

CHAPTER 14

DIETARY ELIGIBILITY

14.1 Introduction

Criteria for assessment of dietary eligibility in DISC ensure that the child's dietary intake provides a margin for intervention, the child does not have an aberrant eating pattern and the family is willing and able to make dietary changes. Specific ineligibility criteria are:

1. Household member almost always follows a cholesterol lowering diet prescribed by a physician.
2. Child has an aberrant eating pattern as defined by:  
(a) not eating fruits or vegetables at least once a week and not willing to change this pattern, or (b) at the discretion of the nutritionist.
3. Child is not willing to make changes in what he/she eats.
4. More than three adults decide what the child eats at six or more meals during a typical week and parents/guardians are unwilling to change this practice.
5. Adult who usually decides what the child eats is unwilling or unable to learn diet modification.
6. No one is willing or able to provide school lunch from home for the child if necessary.
7. Dietary fat intake is not sufficient to allow a margin for intervention.
8. Child usually takes more than one multivitamin per day or greater than or equal to one gram of vitamin C per day or any amount of any other dietary supplement.

9. Nutritionist does not feel the child and/or family are good candidates for intervention.

Assessment of dietary eligibility is primarily made using the Dietary Eligibility Questionnaire (DISC Form 21). The only exception is the assessment of diet supplement (vitamins and minerals) use which is included in the Screening Visit 01 Form (Form 01).

#### 14.2 General Instructions - Dietary Eligibility Questionnaire

The DISC Dietary Eligibility Questionnaire is to be administered by a nutritionist at Screening Visit 1 (SV1) to the child and his/her parent or guardian. The form consists of two parts. Part A elicits information about eligibility criteria other than dietary fat intake. Although both the child and parent can contribute to answers in Part A, the person to whom the question is addressed is identified by a 'C' for child or 'P' for parent before each item number. Part B is a categorized food frequency aimed at ascertaining intake of high fat/saturated fat foods. The questions in Part B are addressed to the child but the parent should be encouraged to participate.

All children and parents who attend SV1 will complete Part A of the Dietary Eligibility Questionnaire. After that part of the form is completed, the nutritionist will determine if the child is eligible for DISC on the basis of responses to questions in Part A. Only children who are determined to be eligible on the basis of Part A of the questionnaire will complete Part B.

Part B of the Dietary Eligibility Questionnaire incorporates two approaches to assessing intake of high fat/saturated fat foods. The first approach, evaluated using column D, identifies children who eat a variety of high fat/saturated fat foods. The second approach, evaluated using column E, identifies children who eat a lot of high fat/saturated fat foods in a single category. All children complete

Part B of the form will be evaluated in relation to column D, intake of high fat/saturated fat foods from a variety of sources. Children who are eligible for DISC on the basis of column D are not asked items in column E; only those children who are not eligible on the basis of column D are asked about column E.

### 14.3 Specific Instructions - Dietary Eligibility Questionnaire

#### 14.3.1 Part A

<u>Item</u>	<u>Address to</u>	<u>Instructions</u>
1	Child	No eligibility criteria in this question but clues the nutritionist to whether the child is on a special diet and who provided the diet information.
2	Parent	If a household member is on a cholesterol-lowering diet, and it is determined that this person follows the diet almost always, the child is ineligible for DISC. For the purposes of this question almost always is defined as 90% of the time or more.
3	Child	If fruit, vegetables and fruit juice are not consumed by the child at least once per week, and the child is not willing to change, the child is ineligible.
4	Child	If the child is not willing to make some changes in what he/she eats, the child is ineligible.

<u>Item</u>	<u>Address to</u>	<u>Instructions</u>
5	Parent	If more than three adults each decide the child's food intake at six or more meals per week, and the family is not willing to change, the child is ineligible.
6	Parent	If the person who usually decides the meals for the child is not willing to come to group sessions and other arrangements cannot be worked out, the child is ineligible.
7	Parent	If no one in the house is willing to make lunch for the child to carry to school if necessary, the child is ineligible.
8		The nutritionist should check to see if any 'INEL' responses have been checked. If YES, the child is ineligible and the interview should stop. If no 'INEL' responses have been checked, continue with Part B.

