Summer Year 4 Making Wise Fat-Free Choices

In this session, the participant will:

- 1 Identify reduced-fat commercial foods currently used.
- 2. Review and discuss fat-related label claims and fat-replacer ingredients used in commercial foods.
- 3. Practice fat label reading skills to help evaluate your use of reduced-fat commercial foods and naturally low-fat fruits, vegetables and grains.

	Checklist of Materials Needed		
Supporting Materials			
	Fat Scans or other self-monitoring tool		
	Supplies for "mock" label reading activity:		
	Fat Counters		
	Pencils or pens		
	Magnifying glass, if participants need for the food labels		
	Food Labels(e.g., fat-free, low-fat,% fat-free, reduced-fat, products made with <i>olestra</i> , <i>salatrim</i> or <i>caprenin</i> . Use real food labels or label samples provided in the Group Nutritionist Summer, Year 4 Session Resources		
	Overhead projector, blackboard or whiteboard		
	Overheads: - Most Popular Reduced-Fat Products - Reasons Why People Use Reduced-Fat Products - Counting Fat-Free Commercial Foods - Counting Commercial Foods with Term Available Fat		
Food & Paper Supplies			
	Beverages of choice (coffee, tea, juice)		
	Sugar, skim milk or low-fat creamer, stir sticks, optional		
	Paper supplies: plates, napkins, cold cups, hot cups (if needed)		
	Plastic spoons or forks		
	Suggested Food Tasting: Reduced-fat food products, or recipes that use reduced-fat foods (e.g., fat-free, low-fat, light, etc.).		
	Participant Manual		
Worksheets	Worksheet Page(s) # Summer 4-1 17-19 (or use real labels) Summer 4-2 20-21 Summer 4-3 22-23 Summer 4-4 24-26		

Resource Section

Additional materials available in Participant Manual

Resource	Page(s) #
Descriptions of Fat Replacers	32-34
What's In a Label? (Fat)	35
What's In a Label? (Calories)	36
Tips for Cooking with Fat-Free Commercial Products	37
Sample labels for Worksheet Summer 4-4	38-43



Please be sure to review the following publications before facilitating this session:

- Purpose of WHI Guideline for commercial "fat-free" products: Read *Vol. 4-Group Nutritionist Manual, Section 1.2.5. Use of Fat-Free Foods* (pgs. 1-7 and 1-8).
- WHI position statement on Olestra in Bulletin 74 (12/23/96). Filed in WHI Manuals Vol. 2, Procedures-Appendices, Appendix G.4.1.
- IRS 96-0256 Advising participants how to account for foods containing modified fats (e.g., *salatrim*, *caprenin*).

Session Definition of Term "Reduced-fat"

In this session, when the term <u>reduced-fat</u> is used without quotations, it globally refers to any commercial food that is labeled "fat-free," "low-fat," and "reduced-fat." However, when the term "reduced-fat" is used in quotations, it refers to the specific nutritional claim found on a food label.

Label Reading Activity (Worksheet Summer 4-4):

Nutritionists may modify or add label-reading situations to those found on **Worksheet Summer 4-4** to address DM group questions/concerns. For the "mock" label-reading situations and answers, refer to the Additional Group Nutritionist Support Materials for Worksheet Summer 4-4, pages 41-54.

Suggestion for Food Tasting/Serving Size Activity

• To highlight "label serving size vs. individual's serving size"--consider buying some fat-free commercial products (e.g., *Entenmann's*TM pastry, *Betty Crocker* Sweet RewardsTM, etc.). Then have participants divide the fat-free baked good or snack into "single servings" as defined on the Nutrition Facts panel and talk about how these servings compare to their usual serving.

Optional Resource

Technical resource for Nutritionists--If you want to know more information about the FDA's proposed rule pertaining to the *available fat* content of food, refer to the Dec. 20, 1996 *Federal Register* (61FR 67243).

