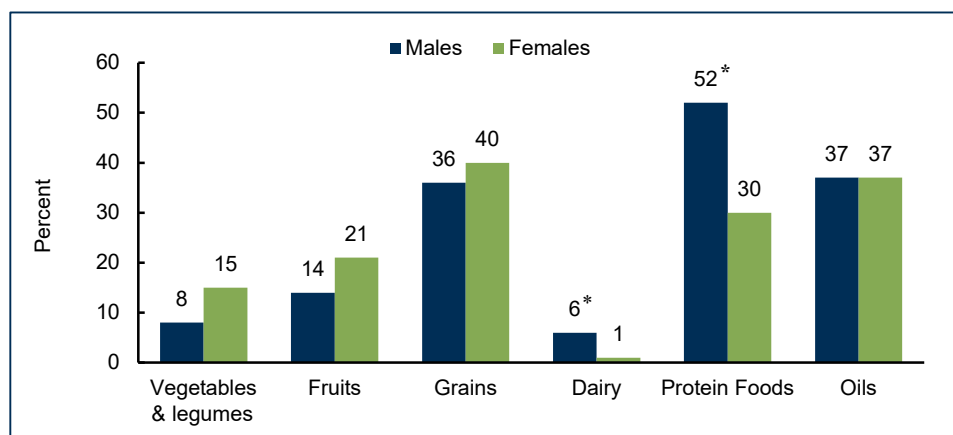
- Less than a quarter of older adults meet the DGA recommendations for vegetables, fruits, and dairy.
- For protein foods, about half of older males meet the recommendations compared to a third of females.
- About half of older Hispanics meet the recommendation for grains compared to about a third of non-Hispanic whites and non-Hispanic blacks.
- About a third of older Hispanics meet the recommendation for fruits compared to a sixth of non-Hispanic whites and non-Hispanic blacks.
- Less than 10% of lower income older adults meet the recommendations for vegetables and less than 30% meet the recommendations for protein foods.
- Less than half of older adults meet the recommendation to limit added sugars to <10% of total daily energy particularly those in lower income levels and who are non-Hispanic black.

The 2015-2020 Dietary Guidelines for Americans<sup>1</sup> (DGA) recommends healthy eating patterns to help promote health and prevent chronic disease. Adults 65 years and older, many who will have a higher risk of chronic disease, will make up 21 percent of the population by 2030, increasing the demand for health care.<sup>2</sup> This report compares usual intake<sup>3</sup> to DGA energy-specific intake recommendations for 1,422 older adults (698 men and 724 women), defined as those age 71 and older, from the 2013-2016 WWEIA, NHANES.<sup>4</sup>

## What percentage of older adults meet the DGA food group recommendations?

Overall, less than half of older adults meet the recommendations for DGA food groups to include in a healthy eating pattern. The exception is males where just over half meet the DGA recommendations for protein foods. Dairy has the lowest percentage of older adults meeting the recommendations. A higher percentage of males compared to females meet the recommendations for protein foods and dairy.

Figure 1. Percentage of older adults meeting DGA food group recommendations<sup>†</sup> WWEIA, NHANES 2013-2016



<sup>†</sup>Energy-specific recommendations based on age, sex, and physical activity level

\*Significantly different from females ( $p < 0.001$ )

SOURCE: What We Eat in America, NHANES 2013-2016, individuals age 71 and older, 2 days



