

SNAP-Ed Toolkit

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R3: Whole Grains

Framework Component

Population Results – Trends and Reductions in Disparities

Indicator Description

This indicator represents whole grains consumption over time, from year to year, of the SNAP-Ed eligible population of the state or project area. Unlike [MT1](#) and [LT1](#) (Healthy Eating Behaviors), which measure frequency of grains consumption attributed to SNAP-Ed series-based programs, R3 is intended to measure the proportion of the SNAP-Ed eligible population that is achieving the *Dietary Guidelines for Americans* recommendations. Thus, R3 measures whole grains status for low-income households surveyed within the state or area of focus. R3 is a population-level surveillance measure.

Background and Context

The current Dietary Guidelines for Americans recommends that Americans make half their grains whole, and total daily grains intake should range from 3 to 7 ounces depending on daily calories consumed. The recommended amount of grains in the Healthy U.S.-Style Eating Pattern at the 2,000-calorie level is 6 ounce-equivalents per day. Half of these grains should be whole either in the form of single grain foods or products that include grains as an ingredient. Most Americans are not meeting whole grains recommendations. The Dietary Guidelines for Americans describe that eating more whole grains, particularly those high in dietary fiber, especially helps adults to feel full longer and prevent weight gain. Increasing whole grains consumption is an important obesity prevention strategy. Indicator R3 measures whole grains consumption among low-income children and adults. Unlike R2 (Fruits and Vegetables), there are no validated public health surveillance questions for assessing intake of grains currently in practice. Surveys such as the BRFSS and YRBSS abandoned these questions in previous years. USDA previously administered the Continuing Survey of Food Intakes by Individuals and the Diet and Health Knowledge Survey to assess consumers' adherence to whole grains recommendation. Several industry trade groups, such as the Whole Grains Council, administer market research surveys, but these surveys have not been tested for the SNAP-Ed eligible audience. Practitioners may use the aforementioned survey questions, choose among 24-hour dietary recall instruments or food frequency questionnaires, or use results from Healthy Eating Index (see [R1](#)) to track the whole grains outcome measures and calculate if half of grains consumed were whole. Alternatively, customized surveys may include pictorial representations of grains of interest for the population and allow participants to choose which types of grains they eat per day, per week, or other frequency. One of the biggest challenges for this indicator is determining

whether participants eat 100 percent whole grain products; according to Kantor et al. (2001), consumers may struggle with identifying whole grain foods. Thus, program evaluators should use commonly known whole grain foods (e.g., pasta, rice, bread, or tortillas).

Outcome Measures

Number or percent of SNAP-Ed eligible persons who:

R3a. Ate whole grains more than one time per day

1. Cooked grains (pasta, rice, other)
2. Ready-to-eat grains (bread, cereal, tortillas, other)

R3b. Ate refined grains less than one time per day

1. Cooked grains (pasta, rice, other)
2. Ready-to-eat grains (bread, cereal, tortillas, other)

R3c. Made half their grains whole

What to Measure

Conduct a population-level assessment of whole grains intake using either a validated survey instrument or a 24-hour recall. Administer surveys to participants using interval measures, which are standard units, such as times per day that grains were consumed. Compare whole grain consumption to refined grain consumption, particularly grain-based desserts that represent empty calories and should only be consumed once in a while. Survey questions should tease out different types of grains, including those that are ready-to-eat and those that are cooked, which can be tracked separately or aggregated for purposes of reporting.

Population

Youth (pre-school and above) or Adults

Surveys and Data Collection Tools

ADULTS [collapse title="Shortened Rapid Eating Assessment for Participants (REAP-S)"]

https://appliedresearch.cancer.gov/diet/shortreg/instruments/segal-isaacson_reap-s.pdf

- In an average week, how often do you eat less than 2 servings of whole grain products or high-fiber starches a day? Serving = 1 slice of 100 percent whole grain bread; 1 cup whole grain cereal like Shredded Wheat, Wheaties, Grape Nuts, high fiber cereals, oatmeal, 3–4 whole grain crackers, ½ cup brown rice or whole wheat pasta, boiled or baked potatoes, yucca, yams, or plantain. [R3a1,2]
 - Responses: Usually/often; sometimes; rarely/never
- Eat regular potato chips, nacho chips, corn chips, crackers, regular popcorn, nuts instead of pretzels, low-fat chips or low-fat crackers, air-popped popcorn? [R3b1,2]
 - Responses: Usually/often; sometimes; rarely/never
- Eat sweets like cake, cookies, pastries, donuts, muffins, chocolate, and candies more than 2 times per day.

