

SNAP-Ed Toolkit

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MT1: Healthy Eating*

Framework Component

Changes – Nutrition-Related Behavioral Changes

Indicator Description

Changes in individual and family healthy eating behaviors on the pathway to achieving the current [Dietary Guidelines for Americans](#) recommendations. *SNAP-Ed Priority Outcome Indicator

Background and Context

Indicator MT1 measures healthy eating behavioral changes reported by SNAP-Ed participants before and after participation in a series of direct nutrition education classes offered face-to-face or over the Internet. Agencies measure the extent to which participants are improving their dietary patterns across food groups on the pathway toward achieving current *Dietary Guidelines for Americans* recommendations. MT1 builds upon [ST1](#) by assessing whether participants are making the behavioral changes they intended. [LT1](#) then builds upon MT1 and should use the same survey or data collection tool to assess behavior change long-term (6 months or longer). The number of SNAP-Ed classes and contacts vary by program model, underlying behavioral theory, or curriculum, ranging from four to eight sessions and sometimes longer. Differences in reportable outcomes may be explained by the intensity of nutrition education programming received by participants.

Outcome Measures

The number or percentage of participants reporting a healthy eating behavior during the period assessed, the frequency, type of behavior(s), or cups of fruits and vegetables consumed: **During main meals:**

MT1a. Protein foods prepared without [solid fats](#) (e.g., saturated and/or trans fats) or fresh poultry, seafood, pork, and lean meat, rather than processed meat and poultry

MT1b. Ate a serving size of protein less than the palm of a hand or a deck of cards

Throughout the day or week:

MT1c. Ate more than one kind of fruit

MT1d. Ate more than one kind of vegetable

MT1e. Ate nuts or nut butters

MT1f. Used MyPlate to make food choices

Frequency:

MT1g. Drinking water

MT1h. Drinking fewer [sugar-sweetened beverages](#) (e.g., regular soda or sports drinks)*

MT1i. Consuming low-fat or fat-free milk (including with cereal), milk products (e.g., yogurt or cheese), or fortified soy beverages

MT1j. Eating fewer refined grains (e.g., spaghetti, white rice, white tortilla)*

MT1k. Eating fewer sweets (e.g., cookies or cake)*

Servings:

MT1l. Cups of fruit consumed per day

MT1m. Cups of vegetables consumed per day

*Note: For certain outcome measures, a reduction in the behavior is desired. An example is drinking sugary beverages, such as regular soda or sports drinks, or consuming [refined grains](#) or grain-based desserts.

What to Measure

At present, there is no standardized survey instrument or composite score used in SNAP-Ed programming due to the variety of curricula and population subgroups served. Evaluators are encouraged to select one or more measures to determine if participants changed their targeted dietary outcome behaviors during the period assessed. Choose at least one outcome measure from the list provided, and select a measurement approach based upon the type of survey question and responses. For a description on ordinal and nominal outcomes, please see [Appendix D](#). Given the variety of measures that make up healthy eating behaviors, it will be useful to measure the degree of correlation among the survey responses listed in this indicator. Evaluators should prioritize survey questions that provide a range of options, such as frequency measures using a Likert scale (e.g., never, seldom, sometimes, etc.) or times per day or week or behavior that occurs. These response options are more sensitive to detecting change during the period assessed than questions with “yes” or “no” answers. **Where possible, FNS strongly encourages SNAP-Ed providers to also measure cups of fruit and cups of vegetables consumed.** Pictures or visual cues of per-cup equivalents of fruits and vegetables aid survey respondents. Typically, a pre-test is administered at program entry and a post-test is administered at program exit. In some instances, a post-only test is administered in which respondents are asked to look back on their behaviors before the series compared to their current behaviors.

Population

Older adults, adults, adolescents, children, preschoolers, and toddlers (via parents, teachers, or child care providers)

Surveys and Data Collection Tools

ADULTS [collapse title="Visually-Enhanced Food Behavior Checklist (13 items)"]
<https://townsendlab.ucdavis.edu/>

- Do you eat more than one kind of fruit each day? [MT1c]

- Do you eat more than one kind of vegetable each day? [MT1d]

Responses: no; yes, sometimes; yes, often; yes, always [/collapse] [collapse title="Starting the Conversation (8 items)"] <https://www.ncbi.nlm.nih.gov/pubmed/21146770>

- How much margarine, butter, or meat fat do you use to season vegetables or put on potatoes, bread, or corn? [MT1a]
- Responses: very little, some, a lot
- How many times a week do you eat desserts or sweets (not the low-fat kind)? [MT1j]

Responses: 1 time or less, 2–3 times, 4 or more times [/collapse] [collapse title="University of California Cooperative Extension - Plan, Shop, Save, and Cook Survey (7 items)"] https://fsnep.ucdavis.edu/sites/g/files/dgvnsk2286/files/inline-files/PSSC_pre-post_NO%20NAME_ENG_FY17.pdf