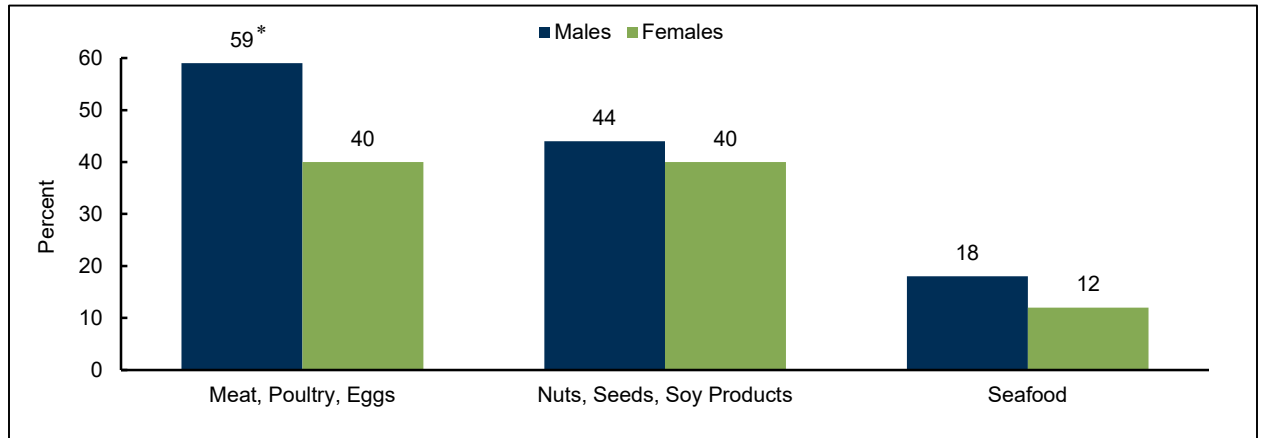
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## Which DGA protein foods contribute to the difference between males and females?

Although more males meet overall recommendations for intake of protein foods than females (Figure 1), the only protein subgroup in which there is a difference between males and females is the meat, poultry, eggs subgroup where a higher percentage of males meet the recommendation.

Figure 2. Percentage of older adults meeting DGA protein foods recommendations<sup>†</sup>, WWEIA, NHANES 2013-2016



<sup>†</sup>Energy-specific recommendations based on age, sex, and physical activity level

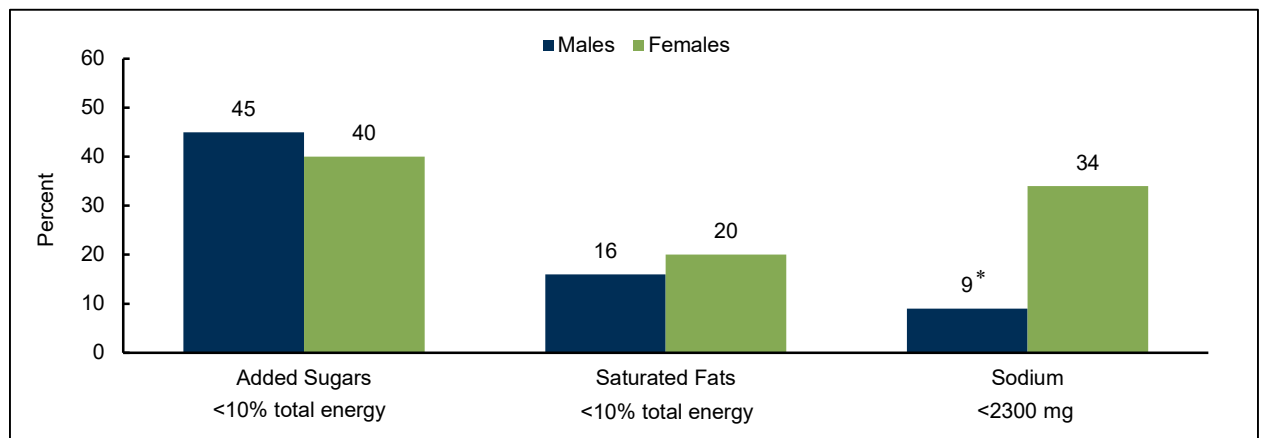
\*Significantly different from females (p<0.001)

SOURCE: What We Eat in America, NHANES 2013-2016, individuals age 71 and older, 2 days

## What percentage of older adults meet DGA recommendations for nutrients to limit?

Fewer than half of older adults meet the recommendations to limit the contribution of added sugars and saturated fats to less than 10% of total energy each, and to limit sodium to less than 2300 mg. A higher percentage of females than males meet the recommendation to limit sodium.