#### 14.3.2 Part B

For each item, ask the child whether he/she eats or drinks the items under column A. If the response is 'NO', continue with the next item in column A. If 'YES', proceed to column B of the same item to ascertain whether or not the child eats high fat/saturated fat foods in that category. A list of high fat/saturated fat foods (FF foods) is included as Exhibit 14-1. Under column C, probe for the frequency of consumption of high fat/saturated fat foods. Guidelines for probing are included under Instructions for Individual Items. It is not

necessary to write comments in columns B and C of the form, space is provided as a work area only. On the basis of information collected under columns B and C of the form, answer whether the child meets the criteria specified under column D. Note that the criteria are based solely on frequencies of consumption and do not include portion sizes. There should be a response under column D checked for any question with a 'YES' response under column A. Those items with a 'NO' response under column A will not have a response marked under column D.

Continue administering the questionnaire for items 9 through 16 without continuing onto column E. After completion of column D for each question, check to see if you have a 'Yes' answer in column D four or more times. If you have four 'Yes' answers in column D, proceed to question 17. If, however, you have a 'Yes' answer in column D only three times, determine if two of these are from the Milk, Cheese, Meat or Ice Cream categories (items 9, 10, 12, or 14). If so, the child is eligible for DISC. Proceed to item 17. If 'Yes' answers to items 9 through 16 occur three times and two of these are not from the Milk, Cheese, Meat or Ice Cream categories, or 'Yes' answers to items 9 through 16 occur less than three times, administer column E.

Column E is aimed at identifying children who eat a lot of one category of high fat/saturated fat foods. Only those items for which a 'Yes' response was provided under column D should be asked about under column E. To obtain sufficient detail to provide an answer under column E, you will need to use NASCO standardized food models to ascertain portion sizes. For column E, use the food models as follows.

9.	MILK YOGURT	1 sv. = 8 oz. 1 sv. = 8 oz.	Standard 8 oz. glass Standard 8 oz. measuring cup
		FF $\geq$ 4 sv./day	
10.	CHEESE	1 sv. = 1 oz.	NASCO American Cheese Slice (W6634HR) = 1 oz.
		FF $\geq$ 4 sv./day	
11.	EGGS	1 sv. = 1 FF $\geq$ 5 sv./wk	Standard large egg
12.	MEAT	1 sv. = 2 oz.	NASCO Hamburger, 2 oz.
	POULTRY	1 sv. = 2 oz.	NASCO Hamburger, 2 oz.
	FISH	1 sv. = 2 oz. FF $\geq$ 4 sv/day	NASCO Hamburger, 2 oz.
13.	BUTTER or MARGARINE	1 sv. = 1 pat	NASCO Butter pat (WA2349HR) = 1 pat
		FF $\geq$ 10 sv./day	
14.	ICE CREAM, FROZEN DESSERT, or PUDDING	1 sv. = 1/2 cp.	NASCO Chocolate Ice Cream, #8 scoop. (W6718HR) = 1/2 cup
15.	BAKED DESSERT	1 sv. = 1 piece OR 2 cookies	NASCO Choc chip cookie (2" diam. size. (WA5260HR) = 1 cookie
		FF $\geq$ 10 sv./day	
16.	SALTY SNACKS	1 sv. = 1 cup OR 4 crackers	Standard measuring cup NASCO Crackers, 6 salted soda, 3 oz. (W6119HR) = 6 crackers Use only 4 crackers

Use the criteria listed under column E to determine the appropriate response to mark. Only one 'Yes' response under column E is necessary to establish eligibility. Before determining that a child is ineligible for DISC on the basis of Part B of the Dietary Eligibility Questionnaire, the nutritionist must complete column E for all food groups for which a 'Yes' response was provided under column D.

Item 17 is answered by the nutritionist based on items 9 through 16. The child is eligible for DISC if he/she meets one of the following criteria:

1. Column D includes four or more 'Yes' responses.
2. Column D includes three 'Yes' responses, two of which are Milk, Cheese, Meat or Ice Cream.
3. Column E includes at least one 'Yes' response. If one of the above criteria is not met, the child is ineligible for DISC.

Items 18 and 19 allow the nutritionist to exclude a child from DISC because of aberrant eating patterns or because the nutritionist feels the child and/or family is not a good candidate for intervention.

