

**Food Stamp
Program**

instruction guide
for the administration of the evaluation tool

Fruit and Vegetable Checklist

Developed by the University of California (UC) Cooperative Extension, the California Nutrition Network, UC Davis Design Program and UC Davis Nutrition Department

Funded by the USDA Food Stamp Program via the California Nutrition Network, UC Cooperative Extension and UC Davis

FSP

Visually Enhanced Fruit and Vegetable Checklist (FBC)^{1, 2, 3}

Instruction Guide

The purpose of this tool is to document client behavior change by assessing client eating behaviors before and after the nutrition education lessons.

Instructions: Use this instruction guide when administering the Food Behavior Checklist tool to clients. Administer this tool on 2 occasions—at the registration time before the first lesson is taught and then after the last lesson is taught.

FBC Questions	Photograph	Explanation	Potential Questions from Clients	Staff Response Suggestions
Q1. Do you eat fruits or vegetables as snacks? 	Items pictured include 3 photos: <ul style="list-style-type: none"> Far left- a woman sitting eating a whole apple Top right- hands of a person holding carrots sticks Bottom right- hands of a person holding grapes 	Snacks are eating occasions which occur before, after, or between meals. If you do not eat fruits or vegetables, mark 'No.'	I ate apple pie, does that count? How about carrot cake?	No, in both cases
			Do fruit snacks count?	No if a 'fruit snack' is a fruit roll up or gummy fruit snacks. Yes if the 'fruit snack' is something like a piece of fruit.
			Can they be in something like zucchini bread?	No
Q2. Did you have citrus fruit or citrus juice during the past week?	Items pictured include: <ul style="list-style-type: none"> 100% orange juice in a carton frozen concentrated 100% orange juice 	Citrus fruit includes orange, grapefruit, kumquat, lemon, lime, tangerine, tangelo, mandarin, and pomelo. Count juices of these citrus fruit, but not juice drinks,	Does Hawaiian punch count? Does Sunny-D count?	No, only count 100% juice.
			Are those in the picture the only type of citrus	No, citrus fruit includes oranges,

¹ Prepared by Marilyn Townsend, Christine Davidson, Larissa Leavens, Anna Martin, and Diane Metz. Reviewed by Gloria Espinosa-Hall, Lucia Kaiser, and Cathi Lamp.

² If you have additions for this guide, please contact Larissa Leavens at 530-754-8051 in the Nutrition Dept, UC Davis.

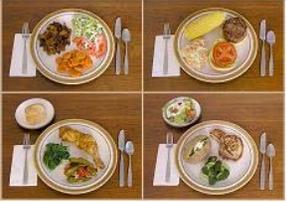
³ Version FSP Fruit and Vegetable Checklist English 12/2007

FBC Questions	Photograph	Explanation	Potential Questions from Clients	Staff Response Suggestions
	<ul style="list-style-type: none"> • 100% juice in a glass • a can of mandarin oranges • a cut orange • a cut grapefruit • 2 tangerines • a pomelo. 	punches or aides. Do not count lemonade or limeade.	fruits?	grapefruit, kumquats, lemon, lime, tangerine, tangelo, and mandarins.
			Does citrus soda count? What about Sunkist or orange soda?	No
			Does kiwi count?	No
<p>Q3. Fruit: How much do you eat each <u>day</u>?</p> 	<p>Items pictured include 4 sets of cups:</p> <ul style="list-style-type: none"> • First cup – empty 1 cup measuring cup over the circle answer ‘none’ • Second cup – a 1 cup measuring cup half full with canned fruit cocktail over the circle answer ‘½ cup’ • Third cup- a full 1 cup measuring cup with grapes, sliced strawberries, and sliced banana over the circle answer ‘1 cup’ • Fourth set of cups – two full 1 cup measuring cups over the circle answer ‘2 cups’ <ul style="list-style-type: none"> ▪ one has grapes, sliced strawberries, and sliced banana. ▪ the second has cut watermelon, cut mango, and an orange wedge. • Fifth set of cups – three full 1 cup measuring cups over the circle answer ‘3 cups or more.’ <ul style="list-style-type: none"> ▪ the first cup has cut watermelon and cut mango ▪ the second cup grapes, sliced strawberries, and sliced banana ▪ the third cup has orange and apple slices ▪ 	<p>This question is about total quantity of fruit. This includes all fresh, frozen, canned, and dried fruits and fruit juices. In general, 1 cup of fruit or 100% fruit juice, or ½ cup of dried fruit can be considered as 1 cup of fruit.</p> <p>Examples:</p> <ul style="list-style-type: none"> • 1 piece of fruit counts as 1 cup • 1 cup chopped watermelon counts as 1 cup of fruit • 1 cup of 100% orange juice counts as 1 cup of fruit • ½ cup of raisins counts 1 cup of fruit <p>If you do not eat fruit, mark ‘none.’</p> <p>Note: These measurements reflect the MyPyramid guidelines, not the Food Guide Pyramid serving size guidelines.</p>	<p>Does frozen fruit count? Yes</p> <p>Does cran-raspberry juice count? Only if it is 100% juice with no added sugar.</p> <p>Does dried fruit count? Yes, remember that ½ cup of dried fruit should be considered as 1 cup of fruit.</p> <p>Do fruit snacks count? No if a ‘fruit snack’ is a fruit roll up or gummy fruit snacks. Yes if the ‘fruit snack’ is something like a piece of fruit.</p> <p>I eat less than ½ a cup. What do I mark? Mark the answer that is closest to the amount you eat.</p>	