Figure 3. Percentage of older adults meeting DGA recommendations for nutrients to limit, WWEIA, NHANES 2013-2016



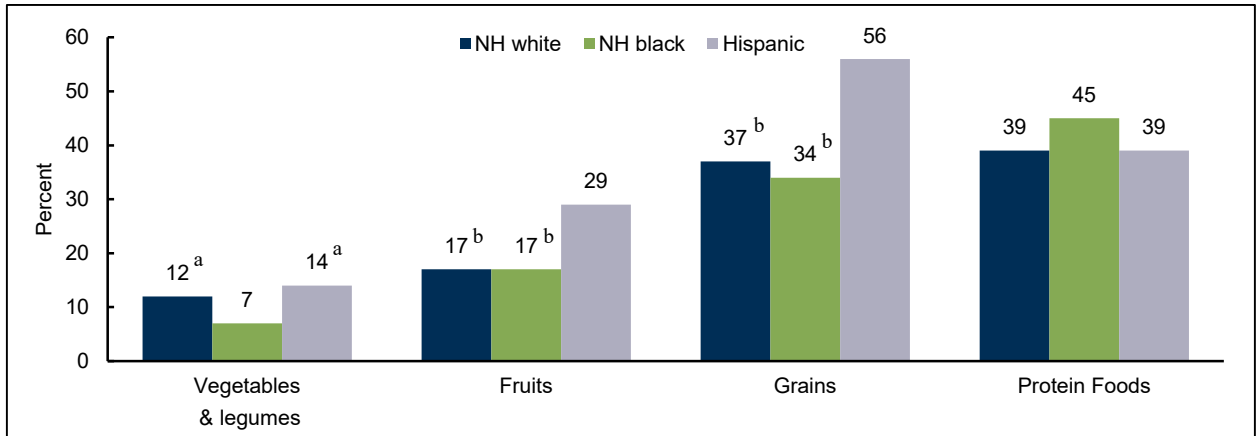
\*Significantly different from females (p<0.001)

SOURCE: What We Eat in America, NHANES 2013-2016, individuals age 71 and older, 2 days

**Race/Ethnicity: Are there differences in older adults meeting DGA recommendations?**

A higher percentage of Hispanics meet the recommended intake of grains and fruits than non-Hispanic (NH) whites or NH blacks. A lower percentage of NH blacks meet the recommendations for intake of vegetables than NH whites or Hispanics.

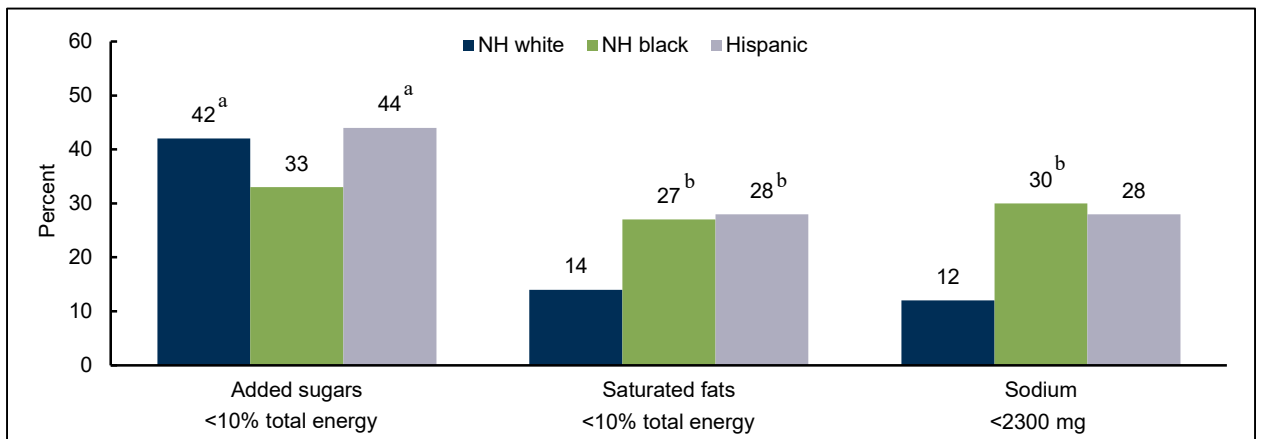
**Figure 4. Percentage of older adults meeting selected DGA food group recommendations† by race/ethnicity**  
WWEIA, NHANES 2013-2016