- How often do you use MyPlate to make food choices? [MT1f]

Responses: never, seldom, sometimes, usually, always [/collapse] [collapse title="Share our Strength Cooking Matters for Adults Survey (39 items)"] https://cookingmatters.org/sites/default/files/Survey.CMA_.English.2017.Esurvey.Updated.pdf

- How often do you typically eat french fries or other fried potatoes, like home fries, hash browns, or tater tots? [MT1a]
- How often do you typically drink a bottle or glass of water? (Count tap, bottled, and sparkling water.) [MT1g]
- When you eat grain products like bread, pasta, rice, etc., how often do you choose whole grain products? [MT1i]

Responses: not at all, once a week or less, more than once a week, once a day, more than once a day [/collapse] [collapse title="National Cancer Institute Automated Self-Administered (ASA) 24-hour Dietary Recall"] <https://appliedresearch.cancer.gov/asa24/> [collapse title="University of California Cooperative Extension EFNEP Food Tracker: 5?step Multiple Pass 24-hour Dietary Recall"] <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 be used.) [collapse title="Rethink Your Drink (RYD) Survey (15 items)"] Originally known as the Beverage Intake Questionnaire (BEVQ-15) https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/NEOPB/CDPH%20Document%20Library/RES_CompndiumofS

- Indicate how often you drank the following beverages. [MT1g-i]

Responses: Never or less than 1 time per week, 1 time per week, 2–3 times per week, 4–6 times per week, 1 time per day, 2+ times per day, 3+ times per day [/collapse] **CHILDREN & YOUTH** [collapse title="Beverage and Snack Questionnaire (19 items) 10–18 year olds"] <https://sharedresources.fhcr.org/documents/beverage-and-snack-questionnaire> How often did you drink these beverages in the past week? [MT1g-i] How often did you eat these foods in the past week? [MT1j-k] Responses: never or less than 1 per week, 1 per week; 2–4 per week, 5–6 per week, 1 per day, 2–3 per day, 4+ per day [/collapse] [collapse title="California Youth Nutrition and Physical Activity Survey 4th–8th graders"] Condensed version of the School and Physical Activity Nutrition project (SPAN) survey <https://www.cdph.ca.gov/programs/cpns/Pages/Chapter1RequiredSurveysfor> https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/NEOPB/CDPH%20Document%20Library/RES_CompndiumofS

- Yesterday, did you eat any corn tortillas or bread, tortillas, buns, bagels or rolls that were brown (not white)? [MT1j]
- Yesterday, did you eat sweet rolls, doughnuts, cookies, brownies, pies, or cake? [MT1k]

Responses: no, I didn't eat any of these foods yesterday; yes, I ate one of these foods 1 time yesterday; yes, I ate one of these foods 2 times yesterday; yes, I ate one of these foods 3 or more times yesterday [/collapse] [collapse title="EFNEP Nutrition Education Survey Graders Grades 6–8, 9–12"]

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

- Yesterday, how many times did you drink nonfat or 1% low-fat milk? Include low-fat chocolate or flavored milk, and low-fat milk on cereal. [MT1g]
- Responses: none, 1 time, 2 times, 3 times, 4 or more times
- Yesterday, how many times did you drink sweetened drinks like soda, fruit-flavored drinks, sports drinks, energy drinks, and vitamin water? Do not include 100 percent fruit juice. [MT1h]

Responses: none, 1 time, 2 times, 3 times [/collapse] [collapse title="Healthy Kids 3–5 year olds"]

<https://townsendlab.ucdavis.edu/evaluation-research-tools/validation-research/> Think about what you and your child do. Do not include school time.

- My child eats vegetables. [MT1d]
- My child eats fruit. [MT1c]
- Responses: rarely, some days, most days, almost every day, every day
- My child drinks milk ___ times per day. [MT1i]
- My child drinks milk.

Responses: no, while, 2 % reduced fat, 1 % low fat, skim/non-fat, soy [/collapse] Additional evaluation tools to measure MT1 can be found in the [SNAP-Ed Library](#).

Key Glossary Terms

[Refined grains](#) [Solid fats](#) [Sugar-sweetened beverages](#)

Additional Resources or Supporting Citations

English and Spanish Food Behavior Checklists citations for formative research and validation studies:

<https://townsendlab.ucdavis.edu/publications/>. BSQ - Neuhouser ML, Lilley S, Lund A, Johnson DB.

Development and validation of a beverage and snack questionnaire for use in evaluation of school nutrition policies. *J Am Diet Assoc.* 2009; 109(9): 1587-1592.SPAN - Thiagarajah K, Fly AD, Hoelscher DM, et al.

Validating the food behavior questions from the elementary school SPAN questionnaire. *J Nutr Educ Behav.* Sep-Oct 2008;40(National Cancer Institute & 5 a Day Program Evaluation Group):305-310.