FBC Questions	Photograph	Explanation	Potential Questions from Clients	Staff Response Suggestions
<p>Q4. Do you eat more than one kind of fruit each <u>day</u>?</p> 	<p>Items pictured include 4 sets of cups:</p> <ul style="list-style-type: none"> • First cup – empty 1 cup measuring cup over the circle answer ‘none’ • Second cup – a full 1 cup measuring cup with sticks of carrot, celery, green bell pepper and cucumber over the circle answer ‘1 cup’ • Third set of cups – two full 1 cup measuring cups over the circle answer ‘2 cups’ <ul style="list-style-type: none"> ▪ one has cooked corn kernels, peas, and broccoli ▪ the second has raw vegetables including torn romaine lettuce, cut tomatoes, cut cucumber, and sliced red onion. • Fourth set of cups – three full 1 cup measuring cups over the circle answer ‘3 cups or more’ <ul style="list-style-type: none"> ▪ the first cup has sticks of carrot, celery, green bell pepper and cucumber ▪ the second cup has cooked corn kernels, peas, and broccoli ▪ the third cup has raw vegetables including torn romaine lettuce, cut tomatoes, cut cucumber, and sliced red onion <p>Items pictured include 4 photos:</p> <ul style="list-style-type: none"> • Top left picture- bag of frozen whole strawberries, a jar of applesauce, a pear, a nectarine, a peach, and a bowl of mixed fruit including dried plums (prunes), dried apricot, and dried nectarines • Top right picture- small carton of orange juice, a glass of orange juice, a can of frozen orange juice, a can of 	<p>This question is about total quantity or amount of vegetables or vegetable juice. This includes all fresh, frozen, canned and dried vegetables and vegetable juices. In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup of vegetable.</p> <p>Examples:</p> <ul style="list-style-type: none"> • 1 cup chopped broccoli counts as 1 cup of vegetable • 1 cup of V8 or tomato juice counts as 1 cup of vegetable • a salad with 2 cups of leafy greens counts as 1 cup of vegetable <p>French fries count because they are potatoes. Potato chips do not count as a vegetable. If you do not eat vegetables, mark ‘No.’</p> <p>Note: These measurements reflect the MyPyramid guidelines, not the Food Guide Pyramid serving size guidelines.</p> <p>This question is attempting to address variety. Different preparation methods of the same fruit do not count as variety (e.g. raw apple for snack, applesauce at dinner). Small amounts of fruit should not be counted (e.g. raisins in a cookie).</p>	<p>Does it have to be the vegetables in the picture?</p> <p>Does it count if I only had 2 grapes and ½ a banana?</p> <p>Does juice count or does it have to be the piece of fruit?</p> <p>If I eat canned fruit cocktail does it count as more than one fruit?</p>	<p>No, any vegetable will count.</p> <p>No. The minimally accepted amount for each is: ¼ cup of raw or canned fruit, ¼ cup 100% fruit juice, 2 tablespoons dried fruit, or equivalent.</p> <p>Juice counts if it is 100% juice with no added sugar.</p> <p>The minimally accepted amount for each is: ¼ cup of raw or canned fruit, ¼ cup 100% fruit juice, 2 tablespoons dried fruit, or equivalent.</p>

