
FORM:	60 - FOOD FREQUENCY QUESTIONNAIRE
Version:	1.4 – June 15, 1997
Description:	Self-administered; 12-page mark-sense booklet; must be completed using a #2 pencil.
When used:	Completed by all participants at baseline (usually Screening Visit 0 [SV0]) and at designated annual visits for a subsample of participants in the Clinical Trial (CT) and Observational Study (OS).
Purpose:	Used for eligibility screening of participants for entry into the Dietary Modification (DM), and to collect dietary intake data.

GENERAL INSTRUCTIONS

1. Screening (Baseline) FFQ

- 1.1. The form is printed in English (*Form 60*), Spanish (*Form 60S*) and Asian/Pacific (*Form 60A*) versions. All versions of *Form 60* are in mark-sense format. Use the form appropriate for the participant.
- 1.2. Clinical Center (CC) staff mail the *FFQ* and *Form 61 - How to Fill Out the Food Questionnaire* to all potential participants two weeks before SV0 or Screening Visit 1 (SV1), or give the *FFQ* to the participant at SV0 or SV1. Use the procedure under Item 3, "Introducing the Self-Administered FFQ to the Participant" to introduce the form to the participant if you give it to her in person.
- 1.3. See item instructions on pages 7 - 9 for responses to questions commonly asked by participants.
- 1.4. Clinical Center staff certified to review the *FFQ* perform the pre-scan edit (see *Form 565 - Food Frequency Questionnaire Checklist*) and clarify any missing information with the participant before scanning. Use procedure below in Item 4, "Guidelines for Checking the Completed FFQ."
- 1.5. Scan the completed *FFQ* according to procedures specified in *Vol. 5 - Data System, Section 7.2 - Scanning*.
- 1.6. Return *FFQs* with Error Reports following scanning to CC staff certified to review the *FFQ*. This person reviews the *FFQ* Error Report and corrects each error according to the procedures specified in *Vol. 2 - Procedures, Section 10 - Dietary Assessment*. Rescan the corrected *FFQ*.
- 1.7. Store the scanned *FFQs* at the CC. Do not punch holes in the *FFQ*. Punching holes in the *FFQ* will render it unscannable.

2. Follow-Up FFQ

- 2.1. Clinical Center staff mail the follow-up *FFQ* and *Form 61* to a subsample of participants in the DM and OS two weeks before their scheduled annual CC visit.
- 2.2. The participant brings the completed *FFQ* to her visit.
- 2.3. Clinical Center staff certified to review the *FFQ* complete Items 1.4. - 1.6. as outlined above in Item 1, "Screening (Baseline) FFQ."

- 2.4. Store the scanned *FFQs* at the CC. Do not punch holes in the *FFQ*. Punching holes in the *FFQ* will render it unscannable.

3. **Introducing the Self-Administered FFQ to the Participant**

The *FFQ* is designed to be a self-administered form. Since participants may receive the form either by mail or in person, it is important to standardize the information that is given to the participant in order to maintain the quality of the data collected.

When you mail the form to the participant, include *Form 61* with the form.

When you give the form to the participant in person, provide *Form 61* and use the following guidelines to administer the *FFQ*.

- 3.1. Show the participant how long the questionnaire is (12 pages).
- 3.2. Tell her that it will take about 40 minutes to complete. You might suggest that she take a break half-way through and come back to it later. Some people get careless on the second half and this can lead to poor estimates of nutrient intakes.
- 3.3. Tell her the time frame that the food questionnaire covers is the past three months.

Some participants may say, "I can't even remember what I ate yesterday, how can I answer what I ate in the past three months?" Clarify that she is not expected to remember exactly what she ate during this period. The goal is just to get an idea of her usual diet during this period. For example, she doesn't have to try to remember how many times she had eggs in the past three months, but to describe her usual pattern of frequency, e.g., "I have eggs about twice a week."

- 3.4. Show the participant the three sections of the questionnaire.