Instructions for Individual Items in Part B

<u>Item</u>	<u>Instructions</u>
9	See attached list of FF foods (Exhibit 14-1). Include milk the child drinks or uses on cereal and yogurt the child eats. Do not include milk and yogurt used in cooking or baking.
10	See attached list of FF foods. Include cheese eaten in any way, as a snack, on a sandwich, on pizza and in macaroni and cheese, etc.
11	See attached list of FF foods. Include eggs eaten as eggs and products that have egg as their primary ingredient like egg salad.

<u>Item</u>	<u>Instructions</u>
12	See attached list of FF foods. <u>Probe</u> for fast foods.
13	See attached list of FF foods. Include butter/margarine used as a spread on bread, vegetables, sandwiches, etc. Include butter, margarine blends, shortenings, lard used in cooking or baking.
14	See attached list of FF foods.
15	See attached list of FF foods.
16	See attached list of FF foods.
17	Self-evident.
18-19	The nutritionist should use her judgement in responding to these questions and/or confer with the Principal Investigator at her Clinical Center. 'Yes' responses require an explanation.

#### 14.4 Instructions - Dietary Supplements

Questions about the use of vitamins, minerals and diet supplements are included in the Screening Visit 01 Form (Form 01, items 17 and 18). The interviewer should review the information provided by the parent/guardian to ascertain whether the child takes any vitamins, minerals or other dietary supplements and, if yes, what the brand names are. If the parents brought the bottles to the clinic, information on the label should be used to ascertain whether the preparation is a multi-vitamin or contains <1 gram of vitamin C. Otherwise, the interviewer should

try to get the brand name from the parent/guardian. If the parent does not know the brand name, but knows the type of supplement and, if it is vitamin C, the dose, this information should be used. Once the interviewer has determined the types of vitamins, minerals and other dietary supplements the child takes, he/she should complete item 5 on the Screening Visit 01 Summary Form (DISC Form 01).

#### 14.5 Training and Certification

##### 14.5.1 Introduction

The DISC Diet Eligibility Questionnaire (DEQ) is administered by a nutritionist during Screening Visit 1 (SV1) to the child and his/her parent or guardian. Part A of the form elicits behavioral information related to potential participation and adherence to the DISC dietary intervention. Part B is a categorized food frequency that ascertains intake of high fat/saturated fat foods. The DISC Quality Assurance Committee has deemed it appropriate to develop training and certification procedures that will help to assure standardized administration of the form across all centers.

##### 14.5.2 Training on the DEQ

The chief nutritionist at each center is responsible for training, certifying and recertifying staff nutritionists who are to perform the DEQ. Training will consist of observation of the DEQ administration by the chief nutritionist or other currently certified nutritionist during a minimum of three SV1 visits. Trainees will then conduct several practice DEQ's among non-DISC participants and/or staff members to familiarize themselves with the form and the process. The trainee should then conduct three DEQ's with SV1 participants under the supervision of the chief nutritionist, who will simultaneously complete a DEQ form based upon the participant's responses.

The supervisor should pay close attention to interviewing style and conduct of the interview, to monitor the thoroughness of probing technique as well as the accuracy of documentation. It should be emphasized that questions to both parents and children are to be open ended without leading the responses. The instructions identified in the DISC Manual of Operations (Chapter 14) are to be followed exactly with appropriate continuation or termination of the form when key eligibility issues are raised. The supervising nutritionist should interrupt the interview or clarify the responses if, in her/his judgment, the critical information has been missed; otherwise, the trainee is expected to complete the entire interview on her/his own. When three consecutive DEQ's have successfully been completed to the satisfaction of the supervising nutritionist, based on the Certification Checklist (Exhibit 14.5), the trainee will be considered certified in the technique.

Recertification should occur prior to each round of SVI visits or every six months, whichever occurs first. Recertification involves observation by a DEQ-certified nutritionist and satisfactory documentation procedures credentials for administration of the DEQ.

#### 14.5.3 Credentials of DEQ Interviewers

The DEQ should preferably be administered by a registered or registration - eligible dietitian with knowledge of food composition, food preparation and excellent communication skills. This person may be either a DISC interventionist or a certified endpoint dietary assessment specialist who also conducts baseline or follow-up 24 hour recalls on eligible participants. Nutritionists hired specifically for SVI's need not be certified in the Nutrition Coordinating Center methodology since no nutrient analyses are to be performed.