Spring 4 Session Outline--Key Activities

Activity Type (Time)	Activity
Pair or Small Group Discussion (20 minutes)	 Review of Success/Progress ◆ Discuss experiences of the last 3 months (with or without the group supportdepending on peer group meetings). Use the questions below: Q/A: What were some of the fruits and vegetables you ate during the last few months? (look for variety) What low-fat methods did you use to prepare and serve your fruits and vegetables? (Ask the group a question that addresses their last maintenance session, if appropriate): Spring Year 3: What breakfast challenges did you identify or experience during the
€ ¶ Notes	 Spring Year 4: What steps did you take to improve your communication with the people around you? (Ask the group a question that addresses their peer group activities, if appropriate.)
Group Discussion/ Mini Lecture (10 minutes)	 ♦ Ice breaker discussion with participants. • Identify reduced-fat commercial products currently used. • Identify reasons for use (or limited use). • Compare to national trends (Overheads Summer 4-1 and 4-2, optional) • Key point participants identify the variety of reduced-fat foods they currently use and some of their reasons for using these foods.



Lecture/ Group Activity and Discussion (10-15 minutes)



- ◆ Participants use **Worksheet Summer 4-1** (or real labels) to identify and discuss fat-related nutrition claims on labels.
 - fat-free, low-fat, ___ % fat-free, reduced-fat, light/lite
- ♦ Key point -- participants understand meaning of fat-related nutrition claims on labels.

(Optional Activity)

Lecture/
Group Activity
and Discussion
(15 minutes)

(Optional Activity)

- ◆ Participants use **Worksheets Summer 4-2** and **Summer 4-3** to:
- Address safety concerns about fat replacers.
- Identify ingredients used as fat replacers (carbohydrate-, protein- and fat-based).
- ♦ Key point -- participants recognize fat-replacer ingredients commonly used in commercial foods.

<u>Note:</u> Focus on fat replacer ingredients only if participants are interested. To shorten and simplify the session--briefly explain that all reduced-fat commercial products use fat replacers and the FDA has a process to review their safety. Then move on to the WHI Guidelines for fat-free commercial foods and the practice activity.



Large Group Discussion (10 minutes)

- ◆ Use real labels or Overheads Summer 4-3 and Summer 4-4 to explain the WHI guidelines for counting the fat in:
 - Fat-free commercial foods.
 - Commercial foods with "available fat" claim.
- ♦ Key point -- participants understand the rationale behind WHI guidelines for counting fat in commercial foods.

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Small or Large Group Activity (10 minutes)

- ◆ Participants use **Worksheet Summer 4-4** to apply their label reading knowledge for fat-related claims and ingredients. Activity can be done individually, in pairs, or teams (3-4 people).
 - Set up label reading stations with "mock" label-reading situations.
 - Use real food labels (or samples provided).
 - Use open-ended questions in Summary for general sharing and discussion of activity.
- ♦ Key point -- participants practice label reading skills to help evaluate their use of reduced-fat commercial foods and naturally low-fat fruits, vegetables, and grains.

Large Group Discussion (15 minutes)

Summary

Discuss issues and identify participants who need more help.

◆ Focus on how this fat-related label information can help participants make decisions about their use of reduced-fat commercial foods.

QA:

- What label information was new to you?
- How will the information you learned about *fat-free* commercial foods change the way you think about, or record these foods?
- How will you use the label-reading information you received today to help you evaluate the food choices you make?

Home Activity

Lecture (5 minutes)

- ♦ Assign 3 Fat Scans (or other self-monitoring method).
- ◆ Suggest activities to work on during the next 3 months. Answer questions.