Adjustment Questions on Pages 2-4

These questions ask about specific foods and preparation methods.

Review the general instructions and example for completing the Food Questionnaire at the top of page 2.

- Answer each question as best you can - estimate if you aren't sure. There are no "right" or "wrong" answers.

Tell the participant that this questionnaire will help us learn about nutrition and health.

- Use an ordinary #2 pencil to complete. Do not use a pen or felt-tipped marker.
- Fill in the ovals completely. Do not use check marks, Xs, or other marks.

Point out the example in the shaded area on page 2 and how to fill in the oval.

- Do not make any other marks or write anything else on the form.

Explain that stray marks, spills, tears, or staples will cause problems when the completed form is processed.

- Answer each question completely. Some questions have more than one part. Make sure you complete all parts of the question.

Food Items on Pages 5-11

This section contains individual food items by category with choices for frequency of use and portion size.

Review the general instructions for completing this section at the top of page 5.

- Mark the column to show how often, on the average, you ate the food.

Tell the participant that she is to fill in the oval in the column that best represents the number of times per day, week, or month that she **usually** ate the food item listed during the last three months.

- Mark your usual serving as small, medium, or large.

Tell the participant that she is to fill in the oval for the column that best represents the serving size (e.g., small, medium, or large) for the food item.

Show her the serving size pictures on *Form 61*. Ask her to use the pictures to help her complete the serving size column.

- Emphasize completeness.

Tell the participant she should not skip any foods. If she did not eat the food during the last three months, fill in the oval for the column marked "Never or less than once per month."

If a participant does not recognize a food, she should assume she does not eat it.

- Emphasize care and attention.

Tell the participant to be careful which column she marks. Explain that it will make a big difference in the estimate if she marks hamburgers, once a day when she means hamburgers, once a week.

- Point out that the frequency headings for Beverages (on page 11) are different than for the previous sections.

Summary Questions on Page 12

These questions ask how often fat is used in cooking and how often specific foods (i.e., fruits and vegetables) are eaten.

Tell the participant to make sure she answers each question. Point out that the frequency headings are different than for the previous sections.

- 3.5. The *FFQ* does not ask directly about salt because it is estimated in the analysis program. If a participant brings up salt content of foods, the response should be that the study is not focusing on that item in the diet. **It is not appropriate to state that the questionnaire focuses on fat.**

4. Guidelines for Checking the Completed FFQ

When the *FFQ* is scanned, the scan program checks for completeness and an Error Report is generated. To ensure quality data, however, it is necessary that the form be reviewed before scanning for completeness and consistency of responses. Use the following guidelines to conduct the cursory review and pre-scan edit of the

completed *FFQ*. (These instructions expand on those provided in *Vol. 2 - Procedures, Section 10 - Dietary Assessment*.)

Cursory Review

- 4.1. Review the front page (shaded area) for accuracy and completion of the data specified. (See Item Instructions.)
- 4.2. Review the *FFQ* for skipped pages or entire sections.
- 4.3. Check for blackened and completely filled-in ovals; erase stray pencil marks.

Light marks or partially-filled ovals may cause information to be misread or skipped. Completely erase stray marks.

- 4.4. Go over marks made with a pen with a #2 pencil.

Pre-Scan Edit

- 4.5. Review the Adjustment Questions on pages 2-4.

Check to see that:

- All yes/no questions are answered.
 - All responses to sub-questions are answered (e.g., 1.1. and 1.2. are sub-questions of Question 1: Did you eat chicken or turkey during the last three months?).
- 4.6. Review the food items on pages 5-11.

Large blocks of missing data will generate an Error Report. Check for missing frequencies, or missing portion sizes.

- Check for missing frequencies.

An Error Report is generated if less than 90% of the frequencies on the entire *FFQ* or more than half of the food items in any section (e.g., Fruits and Juices, Breakfast Foods) have a missing frequency.