†Energy-specific recommendations based on age, sex, and physical activity level  
<sup>a</sup>Significantly different from non-Hispanic black (p<0.001)  
<sup>b</sup>Significantly different from Hispanic (p<0.001)  
 SOURCE: What We Eat in America, NHANES 2013-2016, individuals age 71 and older, 2 days

Higher percentages of non-Hispanic (NH) blacks and Hispanics meet the recommendation to limit saturated fats to 10% of total energy than NH whites. A higher percentage of NH blacks meet the recommendation to limit sodium to <2300 mg than NH whites or Hispanics. A lower percentage of NH blacks meet the recommendation to limit added sugars than NH whites or Hispanics.

**Figure 5. Percentage of older adults meeting DGA nutrients to limit recommendations by race/ethnicity**  
WWEIA, NHANES 2013-2016

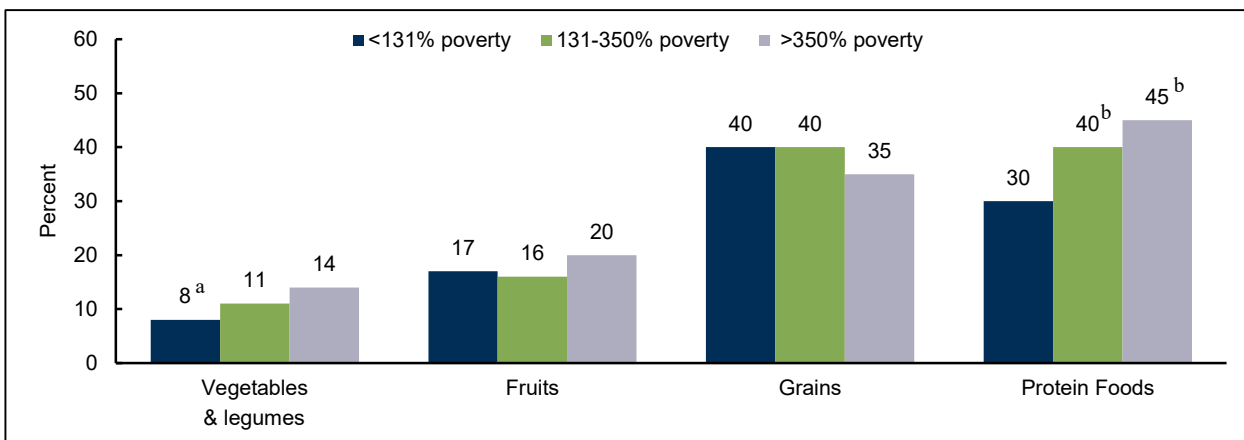


<sup>a</sup>Significantly different from non-Hispanic black (p<0.001)  
<sup>b</sup>Significantly different from non-Hispanic white (p<0.001)  
 SOURCE: What We Eat in America, NHANES 2013-2016, individuals age 71 and older, 2 days

## Income: Are there differences in older adults meeting DGA recommendations?

The highest income level has a greater percentage of older adults meeting the recommendation for vegetables and legumes compared to those in the lowest income level. The lowest income level also has a lower percentage meeting the recommendations for protein foods than both the middle and highest income levels. Income levels reflect family income in terms of the Poverty Income Ratio.