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Food Tasting (15 minutes)

Food Tasting

◆ Feature reduced-fat food products and/or recipes that use reduced-fat foods. (See serving size activity suggestion, *Group Nutritionist Note*, pg. 3)

Total Time: 90-105 minutes

Summer 4 Session: Making Wise Fat-Free Choices

Activity Type (Time)	Activity	
	REVIEW OF SUCCESS/PROGRESS	
Pair or Small Group Discussion (20 minutes)	 ◆ Discuss experiences of the last 3 months (with or without the group supportdepending on peer group meetings). Use the questions below: Q/A: 	
	 What were some of the fruits and vegetables you ate during the last few months? (look for variety) What low-fat methods did you use to prepare and serve your fruits and vegetables? 	
	 (Ask the group a question that addresses their last maintenance session, if appropriate): Spring Year 3: What breakfast challenges did you identify or experience during the last 3 months and what strategies were helpful? 	
	 Spring Year 4: What steps did you take to improve your communication with the people around you? (Ask the group a question that addresses their peer group activities, if appropriate.) 	
	OVERVIEW OF SESSION	
	• At this point in time, most of you have been in the WHI Dietary Study about four years. In one of our very first group meetings we talked about label-reading skills and what you needed to look for on the new nutrition labels.	
	• However, since the new label came into effect in 1993, the market has been flooded with new reduced-fat foods and colorful labels with nutrient claims. Many of you have probably refined your label-reading skills to handle these new products. However, you may want to know more about the ingredients being used to replace the fat in foods and their safety.	

- The aims of this session are to:
 - ➤ Look at the role of reduced-fat commercial products in a low-fat eating pattern;
 - Address some of your questions about the ingredients used in these products, and;
 - ➤ Give you a chance to evaluate your own ability to understand and use the fat information provided on food labels.
 - ➤ Provide an opportunity for you to evaluate your food choices and aim for a balance between naturally low-fat fruits, vegetables and grains and fat-free commercial snacks and sweets.
- Let's start by talking about some of the reduced-fat commercial products you currently use and look at the reasons you do (or don't) use these products.

NEW MATERIAL

Taking Stock

PURPOSE: Participants identify the reduced-fat commercial foods they currently use and the reasons for their selections.

Group Discussion/ Mini Lecture (10 minutes)

- **♦** Ice breaker discussion with participants.
 - Identify reduced-fat commercial products currently used.
 - Identify reasons for use (or limited use).
 - Compare to national trends (Overheads Summer 4-1 and 4-2, optional).
- ♦ Key point -- participants identify the variety of reduced-fat foods they currently use and some of their reasons for using these foods.
- As part of the Dietary Study, you have been reducing your fat intake in a number of different ways. One of your choices may include using reduced-fat commercial foods, such as non-stick cooking sprays, light mayonnaise, and/or fat-free salad dressings.



Group Nutritionist Note: Use the questions listed below (or other openended questions) to encourage participants to share information about:

- Reduced-fat commercial products they frequently use and
- Reasons why they use reduced-fat products.
- One survey, conducted in 1996 by the Calorie Control Council reported that 80% of adults in the U.S. use reduced-fat foods and beverages. Think about the reduced-fat commercial foods you currently use.

Q/A:

- What reduced-fat commercial products do you frequently use?
- What are some of your reasons for using these products?



Group Nutritionist Note: Compare your DM groups' responses to the US population. (Optional: Use <u>Overheads Summer 4-1</u> and <u>Summer 4-2</u> to summarize national trends.)

Most Popular Reduced-Fat Products

• Overhead Summer 4-1 summarizes information collected in a 1996 Calorie Control Council survey. It shows the most popular reduced-fat products consumed by U.S. adults.

- The survey found that the most popular reduced-fat food was skim or low-fat milk. It was used by 66% of adults. This was followed by reduced-fat salad dressings/sauces/mayonnaise, reduced-fat cheeses and dairy products, and reduced-fat margarines.
- Reduced-fat frozen desserts, chips/snack foods, meat products, and baked goods were used by less than half of the adult population who were reduced-fat consumers.

Reasons Why People Use Reduced-Fat Products

• Overhead Summer 4-2 summarizes the reasons reduced-fat consumers used these products. The most important reason given by 79% of the consumers was "To stay in better overall health." Other important reasons are shown on the overhead.

Q/A: (Ask for volunteers)

- How have reduced-fat commercial products helped (or hindered) your ability to reach and maintain your WHI fat gram goal?