## 14.6 Quality Assurance

### 14.6.1 Introduction

Quality assurance of the Dietary Eligibility Questionnaire (DEQ) is important in maintaining standardized criteria for dietary eligibility within and between centers. The predicted volume of SV1's is expected to average about 1,100 per center. A sample of 5% are to be monitored by another nutritionist either in person or by audio tape for comparison of results. Of that sample, 10% of these interviews will be audiotaped for cross-clinic comparisons.

### 14.6.2 Selection of Participants

Every twentieth participant will be identified by the visit scheduler such that nutritionists will know when a specific DEQ interview is to be monitored. If two nutritionists are available, the interview may be monitored in person, otherwise the interview may be audiotaped and reviewed by another nutritionist at a later time.

### 14.6.3 Preparation of Forms/Tapes

The DEQ itself will be completed by the two nutritionists on 5% of the sample. If the interview is monitored simultaneously, the DEQ is completed at that time. If the interview is taped, the DEQ should be completed upon review of that tape.

Audiotapes should be identified by both participant and nutritionist ID's in order to compare results with the appropriate DEQ.

### 14.6.4 Process for Notifying Completion of Quality Assurance

The chief nutritionist at each center is responsible for monitoring the quality assurance assessments for her staff. The duplicate DEQ's should be compared with the primary form as a normal editing process. Each DEQ nutritionist's progress should be monitored locally and discrepancies should be identified and resolved. Duplicate DEQ's need

not be sent to the Coordinating Center. Instead a Quality Assurance Log (Exhibit 14.6) should be kept and sent to the Coordinating Center at 3 month intervals during SVI's. Each nutritionist who performs DEQ's at the center should submit at least one tape per SVI period and be monitored locally. The chief nutritionist should herself be monitored by another DEQ certified nutritionist, if she administers the DEQ form.

## EXHIBIT 14-1

FOOD LIST FOR COMPLETING ITEMS 9 THROUGH 16  
OF DISC DIETARY ELIGIBILITY QUESTIONNAIRE

ITEM NUMBER	FOOD CATEGORY	FATTY FOODS (FF)	OKAY FOODS
9	Milk & Yogurt	Whole Whole Buttermilk Whole Chocolate	Skim 1 or 2% Low Fat Buttermilk Skim Chocolate
10	Cheese	American Cheddar Cream Cheese Colby Mozzarella (Whole) Muenster Provolone Ricotta Swiss Cheese Spreads Velveta Cheese Whiz Pizza Macaroni & Cheese Cheese Dishes	Cottage Cheese Lowfat Cheese: Cheezola Lo-Chol Light & Lively Lite Line Weight Watchers Other local Lowfat Cheese
11	Eggs	Whole Yolk	White only Egg Substitute
12	Meat, Poultry, Fish	Beef - any not under OK list Pork or Ham - any not under OK list Lamb - any not trimmed Poultry - w/skin or fried Fish - Fried, Fishsticks Organ Meat Lunch Meat - Reg. Beef, pork type Hot Dogs	Beef - any cut trimmed Extra lean grd. beef Flank Steak Minute Steak Round Sirloin Tip Pork or Ham - any cut trimmed Canadian Bacon Tenderloin Lamb - any cut trimmed Veal - any cut Poultry - w/o skin & not fried Fish - not fried Luncheon meat - poultry
13	Butter or Margarine	Butter Butter/Margarine Blends Shortening or lard	Margarine Vegetable oils