FBC Questions	Photograph	Explanation	Potential Questions from Clients	Staff Response Suggestions
	<p>frozen grape juice, a grapefruit, a banana, a slice of watermelon, and a bowl of fresh strawberries and blueberries</p> <ul style="list-style-type: none"> • Bottom right- a pomegranate, a persimmon, half of a honeydew melon, a cut papaya, a box of raisins, and a can of sliced pears <ul style="list-style-type: none"> ▪ Bottom left- a can of fruit cocktail, a can of sliced pineapple, a whole cantaloupe melon, a whole mango, cut kiwi fruit, 2 whole plums, and a whole apple 			
<p>Q5. Do you eat more than one kind of vegetable each day?</p> 	<p>Items pictured include:</p> <ul style="list-style-type: none"> • tomatoes • potato • cilantro • onion • squash • cucumber • peppers • radishes • avocado • garlic • cactus • zucchini • corn • carrots • chayote • cauliflower • spinach • canned tomatoes • canned salsa • canned sweet potatoes • canned peas • V-8 vegetable juice 	<p>This question is about “variety.” Different preparation methods of the same vegetable do not count as variety (e.g. coleslaw at lunch, cooked cabbage at dinner). Small amounts of vegetables should not be counted (e.g. the few carrot pieces in canned chicken noodle soup). If you do not eat vegetables, mark ‘No.’</p>	<p>Do frozen vegetables count? If I eat French fries and lettuce on my hamburger does that count? Do lettuce and onions on my taco count? If I eat a can of mixed vegetables does that count? What if I eat a medley of frozen vegetables? Does that count as more than one kind?</p>	<p>Yes The minimally accepted amount for each item is: ¼ cup of chopped raw or cooked vegetables, ¼ cup 100% vegetable juice, ½ cup of leafy vegetables, or equivalent. Yes, the minimally accepted amount for each item is ¼ cup of chopped raw or cooked vegetables, ½ cup of leafy vegetables, or equivalent.</p>

FBC Questions	Photograph	Explanation	Potential Questions from Clients	Staff Response Suggestions
<p>Q6. Vegetables: How much do you eat each <u>day</u>?</p> 	<p>Items pictured include 4 sets of cups:</p> <ul style="list-style-type: none"> • First cup – empty 1 cup measuring cup over the circle answer ‘none’ • Second cup – a full 1 cup measuring cup with sticks of carrot, celery, green bell pepper and cucumber over the circle answer ‘1 cup’ • Third set of cups – two full 1 cup measuring cups over the circle answer ‘2 cups’ <ul style="list-style-type: none"> ▪ one has cooked corn kernels, peas, and broccoli ▪ the second has raw vegetables including torn romaine lettuce, cut tomatoes, cut cucumber, and sliced red onion. • Fourth set of cups – three full 1 cup measuring cups over the circle answer ‘3 cups or more’ <ul style="list-style-type: none"> ▪ the first cup has sticks of carrot, celery, green bell pepper and cucumber ▪ the second cup has cooked corn kernels, peas, and broccoli ▪ the third cup has raw vegetables including torn romaine lettuce, cut tomatoes, cut cucumber, and sliced red onion 	<p>This question is about total quantity or amount of vegetables or vegetable juice. This includes all fresh, frozen, canned and dried vegetables and vegetable juices. In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup of vegetable.</p> <p>Examples:</p> <ul style="list-style-type: none"> • 1 cup chopped broccoli counts as 1 cup of vegetable • 1 cup of V8 or tomato juice counts as 1 cup of vegetable • a salad with 2 cups of leafy greens counts as 1 cup of vegetable <p>French fries count because they are potatoes. Potato chips do not count as a vegetable. If you do not eat vegetables, mark ‘No.’</p> <p>Note: These measurements reflect the MyPyramid guidelines, not the Food Guide Pyramid serving size guidelines.</p>	<p>Does it have to be the vegetables in the picture?</p> <p>Do I count everything that was on my salad?</p> <p>Do they have to be fresh or can they be frozen or canned?</p> <p>Do French fries count?</p>	<p>No, any vegetable will count.</p> <p>Yes, count the total amount of the salad. But, remember the 2 cups of raw leafy greens can be considered 1 cup of vegetable.</p> <p>They can be fresh, frozen, canned, or vegetable juice.</p> <p>Yes, count French fries for questions 6, 9, 13, and 17. Do not count them for questions 18, 19, 20, and 21.</p>
<p>Q7. Do you eat 2 or more vegetables at your main meal?</p>	<p>Items pictured include 4 photos:</p> <ul style="list-style-type: none"> • Top left photo- a plate with chili with cheese, salad (lettuce and tomato) with creamy dressing, and cooked cut carrots • Top right photo- a plate with an open hamburger (beef patty, bun, 	<p>This question is about “variety.” French fries count as a vegetable because they are potatoes. Potato chips do not count as a vegetable. If you do not eat vegetables, mark ‘No.’</p>	<p>How much do I have to eat of each kind to count?</p> <p>Do French fries count?</p>	<p>2 or more.</p> <p>Yes, count French fries for questions 6, 9, 13, and 17. Do not count them for questions 18, 19,</p>