Research has shown that respondents often skip foods (i.e., don't fill in the ovals) for foods they do not eat. If the participant is in the CC, ask her to review the items that are missing and mark "never or less than once per month" for those foods she does not eat. If she is not in the CC and cannot be easily reached, scan the *FFQ*.

Some participants may think they should translate all responses into a single unit of time such as "per month" or "per week." This will produce poor estimates of nutrient intake. If a participant has completed the frequency column as "one per week" or "one per month" for a substantial proportion of foods, clarify the frequency headings (time units) with her. Then ask her to review her responses carefully.

- Check for multiple marks.

A double mark refers to the situation where two frequencies, (e.g., one per month and one per week) are marked for one food. One common cause of multiple marks is the respondent marking

two adjacent items on a single line. The result is a blank item either above or below the multiple mark.

If a multiple mark occurs, clarify with the participant if she is present in the CC, otherwise multiple marks can be corrected using the following assumptions:

- Average the two marks if possible, (e.g., put a mark between the two and erase the two original marks). If the marks are next to each other, erase the more frequent mark, (e.g., erase 2+ times per day and leave one per day).
- If a line item above or below is blank, use your best judgment to determine which food would likely be eaten more frequently (e.g., other potatoes would be eaten more frequently than sweet potatoes). If this type of judgment cannot easily be made, use the less frequent mark for both foods.
- Check for missing portion sizes.

Small, medium, or large portion size should be marked for each food. If a food is never eaten, the serving size may be left blank.

As an approximation, a small serving portion is about half ($\frac{1}{2}$) the medium size or less. A large serving portion is about $1\frac{1}{2}$ times the medium serving size shown, or more.

The scanning program defaults to medium portion if there is a missing portion size when a frequency is marked. If a participant marks a portion size, the assumption is made that the participant eats the food, therefore a frequency must be marked or an Error Report is generated. This is in contrast to an item where **both** the frequency and the portion size are left blank. In this case, the assumption is made that the participant **does not** eat the food.

If the participant has marked all "medium" or all "small" portion sizes, ask her to review this section again using the serving size pictures on *Form 61* as a guide. Participants who check all "mediums" may not have thought through their answers carefully. If a participant checks all "small" portion sizes, the nutrient analysis may be unreasonably low.

4.7. Review the Summary Questions on page 12.

Check to see that all frequency fields are complete.

The four summary questions ask about usual intake of fruits, vegetables, and fat added to foods and in cooking. These questions are used to reduce the measurement bias towards over-reporting of total food consumption when there are long lists within food groups, such as 25 vegetables.

Item Instructions

Name	First and last name of participant. Completed by participant.
Date	Date participant completed the questionnaire. Completed by participant.
Date completed	Date the participant completed the <i>FFQ</i> .
Reviewed by	Standard 3-digit WHI employee ID. (See common data items.)
Contact type	Mark appropriate oval or box. (See common data items.)
Visit type	Contact for which the participant completed the form. Mark appropriate oval or box for visit type and number. (See common data items.)
Form administration	Method used to administer form to participant: 1 - Self: Participant completed the form by herself. 2 - Group: Participant completed the form with a group of other participants. 3 - Interview: Do not use. 4 - Assistance: Participant needed partial assistance from CC staff or others to complete the form.
Comment	Use the guidelines on pages 7-9 to respond to questions commonly asked by participants.

Guidelines for Responding to Questions about the FFQ

Listed below are some questions that participants may ask when completing the *FFQ*. If a participant asks you one of these questions, you may respond as specified. The Clinical Coordinating Center (CCC) will continue to update this information based on comments from the CCs.

ADJUSTMENT QUESTIONS: (pages 2-4)

#5, 6, 7	Include powdered milk under skim or 1% milk. Powdered whole milk is very difficult to find, but if the respondent uses it, consider it whole milk. Include 1/2% milk and skim evaporated milk under non-fat or skim milk.
#11, 12, and 13	Include Regular Benecol [®] and Take Control [®] under Tub margarine. Include Benecol Lite [®] under Low calorie or low fat margarine.
#12	IMO is the same as sour cream since the fat content is similar.