## EXHIBIT 14-1 (Continued)

ITEM NUMBER	FOOD CATEGORY	FATTY FOODS (FF)	OKAY FOODS
14	Ice Cream & Frozen Treat, or Pudding	Ice Cream Ice Cream Bars & Sandwiches Ice Milk Bars Milkshakes Malted Frozen Yogurt ( > 4 gm fat/ 1/2 cup) Pudding made w/ whole milk or egg	Ice Milk Dreamsicles Fudgesicles Popsicles Pudding Pops Fruit Bars Sherbert Sorbet Pudding made w/ lowfat milk & w/o egg Canned Pudding Tofu Frozen Dessert
15	Chocolate Candy and Baked Goods Cake, pie, Brownies, Cookies, Doughnut	Chocolate Candy Homemade Cakes & Brownies w/ butter, lard or shortening OR a mix w/ lard butter, shortening, pudding or chocolate sauce OR a mix w/ no added fat Commercial Cakes except Angel Food Cake Homemade Cookies w/ butter, lard or shortening All Homemade Chocolate Chip Cookies Commercial Cookies not on OK list Pies & Pastries - all homemade & commercial Donuts & Sweet Rolls - all homemade & commercial	Homemade Cakes & Brownies w/ margarine or oil OR a mix with margarine or oil OR Angel Food Homemade Cookies made w/ margarine EXCEPT Chocolate Chip Commercial Cookies on OK Cookie List (Exhibit 14-2)

## EXHIBIT 14-1 (Continued)

ITEM NUMBER	FOOD CATEGORY	FATTY FOODS (FF)	OKAY FOODS
16	Salty Snacks Popcorn, Chips, Pretzels, Crackers, French Fries	Chips, any kind Popcorn w/ butter French Fries Crackers not on OK list	Pretzels Plain Air-Popped Popcorn Matzoh Rye Krisp Graham Crackers Saltines Soda Crackers

## EXHIBIT 14-2

DISC Dietary Eligibility Questionnaire  
Okay Cookie List

Almond Toast, Stella D'Oro  
Animals, Sunshine  
Anisette Sponge, Stella D'Oro  
Anisette Toast, Stella D'Oro  
Applesauce Drop, Archway  
Apple Newtons, Nabisco  
Apple Fruit Stick, Almost Home, Nabisco  
Arrowroot Biscuit, Sunshine  
Aunt Sally, Iced, Sunshine  
Blueberry Fruit Stick, Almost Home, Nabisco  
Blueberry Newton, Nabisco  
Cherry Fruit Stick, Almost Home, Nabisco  
Cherry Newton, Nabisco  
Cinnamon Toast, Sunshine  
Devils Food Cakes, Keebler  
Devils Food Cakes, Nabisco  
Egg Biscuits, Stella D'Oro  
Egg Jumbo, Stella D'Oro  
Fig Bar, Keebler  
Fig Bar, Lance  
Fig Bar, Sunshine  
Fig Cake (vending machine), Lance  
Fig Newtons, Nabisco  
Fig Square, Peggy Lawton

## EXHIBIT 14-2 (Continued)

DISC Dietary Eligibility Questionnaire  
Okay Cookie List

Fortune Cookies, Umayu  
Fruit & Honey, Archway  
Ginger Snaps, Old Fashion, Nabisco  
Gingersnaps, Keebler  
Gingersnaps, Pogens  
Gingersnaps, Sunshine  
Golden Fruit, Sunshine  
Iced Dutch Apple Fruit Stick, Almost Home, Nabisco  
Lemon Drop, Archway  
Macaroon Date Delight, Peggy Lawton  
Mallowpuffs, Coconut, Sunshine  
Marshmallow Sandwich, Nabisco  
Metrecal Cookies, all flavors, Mead-Johnson  
Molasses and Spice, Sunshine  
Molasses Round, Archway  
Old Time Molasses Grandma's Big Cookie, Frito-Lay  
Pfeffernusse Spice Drops, Stella D'Oro  
Soft Sugar Drop, Archway  
Sour Cream Drop, Archway  
Sprinkles, Sunshine  
Sugar Round, Archway  
Sugared Egg Biscuits, Stella D'Oro  
Tiger's Milk Cookie, Plus Products  
Yogurt, Peak-Frean

## EXHIBIT 14-3

Summary of Instructions For Completing Part A of the  
Dietary Eligibility Questionnaire for DISC

Page 1 is information on identification of participant only, including ID number and Name Code of child and the Visit Number of the child in the section provided. Identical information is collected on the parent completing the form. The section on ELIGIBILITY status is to be completed after the entire form has been completed. The Nutritionist who administers the form will write his/her ID number as well as sign his/her name and write the numerical dates in the space provided.

Part A includes ELIGIBILITY criteria other than dietary intake and is comprised of 10 questions.

Question 2 - ASK CHILD - no INELIGIBILITY criteria in this section but clues the Nutritionist as to whether the child is on a special diet and who gave the diet information.