FBC Questions	Photograph	Explanation	Potential Questions from Clients	Staff Response Suggestions
	<p>lettuce and tomato), coleslaw, and an ear of corn</p> <ul style="list-style-type: none"> • Bottom right photo- a plate with a pork chop, cooked broccoli, a baked potato with sour cream and chives, and a bowl with a salad (lettuce, tomato, and a creamy dressing) • Bottom left photo- a plate with a piece of chicken, cooked spinach, marinated peppers and carrots, and a small plate with a biscuit 		<p>If I have a bag of mixed frozen vegetables, does that count as more than 1 vegetable?</p>	<p>20, and 21.</p> <p>Yes</p>

Visually enhanced evaluation study
.....Enhancing usefulness of food behavior surveys for low-literate populations using visual information processing theories

CITATIONS

Name: **Food Stamp Program Fruit and Vegetable Checklist**

Focus: Fruit and vegetables

Use: Primary prevention interventions focusing on chronic disease prevention

September 30, 2006

PRINTED EVALUATION TOOL READY FOR USE WITH ACCOMPANYING INSTRUCTION GUIDE

- Sylva K, Townsend MS, Martin A, Metz D. Food Stamp Program Fruit and Vegetable Checklist, Public Health Institute, California Department of Health, 2006. (English, 7 items reflecting the Food Guide Pyramid guidelines). Visually enhanced food behavior checklist in 2-page front to back format designed for clients with limited literacy skills).

PRINTED INSTRUCTION GUIDE

- Townsend MS, Davidson C, Leaven L, Metz D, Martin A. Administering the Fruit & Vegetable Checklist: Instruction Guide. Public Health Institute, California Department of Health Services, 2006.

REPORT TO FUNDER

Marilyn Townsend, Kathryn Sylva, Lynn Kai-Chao, Christine Davidson, Larissa Leaven, Anna Martin, Diane Metz, Patti Wooten-Swanson. Visually enhanced Food Behavior Checklist Study: Enhancing usefulness of food behavior surveys for low-literate populations. Report to Public Health Institute, California Department of Health. September 30, 2006.