Reducing Fat Without Using Reduced-Fat Commercial Products

Group Nutritionist Note: If participants are concerned about cost, or taste, the Nutritionist may want to spend a little time having participants share and discuss other choices that they use instead of reduced-fat commercial products. (Note:--if safety is a concern, it can be addressed later in the session when you discuss the FDA safety review process).

<u>Key point:</u> The use of reduced-fat commercial products is not required for participants to reach and maintain their WHI fat gram goals.

• Some people don't like to use reduced-fat commercial products. This reluctance might be due to a number of reasons. They might not like the taste or texture of the products. It's also possible that the cost of these products could make it more difficult to fit them into a limited budget.

Q/A: (Ask for volunteers):

- What are some reasons that you don't use, or limit your use of reduced-fat commercial products?

- Reduced-fat commercial products do help save time and add variety to a low-fat eating pattern. These products can give people a chance to reduce their fat grams and continue to enjoy some traditional high-fat foods, such as salad dressings, snack foods or desserts.
- However, some of you might be wondering, "Do I have to use these products in order to meet my WHI nutrition goals?"
- The answer is "No, you do not need to use reduced-fat commercial products to reach or maintain your WHI nutrition goals." You can reach your goals without using commercial products. Your food choices include a number of foods naturally low in fat--fruits, vegetables, grains, beans/legumes, low-fat dairy products and lean meats, poultry and fish.
- In addition, to using foods naturally low in fat, some people may even make their own homemade reduced-fat products. These recipes may be their own, or ones they have received during the group meetings.

Q/A: (Ask for volunteers)

- What recipes do you use to make homemade reduced-fat products (e.g., salad dressings, yogurt cheese, egg substitutes, cream soups, etc.)

Group Nutritionist Note: Here are some examples of recipes that are available in the Participant's Session materials and Resources: Session 2 (salad dressing); Session 3 (yogurt cheese); Session 13 (tartar sauce); Winter, Yr. 2 (herb/spice blends); Spring, Yr. 3 (coffeecake); Winter, Yr. 3 (cream soup mix, basic soup stocks); and Resources (pg. 47 low-fat marinade ideas).

 Another idea that people use is to lower the fat content of a regular highfat commercial product. They do this by diluting the product or using a smaller serving. For example, the fat in regular creamy salad dressings can be reduced by diluting the dressing with non-fat yogurt or another liquid, such as water.

Q/A: (Ask for volunteers)

- What methods do you use to reduce your fat or increase your servings of fruits/vegetables and grains without using reduced-fat commercial products (e.g. lower-fat cooking or preparation methods, snack ideas, etc.)?

- As you can see, you do not have to use reduced-fat commercial products to reach your WHI nutrition goals. The choice is up to you.
- If you have decided to use reduced-fat commercial products, you might ask: "How often should I use these foods and in what amounts?"
- To help you answer this question, it's important that you understand the information provided on food labels, specifically:
 - > The meaning of nutrition label terms, and
 - ➤ An understanding of the ingredients used to replace the fat in reducedfat commercial foods.
- Let's start with a brief review of the nutritional terms used on reduced-fat commercial products.

Looking At Nutrition Claims on Reduced-Fat Products

PURPOSE: Participants understand meaning of fat-related nutritional claims on food labels.

Mini Lecture/ Group Activity and Discussion (10-15 minutes)

- **♦** Participants use Worksheet Summer 4-1 (or real labels) to identify and discuss fat-related nutrition claims on labels.
 - fat-free, low-fat, __% fat-free, reduced-fat, light/lite
- **♦** Key point -- participants understand meaning of fat-related nutrition claims on labels.
- Until recently, many of the nutrition claims found on food labels were nothing but advertising hype. However, in 1993, the Food and Drug Administration (FDA) and the US Department of Agriculture's Food and Safety Inspection Service (FSIS) published new food labeling regulations that addressed many of the problems. The new labeling regulations helped to restore the honesty of food labels.



