

BLOCK FOOD FREQUENCY QUESTIONNAIRE (FFQ) PROTOCOL

I. Introduction

Purpose: The primary purpose of the dietary questionnaire is to determine the participant's typical diet so that we can approximate the amount of calcium, vitamin D, and other nutrients they have eaten per day, week or month on average.

General issues: The dietary questionnaire is an adaptation of the Block 98 dietary questionnaire developed for the National Center for Health Statistics by Dr. Gladys Block and Block Dietary Data Systems (BDDS). This particular shortened version of the questionnaire was developed specifically for use in the Mr.OS study, to capture the most frequently consumed sources of calcium and other key nutrients among men aged 65 and older residing in the United States.

Results: Each participant who completes the full questionnaire will receive a summary report comparing basic aspects of his diet to RDA guidelines. This report will be generated by BDDS.

II. Specific issues for Mr.OS use of BDDS questionnaire

- Instructions for participants

Mr.OS will have a separate instruction page, telling participants how to complete the questionnaire. Specific instructions will include:

- cover page items
- time to complete
- time frame covered by questionnaire
- #2 pencil
- filling in the dots
- multivitamin skip routine
- completeness
- seasonality
- results
- other general instructions

- Cover page

Participants will not have to complete any information on the cover page, as this will be completed by the clinic prior to mailing (height and weight should be entered after measurement during the clinic visit). Age, sex, and id must be entered on the cover page. All the other information is optional, however, including height and weight will enable the program to give feedback to participants on their desirable weight.

- Filling in the dots

Several of the elderly, especially those with arthritic hands, had difficulty filling in the dots completely during a pilot study. Participants will be asked to fill in the dots as completely as they can. If necessary, the clinic staff should finish completely filling in the dot.

- Never eats a particular food

If a participant never or rarely (less than once per month) eats a particular type of food, the serving size should be left blank.

- Multivitamin questions

If a participant has not taken any vitamins regularly over the past year, then he should skip the questions about vitamins.

- Descriptions of specific food items

Block Dietary Data Systems (BDDS) has provided us with instructions for completing the questionnaire that includes description of each specific food item. These instructions are included as part of the FFQ protocol for the clinic's use. However, please realize that the specific food descriptions are merely to help you if a participant has a specific question. Don't worry about whether the participants are filling the form out with the correct descriptions in mind (this would be almost impossible to do without incredible burden), only refer to the description if a specific question comes up.

- Do not fold the questionnaire.

Participants should also be informed not to fold the questionnaire.

III. General dietary protocol instructions:

The dietary questionnaire includes questions about the usual eating habits of the study participants during approximately the past year. The time frame is meant to be a little vague. It is not expected that a participant will be able to remember exactly what he ate during the past year. Rather, the idea is to establish a usual pattern - his current diet at this point in his life. A respondent may object that he "can't remember what I ate yesterday; how could I tell you what I ate in the past year?" Make clear that the idea is not to remember exactly, but to think about the usual pattern or frequency. He does not have to remember how many times he had eggs in the past year. Instead, what he should be able to tell you with reasonable accuracy is that he has eggs "about twice a week."

If parts of the diet questionnaire are incomplete:

- Ask the participant if he had difficulty answering these questions, and try to find out the nature of the difficulty. This will help focus the explanation of what information is needed from the participant.
- Go over the instructions and the sample questions in the booklet with the participant.
- Help the participant complete the dietary questionnaire in interview format.
- Alternatively, if the participant clearly understands what to do, you may ask him to complete the dietary questions in self-administered format.

Some participants will have completed most, but not all of the items. Go over the missing items with the participant in interview format and help him complete them.

Optional script when using interview format

"These questions ask about your usual eating habits over the past year or so. This includes all meals or snacks, at home or in a restaurant or carry-out. There are two kinds of questions to answer for each food. 1. HOW OFTEN, on average, did you eat the food during the past year?"

Interviewer points to the questionnaire and prompts: "Never, A few times per year, Once per month, 2-3 times per month, Once per week, 2 times per week, 3-4 times per week, 5-6 times per week, or Every day".

Continuing with the introduction, read the next section: "How much did you usually eat the food? Sometimes we ask how many you eat, such as 1 egg, 2 eggs, etc. ON THE DAYS YOU EAT IT. Sometimes we ask how much as A,B,C or D. LOOK AT THE ENCLOSED PICTURES."

Interviewer should hand them the page of portion size pictures and continue: "For each food, pick the picture that looks the most like the serving size you usually eat".

Complete an example with the participant and show him how you would record his answer on the questionnaire.

Specific issues and problems

1. Food frequencies

- Foods that are eaten rarely or never should be recorded as such and not skipped over. The serving size should be left blank.
- When two or more foods are included in the same category, i.e. "bread, rolls, crackers," they are to be thought of altogether, i.e. "subject eats bread or rolls or crackers 2 or 3 times every week." In situations where one food in the category is eaten very frequently, i.e. bread twice a week, and the other very infrequently, i.e. crackers twice a year, then record the frequency for the one eaten more often.
- If a participant eats a food much more frequently at one time of the year than another, you need to calculate a weighted average of their consumption. For example, if he drank milk 7 times a week during the four winter months (hot chocolate), but only 3 times a week during the rest of the year, multiply 7 (times a week) x 4 (weeks per month) x 4 (months) = 112 times. Then multiply 3 (times a week) x 4 (weeks per month) x 8 (months) = 96 times. Add the two (112 + 96 = 208 times during the year). To get an average frequency, you can then divide 208 (times per year) by 52

(weeks per year) which gives about 4 times per week. Record the response category as 3-4 times per week as the average frequency.