LINE ITEMS: (pages 5-12)**Fruits and Juices** (pages 5-6)

#8	Other dried fruit, such as raisins and prunes	This line item does not include raisins in cereals (e.g., Raisin Bran) or in other foods containing raisins (e.g., muffins or cookies).
#11	Any other fruit, such as fruit cocktail, berries, grapes, applesauce and pineapple	Include cherries and frozen berries in this line item.

Vegetables (pages 6-7)

#18	All other beans such as baked beans, lima beans, black-eyed peas and chili without meat.	Includes fat free refried beans and low fat chili.
#19	Tofu and textured vegetable products.	Includes all soy products (e.g. soy cheese, soy hot dogs, soy sausage, Crumbles [™] , fat modified tofu etc.)
#22	Tomatoes, fresh or juice	Include all other vegetable juices here.
#32	Cauliflower, cabbage, sauerkraut and Brussels sprouts.	Includes coleslaw made with vinegar or other fat-free dressing.
#40	Other potatoes, cassava and yucca (boiled, baked or mashed)	Baked or boiled potatoes includes microwaved and oven baked fat free potatoes.

Vegetables (cont.)

#41	Potato, macaroni, or pasta salads made with mayonnaise or oil	<p>For fat modified salads, the only choice is to report the foods separately. However, we don't generally recommend reporting mixed foods by the separate components as that can be confusing for participants and result in additional reporting errors.</p> <ul style="list-style-type: none"> • Mark Adjustment Question #15 or #16 to indicate the type of salad dressing or mayonnaise used and also mark frequency for line item #91: Mayonnaise and mayonnaise type spreads, on sandwiches and in salads • Mark either line item #40: Other potatoes, cassava, and yucca (boiled, baked, or mashed) or #42: Rice, grains and plain noodles, as appropriate.
-----	---	---

Meat, Fish, Poultry, Lunch Items (pages 7-9)

#45	Beef, pork and lamb as a main dish, such as steak, roast and ham	Include venison and squirrel here.
#46	Beef, pork and lamb as a sandwich (steak sandwich and BBQ sandwich)	Sandwich in this line item does not include hamburgers.
#47	Stew, pot pie and casseroles with meat or chicken.	For fat modified entrees (homemade or frozen), mark line item #60: Spaghetti or other noodles with tomato sauce (and no meat).
#51	Chicken and turkey (roasted, stewed or broiled)	BBQ chicken can be considered the same as broiled chicken. Include pheasant here.
#58	Macaroni and cheese, lasagna, or noodles with a cream sauce	Includes spaghetti with clam sauce when prepared in a white sauce. For reduced fat macaroni and cheese or other reduced fat pastas, mark line item #60: Spaghetti or other noodles with tomato sauce (and no meat).
#60	Spaghetti or other noodles with tomato sauce (and no meat).	Includes spaghetti with clam sauce when prepared in a red sauce and reduced fat casseroles and pastas.
#61	Low-fat pizza	Includes pizzas made at home with vegetables, low-fat cheeses or meats.
#67	Soft taco and enchilada baked without oil	Includes low fat taco, enchilada, and quesadilla.
#71	Lunch meat such as ham, turkey and other special lean meats	Lunch meat in this line item includes all types, whether pre-packaged or fresh sliced at the deli/market. Includes reduced fat hot dogs, sausage, bacon, and turkey bacon.
#73	Hot dogs, chorizo and other sausage such as bratwurst	Includes turkey hot dogs. Certain types of sausage are equivalent to hot dogs: one Kielbasa or Bratwurst is equal to two hot dogs.

Meat, Fish, Poultry, Lunch Items (cont.)