RELATED ABSTRACTS (format, layout, visuals, readability)

- Marilyn S. Townsend, Kathryn Sylva, Anna Martin, Diane Metz, Patti Wooten-Swanson, Jennifer Follett, Nancy Keim, Sharon Sugerman. Visually Enhanced Evaluation for Low-income Clients. *J Nutr Educ Behav.* 2005; 37 (1):S49.
- Townsend MS, Sylva K, Martin A, Metz D, Wooten-Swanson P. Assessing Face Validity of Photographs to Enhance Comprehension of the EFNEP Food Behavior Checklist. *FNEE Preconference Proceedings, Food and Nutrition Extension Educators Division, Society for Nutrition Education* 2005; 16. July 23, 2005.
- Townsend MS, Sylva K, Martin A, Metz D, Wooten-Swanson P. Using Cognitive Testing Procedures to Improve the Readability of the EFNEP Food Behavior Checklist. *FNEE Preconference Proceedings, Food and Nutrition Extension Educators Division, Society for Nutrition Education* 2005; 15. July 23, 2005.
- Townsend MS, Davidson C, Metz D, Sylva K. Reliability of a visually-enhanced food behavior checklist for low-income women. *Seventh Annual Conference (Banff, Alberta, Canada) of the International Society of Behavioral Nutrition & Physical Activity Program and Abstracts* 2008;C3:152.

THIS CHECKLIST IS AN EXTENSION OF PREVIOUS RESEARCH

- Townsend MS, Kaiser LL, Allen LH, Joy AB, Murphy SP. Selecting items for a food behavior checklist for a limited resource audience. *J Nutrition Education & Behavior.* 2003;35:69-82.

- Murphy S, Kaiser LL, Townsend MS, Allen L. *Evaluation of Validity of Items in a Food Behavior Checklist*. J Am Dietetic Assoc, 2001;101:751-756, 761.
- Townsend MS, Kaiser LL. Development of an evaluation tool to assess psychosocial indicators of fruit and vegetable intake for two federal programs. *J Nutrition Education & Behavior*. 2005;37:170-184.

JOURNAL PUBLICATION FOR CURRENT STUDY

- Townsend MS, Sylva K, Martin A, Metz D, Wooten-Swanson P. Improving readability of an evaluation tool for low-literate clients using visual information processing theories. *J Nutrition Education & Behavior*. 2008;40:181-186.

mst ...updated 7/1/09

Fruit and Vegetable Checklist

These questions are about the ways you plan and fix food.
Think about how you usually do things.

Name _____ Date _____ ID# _____ Entry Exit

Choose one answer for each question.

1.



Do you eat fruits or vegetables as snacks?

- no
 yes, sometimes
 yes, often
 yes, everyday

2.



Did you have citrus fruit or citrus juice during the past week?

- yes
 no

3. Fruit: How much do you eat each day?



- none
 1/2 cup
 1 cup
 1 1/2 cups
 2 cups
 2 1/2 cups
 3 cups or more

4.



Do you eat more than one kind of **fruit** each day?

- no
 yes, sometimes
 yes, often
 yes, always

5.



Do you eat more than one kind of **vegetable** each day?

- no
 yes, sometimes
 yes, often
 yes, always

6. Vegetables: How much do you eat each day?



- none
 1/2 cup
 1 cup
 1 1/2 cups
 2 cups
 2 1/2 cups
 3 cups or more

7.



Do you eat 2 or more vegetables at your main meal?

- no
 yes, sometimes
 yes, often
 yes, everyday

• Use the accompanying instruction guide when administering this tool.
 • Research and development for this illustrated diet quality checklist were a joint effort of University of California (UC) Cooperative Extension, the California Nutrition Network, UC Davis Design Program and UC Davis Nutrition Department. Authors: Kathryn Sylva, Marilyn Townsend, Anna Martin, Diane Metz.
 • The research for this diet quality instrument is available:
 Townsend MS, Kaiser LL, Allen LH, Joy AB, Murphy SP. Selecting items for a food behavior checklist for a limited resource audience. *Journal of Nutrition Education and Behavior*. 2003;35:69-82.
 Murphy SP, Kaiser LL, Townsend MS, Allen LH. Evaluation of Validity of Items in a Food Behavior Checklist. *Journal of the American Dietetic Association*. 2001;101:751-756, 761.
 Townsend MS, Sylva KG, Martin A, Metz D, Wooten-Swanson P, Follett J, Keim N, Sugerman S. Visually Enhanced Evaluation for Low-income Clients. *J Nutr Educ Behav*. 2005; 37 (1):S49.
 • Funded by the USDA Food Stamp Program via the California Nutrition Network, UC Cooperative Extension and UC Davis.