Similarly, if a participant eats hot cereal 2 times a week for 6 months only, then this is 1 time a week for the past 12 months.

- If the participant says that the frequency "varies" unsystematically from time to time, ask them to choose an average. For example, say: "If you had to choose just one pattern as typical for you, how often would you say you eat [FOOD]?"

2. Serving size

- Some serving sizes are obtained by comparison with quantities labelled A, B, C & D. Pictures should be used to illustrate the portion sizes.

- A respondent who checks the same serving size for every food may not be thinking very hard about his answers. The interviewer should query him about the portion sizes to see if the portion size checked is really his best estimate. However, it is not uncommon for most (e.g. 70%) of portion sizes even in a well thought through questionnaire to be the same (usually medium sizes). Only if ALL the portion sizes are the same is there any cause for concern.

3. Do not expand the categories to include similar foods, e.g. cheese and cheese spreads do not include cottage cheese because cottage cheese has a much lower calcium content per serving. As another example, egg whites are not equivalent to whole eggs, because the whites of large eggs have only 3 mg of calcium while the yolks have about 27 mg of calcium.

Certain foods that are very similar to the food on the list, and have the about the same calcium content, such as nonfat dairy products, can be included. These foods are limited to the following:

- Dairy products

- 1) lowfat cheese can be included with "cheeses" (Nonfat cheese should not be included as the calcium content may differ greatly from other cheeses).
- 2) nonfat milk can be included with "milk"
- 3) nonfat yogurt and frozen yogurt can be included with "yogurt"

- Breads

- 1) diet breads can be included with "breads"

- Sweets

- 1) ice milk (194 mg of calcium per cup) can be included with "ice cream" (204 mg calcium per cup)

4. Summary review of diet questionnaire

- Review the questionnaire for omissions (skipped foods, missing information) and other special problems.
- All frequencies should be filled in. Portion size should be completed for all foods except those eaten rarely or never. If the participant simply can't estimate a portion size or frequency, leave it blank and write over the answer space "DON'T KNOW."
- Check for unreasonable frequencies (i.e. ice cream 5 times per day) and verify them with the participant.
- If the answers are all the same (i.e. all "1 time per day" or all the same serving size) go over each answer with the participant until it can be determined that the answers are valid.
- Check to be sure that milk has not been double counted. Milk poured on cereal should not be double counted as milk consumed as a beverage, and vice versa.

IV. Edit system

The Block Dietary Edit System will check for the following:

- too many food questions skipped
- too many coded using same frequency column
- too many coded as "small"
- too many coded as "medium"
- too many coded as "large"
- too many foods per day
- too few foods per day
- questionably high food frequencies

Although these edits will be checked by the system, try to catch them while reviewing the questionnaire in the clinic so that the participant can clarify any discrepancy immediately. **Once the questionnaires are sent to BDDS, no corrections may be made to the data.** The edits will be used to flag questionnaires with problems. In some cases, questionable responses may be excluded from data analyses.

V. Block Instructions

For further instructions on completing the Block FFQ, refer to the Block Dietary Data System handout.

VI. Shipments / Data system

First shipment: Send one month's worth (approx. 35 or more) of FFQs to Block Dietary Data Systems (BDDS) at the address below.

Future shipments should be made in batches of 120 or more (approx. 3 months worth).

Mail completed and edited FFQs to:

Block Dietary Data Systems
2634 LeConte Avenue
Berkeley, CA 94709
Phone or fax: 510-704-8514

Include a short note indicating the study and clinic, and to whom the questionnaires and edit reports should be mailed including a contact name, address, and phone #.

Edit reports: Block Dietary Data Systems (BDDS) will scan the forms in batches of 500 or more (combining clinics). A combined edit report will be sent to each clinic approximately every 3 months. These reports will be on IBM disk, in ascii format. They can be read by any IBM word processing program (if you need help reading the file, call Gabrielle Milani at the CC). Results for each clinic will be grouped together so that you can print out the report for your clinic only. You do not need to follow up on these edits with the participants. The report will just let us know if there are any participants whose data we might want to throw out as unbelievable (this should be rare). The BDDS is designed to just analyze the data once, using common assumptions to adjust for gross errors as necessary during the analysis. Hence, since the data are only analyzed once (the first time you send the data in), it is very important for the FFQ to be reviewed as best as possible for completeness and accuracy prior to sending it to BDDS.

For the first month, Katie Stone will be reviewing the edits at the CC. If we feel that the edits are jeopardizing the validity of the data, then we will revisit the edit process.

Dietary data: BDDS will send the CC an ascii file for each clinic approximately every 3 months that contains the dietary data for all participants. These are the data that will be used in analysis. The BDDS will generate a one page summary report for participants that will compare his diet to the RDA on several key nutrients. The CC will send these reports to the clinics every few months for distribution to the participants.