Question 3 - ASK PARENT - if a household member is on a Cholesterol-Lowering Diet, and it is determined that this person follows the diet almost Always, the child is INELIGIBLE for DISC.

Question 4 - ASK CHILD - if the child does not consume and is not willing to consume fruit, vegetables and fruit juice at least once per week, the child is INELIGIBLE.

Question 4B - ASK CHILD - if the child is not willing to make some changes in what he/she eats, the child is INELIGIBLE.

Question 5 - ASK PARENT - if three or more persons EACH decide the child's food intake greater than two times per week, the child is INELIGIBLE.

Question 6 - ASK PARENT - if the person responsible for the child's meals is not willing to come to groups sessions, the child is INELIGIBLE.

Question 7 - ASK PARENT - if no one in the house is willing to make lunch for the child to carry to school, the child is INELIGIBLE.

## EXHIBIT 14-4

Summary of Instructions For Completing Part B of the  
Dietary Eligibility Questionnaire for DISC

PART B is a categorized food frequency aimed at ascertaining intake of high fat/saturated fat foods. Questions are addressed to the child but the parent should be encouraged to participate.

NOTE: FF is an abbreviation for Fatty Foods. Since the goal of this section is to determine ELIGIBILITY of the child based on high enough fat intake, probe only for foods that are considered FF.

DIRECTIONS FOR PART B: For each question, ask Column A (Do you eat or drink the item?). If NO, continue with the next question, Column A. If YES, proceed to Column B of that question to ascertain whether or not the child meets criteria for High Fat intake in that food group. NOTE: IT IS NOT NECESSARY TO WRITE COMMENTS IN COLUMNS B OR C - THIS IS A WORK SPACE AREA ONLY. Probe only for fat containing foods, especially high saturated fat content. Next answer Column D based on Criteria A for that specific food group and determine whether or not to check YES or NO for FF intake. Continue administering the questionnaire for questions 9 through 16 without continuing onto Column E. After completion of Column D for these questions, check to see that you have a YES answered in Column D four or more times. DETERMINATION FOR ELIGIBILITY FOR THIS PART OF THE QUESTIONNAIRE IS MET WITHOUT PROBING ANSWERS FOR COLUMN E. Proceed to question 17.

If, however, you have a YES answer in Column D only three times determine if two of these are from the Milk, Cheese, Meat or Ice Cream categories (Questions 9, 11, 12, 14). If so, the child is ELIGIBLE for DISC. Proceed to question 17.

If a YES answer to questions 9-16 occur less than three times AND two of these are NOT from the Milk, Cheese, Meat or Ice Cream categories, administer Column E. NOTE: ANY QUESTIONS IN THIS SECTION WHICH HAVE NO IN COLUMN A, WILL NOT BE PROBED FOR COLUMN E. Answer Column E based on Criteria B for the food group you are questioning. Only one YES response under Column E is necessary to determine ELIGIBILITY for any of the questions 9-16, it is necessary for the Nutritionist to complete Column E for all food groups unless a NO was answered for that food group in Column A.

## EXHIBIT 14-4 (Continued)

Question 17 is answered by the Nutritionist based on questions 9-16. ELIGIBILITY occurs IF:

Column D includes 4 or more YES responses

OR

Column D includes 3 or more YES responses, two of which are Milk, Cheese, Meat or Ice Cream.

OR

Column E includes at least 1 YES response.

If the above criteria are not met, the child is INELIGIBLE for DISC.

Questions 18 and 19 allow the Nutritionist to EXCLUDE a child from DISC because of aberrant eating patterns or because the NUTRITIONIST feels the child and/or family is not a good candidate for intervention.



Quality Assurance Log for Monitoring the Diet Eligibility Questionnaire (DEQ)

Introduction

Every 20th DEQ is to be monitored by another nutritionist at the center or tape recorded for later evaluation. The chief nutritionist is to ensure that both the frequency of these monitoring sessions as well as the reporting of these results are accomplished at 3 month intervals.

Date of Interview	Interviewer Name	Interviewer ID#	Observer Name	Observer ID#	Interview was:		DEQ FORM ID#	Was interview satisfactory?	COMMENTS
					In person	Taped			
						yes/no		yes/no	

Each nutritionist who conducts the DEQ should submit at least one tape every three months during screening visits.