Group Nutritionist Note: The key point of this brief review/group discussion is to assess the participant's:

- Knowledge of key label information: 1) label serving sizes, 2) fat grams/label serving, and 3) usual serving compared to label serving.
- Misunderstanding fat-related label information (for example: fat-free = free of fat and calories; and percent fat based is not based on calories, but on weight).

Ask open-ended questions, such as those listed below. If group members can demonstrate a good understanding of fat-related label information, move on.

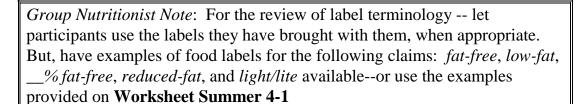
• During your first few weeks in your WHI Dietary Change group we talked about label reading (Session 4) and the key information you needed to look for on the *Nutrition Facts* panel. Think about the last time you went grocery shopping and were wandering down the aisle. Most likely a number of new reduced-fat commercial products caught your attention.



Q/A: (Ask for volunteers.)

- What food label information did you use to decide if the product would fit into your WHI eating pattern?
- What food label information created confusion?

- Even with the new labeling regulations, food labels can still create some confusion. For example, picture yourself at the grocery store reading a fat-free pasta sauce label. It states that the sauce contains 0 grams of fat per serving. However, when you look at the list of ingredients, two of them contain fat--olive oil and Romano cheese.
- Are you wondering why a *fat-free* product contains foods that are considered high fat? If you are, then now is a good time to quickly review how the FDA defines nutrition label claims. As we talk about these label claims, use the label examples provided on **Worksheet Summer 4-1** or real food labels.



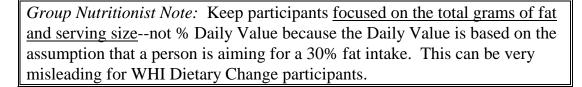
Fat-Free (Sample Label #1 - Worksheet Summer 4-1)

- According to FDA guidelines, if a food has 0.49 grams of fat or less per serving, it can be rounded down to 0 grams, and thus be called *fat-free*. If it has 0.5 to 1.0 gram of fat, it gets rounded up to 1 gram.
- Why does the government allow *fat-free* products to have insignificant or trivial amounts of fat like the pasta sauce example? Because it's impossible to measure fat below a certain amount. So, even though it might be normal to assume that a *fat-free* product contains no fat--like our pasta sauce example, this is not necessarily true.

Q/A: (Ask for volunteers.)

- What have you thought when you've seen the word "fat-free" on commercial foods?
- Another common thought that many people associate with the word *fat-free* is: "Great, no fat, I can eat all that I want." It seems that many people are convinced that if a food is *fat-free*, it must be also be <u>calorie-free</u>. Unfortunately, this is not the case! Even a fat-free food, such as the butter flavored mini popcorn rice cakes shown in Label #1 on **Worksheet Summer 4-1**, has calories.

- Some commercial fat-free foods (e.g., salad dressings, cheeses, dairy foods and margarines) offer a big savings in both fat and calories.
 However, fat-free snacks and bakery products usually contain just as many calories as their regular counterparts. This is because many fat-free products replace the fat with carbohydrates such as simple sugars and food starches.
- If you eat a lot of commercial *fat-free* foods and are gaining weight, you may want to look at your serving sizes. In addition, look at how often you eat these foods.
- The key point to remember is that *fat-free* foods still contain calories. Always check the serving size listed in the *Nutrition Facts* panel and compare it to your own serving. The idea that you can eat whatever you want, in any amount that you want, as long as it's *fat-free*, is a myth.



Low-fat (Sample Label #2 - Worksheet Summer 4-1)

• The nutritional claim *low-fat* is used when a food contains 3 or less grams of fat per serving. The claim *low* can also be used with a number of different nutrients--fat, saturated fat, cholesterol, calories, and sodium.

Q/A:

- What *low-fat* products do you frequently use?
- (Or) What examples of *low-fat* labels do you have to share with the group?