**Figure 6. Percentage of older adults meeting selected DGA food group recommendations<sup>†</sup> by family income as percentage of poverty<sup>7</sup>, WWEIA, NHANES 2013-2016**



<sup>†</sup>Energy-specific recommendations based on age, sex, and physical activity level

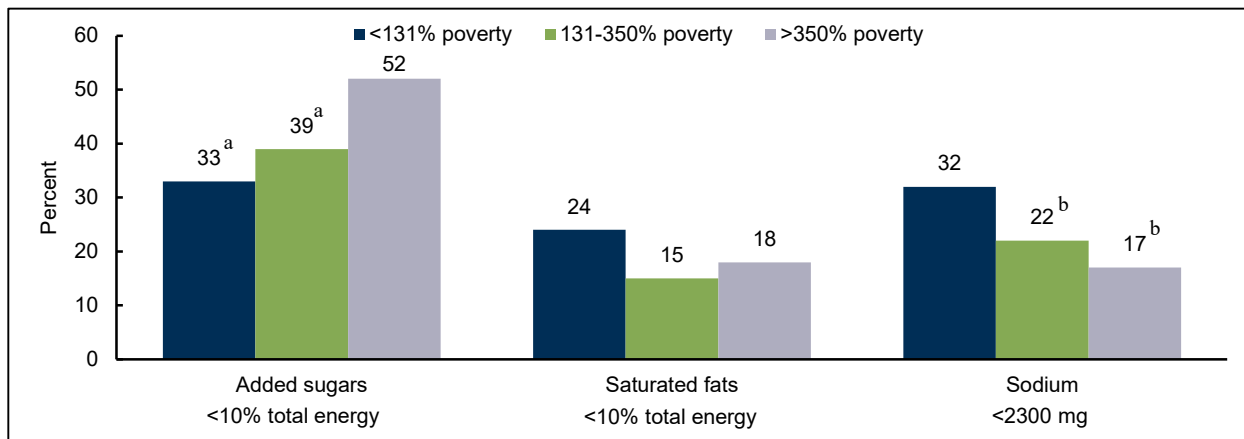
<sup>a</sup>Significantly different from highest income level (p<0.001)

<sup>b</sup>Significantly different from lowest income level (p<0.001)

SOURCE: What We Eat in America, NHANES 2013-2016, individuals age 71 and older, 2 days

The highest income level has a greater percentage of older adults meeting the recommendation for added sugars compared to the middle and lowest income groups. A higher percentage of older adults in the lowest income level meet the recommendation for sodium than both the middle and highest income levels.

**Figure 7. Percentage of older adults meeting DGA nutrients to limit recommendations by family income as percentage of poverty<sup>7</sup>, WWEIA, NHANES 2013-2016**



<sup>a</sup>Significantly different from highest income level (p<0.001)

<sup>b</sup>Significantly different from lowest income level (p<0.001)

SOURCE: What We Eat in America, NHANES 2013-2016, individuals age 71 and older, 2 days

## Definitions

**Dietary Guidelines for Americans<sup>1</sup> (DGA) Healthy Eating Patterns:** Eating patterns that include recommended intakes for vegetables, fruits, grains, dairy, protein foods, and oils. There are also recommended limits for saturated fats, added sugars, and sodium.

**Added sugars:** Syrups and other caloric sweeteners added to foods and beverages in preparation, processing, or at the table. Naturally occurring sugars such as those in fruit and in milk are not considered added sugars.

**Saturated fats:** Fats high in saturated fatty acids that are typically solid at room temperature. Animal products, such as meat and dairy, and tropical oils, such as coconut and palm oil, are major sources of saturated fat

**Usual intake:** An estimate of average daily intake over the long term informed by what was specifically reported on the days surveyed. The National Cancer Institute (NCI) Method<sup>3</sup> was used to produce usual intake distributions for males and females age 71 and older.

