

Healthy People 2010 Operational Definition

19-7. Increase the proportion of persons aged 2 years and older who consume at least six daily servings of grain products, with at least three being whole grains.

National Data Source	Baseline: Continuing Survey of Food Intakes by Individuals (CSFII), Department of Agriculture (USDA). All other data years: National Health and Nutrition Examination Survey (NHANES): CDC, NCHS; USDA, ARS.
State Data Source	Not identified.
Healthy People 2000 Objective	Adapted from 2.6 (Nutrition) (also 16.8)
Changes since the 2000 Publication	Revised baseline.
Measure	Percent (age adjusted-see Comments).
Baseline (Year)	4 (1994-96)
Target	50
Target-Setting Method	Better than the best racial/ethnic subgroup. For a discussion of target-setting methods, see Part A, section 4.
Numerator	Number of persons aged 2 years and older who report consuming six or more servings of grain products per day, including three or more servings of whole-grain products (based on a 2-day average).
Denominator	Number of persons aged 2 years and older.
Population Targeted	U.S. civilian, noninstitutionalized population.
Questions Used to Obtain the National Baseline Data	From the 1994-96 Continuing Survey of Food Intakes by Individuals: The 1994-96 CSFII included the collection of 2 nonconsecutive days of dietary data through in-person 24-hour recalls. ¹ Each respondent was asked to recall the kinds and amounts of foods eaten at home and away from home during the previous day. Amounts of foods reported in

household measures were then converted to gram amounts.

Expected Periodicity Periodic.

Comments For the original baseline, the definitions for grain products and for serving sizes were derived from the 1995 and 2000 Dietary Guidelines,² the Food Guide Pyramid, and related documentation. Estimates were calculated using the USDA Pyramid Servings Database, which provided data on total and whole grain consumption.^{3,4}

The goal of three servings from whole-grain products was based on an assessment of the variety of grain product consumption needed to obtain nutrient adequacy in the development of the Food Guide Pyramid.

The original baseline of 7 percent was revised to 4 percent in 2008 because the USDA Pyramid Servings Database was replaced by the MyPyramid Equivalents Databases for USDA Survey Food Codes (<http://www.ars.usda.gov/ba/bhnrc/fsrg>). There was a need to use the latter database for both baseline and update estimates to permit comparisons over time. The 1994-96 MyPyramid Equivalents Database was used to estimate the number of servings of grain products consumed according to the definition of a serving in the 1995/2000 Dietary Guidelines. This required certain adaptations in programming because of differences in these two databases. The target of 50 percent did not change.

The intakes of grain servings were modified for children aged 2 to 3 years. The modification was accomplished by multiplying their daily servings intake by 1.5, equivalent to estimating that their requirement is two-thirds that of persons over age 3 years. Grain ingredients from mixtures are included in the total, and fractions of servings are counted.

Two component measures are also tracked: (1) age-adjusted percent of persons who consumed six or more servings of grain products daily (based on a 2-day average), and (2) age-adjusted percent of

persons who consumed three or more servings of whole grain products (based on a 2- day average).

Pregnant or lactating women and breast-fed children are excluded from the numerator and denominator.

Data are age adjusted to the 2000 standard population using the age groups 2-5, 6-11, 12-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, and 80 years and over. Age-adjusted rates are weighted sums of age-specific rates. For a discussion of age-adjustment, see Part A, section 7.

Although the CSFII was the baseline data source for this objective, that survey has been discontinued, and tracking data are now obtained from the National Health and Nutrition Examination Survey.

This objective differs from Healthy People 2000 objective 2.6, which only tracked the proportion of the population that consumed six or more daily servings of grain products, and the mean number of servings consumed, with a few exclusions of fruit and vegetable products. Also, Healthy People 2000 estimates were not age adjusted.

For some measures, data do not meet the criteria for statistical reliability, data quality, or confidentiality and have been suppressed. Information on suppression of data for the major Healthy People 2010 data systems has been published in a *Healthy People Statistical Note*.⁵

See Part C for a description of NHANES and Appendix A for focus area contact information.

References

1. Agricultural Research Service (ARS). Design and Operation: The Continuing Survey of Food Intakes by Individuals and the Diet and Health Knowledge Survey, 1994–96. NFS Report No. 96-1. Washington, DC: USDA, 1998.
2. USDA/HHS. *Dietary Guidelines for Americans*. 4th and 5th ed. USDA Home and Garden Bulletin No. 232. 1995 and 2000.
3. USDA, ARS. *1994–96 Continuing Survey of Food Intakes by Individuals and 1994–96 Diet and Health Knowledge Survey*. CD-ROM, Accession No. PB98-500457. Springfield, VA: National Technical Information Service, 1998.

4. Cleveland, L.E.; Moshfegh, A.J.; Albertson, A.M.; et al. Dietary intake of whole grains. *Journal of the American College of Nutrition* 19(3):3315-3385, 2000.
5. Klein, R.J.; Proctor, S.E.; Boudreault, M.A.; Turczyn, K.M. Healthy People 2010 Criteria for Data Suppression. *Statistical Notes* No. 24. Hyattsville, MD: National Center for Health Statistics. 2002.