#78	Other soups such as chicken noodle.	Includes all reduced fat soups (e.g. cream of mushroom) and broth.
-----	-------------------------------------	--

Breads, Snacks, Spreads (page 9)

#79	Biscuits, muffins, scones and croissants	Muffins in this line item do not include English muffins. (English muffins appear in line item #80).
#80	White breads, including bagels, rolls, pita bread, and English Muffins.	Can include fat-free biscuits, muffins, scones, quick breads. Note that the pancakes, and waffles in Breakfast Foods (pg. 10) are already fairly low-fat and therefore are appropriate for low-fat versions.
#83	Tortillas, corn (not including tacos).	Can be used for <u>fat-free</u> cornbread. Note that the normal cornbread option (pg. 9) is not particularly high in fat and may be a better choice for a reduced fat cornbread.
#84	Tortillas, flour or wheat (not including tacos)	If participant eats reduced fat flour tortillas, mark Adjustment Question #14.1: No, made without fat.
#86	Snacks, such as potato chips, corn chips, tortilla chips, pork skins, Ritz [®] and cheese crackers	Includes Wheat Thins, Triscuits, and other high-fat snack crackers.
#87	Saltines, SnackWell's [®] , fat-free tortilla chips and fat-free potato chips	Includes Graham crackers and reduced fat snack chips.
#89	Peanut butter, peanuts, other nuts and seeds.	Includes all other nuts and seeds, including soy nuts and most reduced fat peanut butters since they contain about 75% of the fat in regular peanut butter. If the reduced fat peanut butter has about 50% of the fat contained in regular peanut butter, reduce the portion size or frequency by half.
#91	Mayonnaise and mayonnaise-type spreads on sandwiches and in salads	Includes all salad types (e.g., lettuce, macaroni, potato, pasta, pea, etc.).

Breakfast Foods (page 10)

#97	Eggs	If a participant eats only one egg, mark "small" in the serving size column. Disregard egg whites and egg substitutes since they do not contain fat.
#98	Bacon, breakfast sausage and scrapple	Includes Sizzlean.

Dairy Products (page 10)

#101	Non-fat cheeses. Include cheese added to foods and in cooking.	This item allows participants to indicate that they use non-fat cheeses in cooking.
#102	Part-skim or reduced-fat cheeses, such as Mexican-type cheeses or mozzarella. Include cheese added to foods and in cooking.	Includes low-fat cream cheese and fat modified cheese spreads. This item allows participants to indicate that they use reduced fat cheeses in cooking.

Sweets (pages 10-11)

#106	Ice cream	Includes Gelato because the fat content is similar.
#108	Low-fat or non-fat frozen desserts, such as frozen yogurt, sherbet, ice milk and low-fat milkshakes	Includes Weight Watchers Frozen Desserts [®] and Simple Pleasures. Includes reduced fat desserts made with milk (e.g., low-fat pudding).
#109	Doughnuts, cakes, pastries, Pop-Tarts [®] , and pan dulce.	Includes Breakfast and Energy Bars. Low-fat pies can be included in this line item, if the participant marks Adjustment Question #19 to indicate that she uses special <i>low-fat</i> or no-fat cakes and pastries.

Beverages (page 11)

#115	Milk, all types (including canned and soy), not on cereal	Includes beverages that contain large amounts of milk (e.g., espresso drinks such as lattes and smoothies). For nutritional supplements (e.g. Ensure [®] and Sustacal [®]) mark whole milk for Adjustment Question #5.1. For Slim-Fast [®] , mark 1% milk for Adjustment Question # 5.1
#116	Regular soft drinks (not diet)	Includes flavored seltzers because their sugar and calorie contents are similar to other soft drinks. Includes non-alcoholic beer.
#117	Beer	Non-alcoholic beer is not included in this line item. The issue of interest is calorie consumption and non-alcoholic beer contains far fewer calories than that with alcohol.
#118	Wine	Non-alcoholic wine is not included in this line item. The issue of interest is calorie consumption and non-alcoholic wine contains far fewer calories than that with alcohol.
#121	Milk, cream or creamer in coffee or tea	Note: The portion size is 1 tablespoon. Use line item #115 for beverages that contain larger amounts of milk.