[R3b1,2]

- Responses: Usually/often; sometimes; rarely/never

[/collapse] [collapse title="Rate Your Plate"] <https://www.einstein.yu.edu/nutrition/rateplat.htm>

- Think about the way you usually eat. For each food topic, put a check mark in column A, B, or C.
- Grains: 1 Serving = 1 slice bread or tortilla; ½ bagel, roll, English muffin, or pita; 1 cup cooked rice or pasta; 1 cup cereal
 - Responses: Usually eat: less than 4 servings of grain products a day; 4–5 servings of grain products a day; 6 or more servings of grain products a day [R3b1,2]
- Whole Grains
 - Responses: Usually eat: White breads, white rice, low fiber cereals like corn flakes, Rice Krispies, etc.; Whole grain breads, brown rice, whole grain cereals like oatmeal, bran cereals, Wheaties, etc. [R3b1,2]

[/collapse] [collapse title="University of California Cooperative Extension EFNEP Food Tracker"] Group 5-step Multiple-Pass 24-hour Dietary Recall [R3a,b,c] (Instrument is available in English, Spanish, Russian, Hmong, Chinese, also instructional video and other materials) <https://townsendlab.ucdavis.edu/> Note: Any multiple-pass method in which all data collectors have been trained to collect the information consistently using a standardized, documented protocol that includes probing is acceptable. It is recommended that, if at all possible, visual aids, such as portion size guides (paper or online), measuring cups, dishes/glasses, and/or food models may be used. [/collapse] **CHILDREN & YOUTH** [collapse title="California Youth Nutrition and Physical Activity Survey"] Condensed version of the School and Physical Activity Nutrition Project (SPAN) Survey 4th–8th Grades

https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/NEOPB/CDPH%20Document%20Library/RES_Compndiumof

- Yesterday, did you eat any corn tortillas or bread, tortillas, buns, bagels, or rolls that were brown (not white)? [R3a2]
 - Responses: No, I didn't eat any of these foods yesterday; Yes, I ate these foods 1 time yesterday; Yes, I ate these foods 2 times yesterday; Yes, I ate these foods 3 or more times yesterday
- Yesterday, did you eat rice, farro, macaroni, spaghetti, or pasta noodles that were brown (not white)? [R3a1]
 - Responses: No, I didn't eat any of these foods yesterday; Yes, I ate these foods 1 time yesterday; Yes, I ate these foods 2 times yesterday; Yes, I ate these foods 3 or more times yesterday
- Yesterday, did you eat sweet rolls, doughnuts, cookies, brownies, pies, or cake? [R3b]
 - Responses: No, I didn't eat any of these foods yesterday; Yes, I ate these foods 1 time yesterday; Yes, I ate these foods 2 times yesterday; Yes, I ate these foods 3 or more times yesterday

[/collapse] [collapse title="6th to 8th Grade EFNEP Nutrition Education Survey"]

<https://www2.ag.purdue.edu/programs/hhs/efnep/Pages/Resource-Evaluation.aspx>

- When you eat grain products, how often do you eat whole grains, like brown rice instead of white rice, whole grain bread instead of white bread, and whole grain cereals? [R3a]

[/collapse] **PRESCHOOLERS** [collapse title="Obesity Risk Assessment Tools – Health Kids, My Child at Mealtime"] <https://healthykids.ucdavis.edu/> [/collapse] Additional evaluation tools to measure R3 can be found in the [SNAP-Ed Library](#).

Key Glossary Terms

[glossary]Population-based data collection[/glossary] [glossary]Refined grains[/glossary] [glossary]SNAP-Ed eligible persons[/glossary] [glossary]Surveillance[/glossary] [glossary]Whole grains[/glossary]

Additional Resources or Supporting Citations

Kantor L, Variyam J, Allshouse J, et al. Choose a variety of grains daily, especially whole grains: a challenge for consumers. *J Nutr.* 2001;131:473S-86S.