Meeting Dietary Guidelines Recommendations: Older Adults

What We Eat in America, NHANES 2013-2016

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The 2015-2020 Dietary Guidelines for Americans¹ (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.² This report compares usual intake³ 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.⁴

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†

WWEIA, NHANES 2013-2016

<table>
<thead>
<tr>
<th>Food Group</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables &amp; legumes</td>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>Fruits</td>
<td>21</td>
<td>15</td>
</tr>
<tr>
<td>Grains</td>
<td>36</td>
<td>40</td>
</tr>
<tr>
<td>Dairy</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Protein foods</td>
<td>52*</td>
<td>30</td>
</tr>
<tr>
<td>Oils</td>
<td>37</td>
<td>37</td>
</tr>
</tbody>
</table>

¹Energy-specific recommendations based on age, sex, and physical activity level
²Significantly different from females (p<0.001)

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

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.
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†, WWEIA, NHANES 2013-2016

![Bar chart showing the percentage of older adults meeting DGA protein foods recommendations for males and females.](chart1)

†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

![Bar chart showing the percentage of older adults meeting DGA recommendations for nutrients to limit.](chart2)

*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

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

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†Energy-specific recommendations based on age, sex, and physical activity level

aSignificantly different from non-Hispanic black (p<0.001)
bSignificantly different from Hispanic (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† by family income as percentage of poverty7, WWEIA, NHANES 2013-2016

- 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 poverty7, WWEIA, NHANES 2013-2016

†Energy-specific recommendations based on age, sex, and physical activity level
aSignificantly different from highest income level (p<0.001)
bSignificantly 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 (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 was used to produce usual intake distributions for males and females age 71 and older.

Energy-Specific Recommendations: 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. Caloric 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. 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.)

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

*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.7

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) 2013-2016.4 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 2013-20165 and Food and Nutrient Database for Dietary Studies 2013-20166 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.4

References

About the authors

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