**Energy-Specific Recommendations<sup>1</sup>:** The DGA provides recommended amounts for food groups in cup equivalents (cup eq) for vegetables including legumes, fruits, and dairy; ounce equivalents (oz eq) for grains and protein foods, and grams for oils at calorie levels based on sex, age and physical activity levels. Calorie levels for adults age 71 and older range from 1,600 to 2,000 calories per day for women and 2,000 to 2,600 for men. Physical activity levels are defined as: *sedentary* includes only the physical activity of independent living, *moderately active* includes sedentary plus activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, and *active* includes sedentary plus activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour.<sup>8</sup> The following chart shows the DGA Energy-Specific Recommendations for adults age 71 and older. (Note: Recommendations for nutrients to limit are not energy-specific.)

	Males			Females		
	Sedentary	Moderately Active	Active	Sedentary	Moderately Active	Active
<b>Daily Amount</b>						
Vegetables and legumes (cup eq)	2.5	3	3.5*	2	2.5	2.5
Fruits (cup eq)	2	2	2	1.5	1.5	2
Grains (oz eq)	6	7	9*	5	6	6
Dairy (cup eq)	3	3	3	3	3	3
Protein Foods (oz eq)	5.5	6	6.5	5	5	5.5
Oils (grams)	27	29	34*	22	22	27
<b>Weekly Amount<sup>†</sup> (oz eq)</b>						
Seafood	8	9	10	8	8	8
Meats, Poultry, Eggs	26	28	31	23	23	26
Nuts, Seeds, Soy Products	5	5	5	4	4	5

\*For males age 76 and older the amounts are: 3 cups of vegetables, 8 ounce equivalents of grains, and 31 grams of oils.

†Weekly amounts shown in the table are divided by 7 before comparing to usual daily intakes.

**Cup equivalent:** An amount of food or beverage that is considered equal to 1 cup from the vegetables, fruits, or dairy food groups.

**Ounce equivalent:** An amount of food that is considered equal to 1 ounce from the grains or protein foods food group.

## Definitions - continued

**Poverty Income Ratio (PIR):** The ratio of family income to poverty level expressed as a percentage. The poverty measure used in calculating the PIR was based on the Department of Health and Human Services' poverty guidelines.<sup>7</sup>

## Data Sources

Estimates of usual intake in this report are based on 2 days of dietary data from What We Eat in America (WWEIA), the dietary component of the National Health and Nutrition Examination Survey (NHANES) 2013-2016.<sup>4</sup> Data from WWEIA, NHANES 2013-2014 and 2015-2016 were combined. The study sample included 1,422 individuals (698 men and 724 women), aged 71 years and older. Sample weights were applied in all analyses to produce nationally representative estimates.

The Food Patterns Equivalents Database 2013-2016<sup>5</sup> and Food and Nutrient Database for Dietary Studies 2013-2016<sup>6</sup> were used to calculate intakes of Food Patterns Equivalents and nutrients, respectively.

The NHANES Physical Activity Questionnaire was used to classify respondents as sedentary, moderately active, or active.<sup>4</sup>

## References

1. U.S. Department of Health and Human Services and U.S. Department of Agriculture. 2015-2020 Dietary Guidelines for Americans. 8th Edition. December 2015. <http://health.gov/dietaryguidelines/2015/guidelines/>
2. U. S. Census Bureau. <https://www.census.gov/library/stories/2018/03/graying-america.html>
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7. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Poverty guidelines. <https://aspe.hhs.gov/poverty-guidelines>
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## About the authors

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## Suggested citation

Steinfeldt LC, Martin CL, Goldman JD, Moshfegh AJ. *Meeting Dietary Guidelines Recommendations: Older Adults What We Eat in America, NHANES 2013-2016*. Food Surveys Research Group Dietary Data Brief No. 28. July 2020.

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