Percent Fat-free (Sample Label #3 - Worksheet Summer 4-1)

• The nutritional term *percent fat-free* can be confusing to consumers. When people see this term they assume that a food listed as 98% *fat-free*, contains 2% of its calories from fat. Unfortunately this is not the case. Food labels base the percent fat on the weight of the food, not on its calories.

• So, to prevent this confusion, commercial foods labeled as *percent fat-free*, must contain no added fat and meet the *low-fat* or *fat-free* criteria based on 100 grams of food. For example, look at Label #4 on **Worksheet Summer 4-1**. This soup is labeled *98% fat-free*, the list of ingredients, which you don't see has no added fat and the soup contains no more than 2 grams of fat per 100 grams of soup.



- Q/A: (Ask for volunteers, if participants have brought labels, ask if anyone has a __% fat-free example)
 - What have you used to evaluate a food labeled 95% or 98% fat-free,?
 - How many of you have been misled by the term 2% milk? (show of hands)

(For example: Think that 2% milk has only 2% of the fat that whole milk has, or that 2% of the calories in 2% milk are from fat).

- By current labeling regulations, 2% milk that is labeled *low-fat* is mislabeled. Think back to the definition of a low-fat food: "one that contains no more than 3 grams of fat." To fit the FDA definition of a low-fat food, 2% milk should not contain more than 3 grams of fat per cup, but it contains 5 grams.
- A new set of FDA regulations will change this situation by the end of 1997. Keep your eyes open for the following name changes:
 - ➤ 2% milk will change to 2% reduced-fat milk
 - ➤ 1% milk will change to *low-fat milk*
 - > Skim or non-fat milk will change to *fat-free milk*.
- Even though the names of milk will change, the actual fat content will remain the same.

Reduced-Fat (Sample Label #4 - Worksheet Summer 4-1)

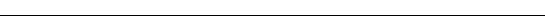
- The term *reduced-fat* means that a commercial food contains at least 25% less fat than the regular or reference food product.
- A product containing the claim *reduced-fat* must be accompanied by information about the comparison food. For example, look at the *reduced-fat* potato chip label provided on **Worksheet Summer 4-1**, Label # 4. The label states: "1/3 less fat than regular potato chips."

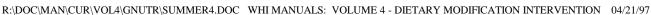
Light/Lite (Sample Label #5 - Worksheet Summer 4-1)

- When the descriptive term *light or lite* is used on a commercial food it can mean two things:
 - The food contains at least 1/3 fewer calories OR 50% less fat than the reference food.
 - ➤ Or, that the <u>sodium</u> content of a low-fat, low-calorie food has been reduced by 50%.
- A *light* claim on a label must also be accompanied by information about the comparison food. For example, look at Label #5 on **Worksheet Summer 4-1.** This *Light* Original Ranch salad dressing is not labeled *low-fat* because it contains more than 3 grams of fat per serving. However, it can be labeled *light* because is contains 50% less fat than the regular salad dressing. It also provides the required comparison information: "50% less fat and 40% fewer calories than our regular dressing."

Q/A: (Ask for volunteers, who have *reduced-fat* labels):

- What are other examples of comparison statements you can find on your *reduced-fat* or *light/lite* food labels?
- Commercial products that are labeled reduced-fat or light/lite have similar challenges. You cannot use the label claim or the comparison information on the label to decide if the food is low in fat. For example, potato chips that contain 50% or even 25% less fat than a regular potato chip might still be more than you want to eat to meet your WHI fat gram goal.
- The key message to remember is: always check the amount of *Total Fat* per serving on the *Nutrition Facts* panel before making your final decision.
- Now that you know how the FDA defines nutrition label claims, your next questions might be:
 - ➤ "How are reduced-fat products made so that they have less fat?"
 - > "What are fat replacers?" and
 - ➤ "How does the FDA evaluate the safety of fat replacers in commercial products?"





A Closer Look at Fat Replacers

PURPOSE: Participants identify ingredients used to replace fat, and how they are regulated.

(Optional)
Lecture/
Group
Activity/
Discussion
(15 minutes)

(Optional Activity)

- ♦ Participants use Worksheets Summer 4-2 and Summer 4-3 to:
- Address safety concerns about fat replacers.
- Identify ingredients used as fat replacers (carbohydrate-, proteinand fat-based).
- **♦** Key point -- participants recognize fat-replacer ingredients commonly used in commercial foods.

<u>Note:</u> Focus on fat replacer ingredients only if participants are interested. To shorten and simplify the session--briefly explain that all reduced-fat commercial products use fat replacers and the FDA has a process to review their safety. Then move on to the WHI Guidelines for fat-free commercial foods and the practice activity.

- Fats contribute many important properties to foods. Besides adding flavor, they tenderize, add volume or bulk, provide smooth textures, stabilize foams, provide structure, improve moisture retention, transport heat rapidly, and provide lubricating action.
- Therefore, when the fat is removed or reduced in a commercial food, some of the properties contributed by fat need to be replaced. This is why manufacturers use different fat replacers.
- What do we mean by a "fat replacer?" Virtually all reduced-fat commercial products use some type of ingredient to replace the fat. It might be something like water (used in salad dressing) or applesauce (used in baked products).
- It might also be another form of carbohydrate, such as a modified food starch or a plant-based gum. The newest ingredients used to replace fat have been developed from protein and from fat itself.

Safety Concerns

• The FDA oversees the approval process of fat replacers. The safety review process has specific regulations.

- The FDA categorizes the substances that it reviews into one of two groups:
 - > GRAS (generally recognized as safe) substances, and
 - > Food additives.
- There is a different approval process for each of these categories. Briefly, the manufacturer as well as the FDA determine the appropriate review process to use for the product. Most of the fat replacers available today are categorized as GRAS substances.

GRAS Category

- GRAS substances do not have to go through rigorous testing before they are used in foods. This is because they are generally recognized as safe by knowledgeable scientists. This "safe" designation usually occurs because the substances have a long history of safe use in foods.
- Many GRAS substances are similar to substances already found in foods.
 Examples of GRAS substances used as fat replacers include: food starches, such as dextrin, and plant-based gums, such as guar gum and carrageenan (seaweed).

Food Additive Category

- Food additives, on the other hand, undergo rigid testing. They must be evaluated for safety and approved by the FDA before they can be marketed. Scientists don't know as much about their use in food products. Products categorized as food additives include substances with no history of use in the food supply. So the FDA requires that they undergo a longer testing and review period before approval.
- To gain FDA approval, manufacturers must test their products, submit the results to the FDA for review, and then wait for agency approval before using their product in a food. Olestra is an example of a fat replacer that the FDA classifies as a food additive.



Group Nutritionist Option: If your participants want to have more details about the FDA approval process for food additives, here is some supplemental information you could use to explain:

The following steps need to be taken in this approval process:

- Manufacturer develops a food additive petition (including safety and scientific data and information on the intended uses) to FDA.
- FDA either accepts the petition and files notice in the *Federal Register*, or refuses the petition and asks for additional information.
- > FDA evaluates the petition and either:
 - --approves the food additive for use as requested by manufacturer; or
 - --approves the food additive and also sets an *acceptable daily intake* or
 - --does not approve the food additive.
- ➤ Manufacturer is then allowed to make and sell the food additive for intended uses and in amounts specified in FDA approval.
- ➤ The FDA may begin continuous monitoring of additive (e.g., olestra) to obtain additional information about consumption, safety and adverse reactions.
- Even after food products with the food additive appear in stores, FDA has authority to re-examine and withdraw approval if they feel it is appropriate at any time.

Types of Fat Replacers



Group Nutritionist Note: Use real labels or the sample ingredient lists provided on **Worksheet Summer 4-3**. Note: <u>If you use real labels</u> --Identify labels that contain carbohydrate-, protein- and/or fat-based fat replacers in their list of ingredients.

Let participants become actively involved as you provide information about the different types of fat-replacers. Give participants time to identify a few of the different types of fat-replacers on their food labels.

• Generally fat replacer substances appear on ingredient lists under their common names rather than their trade names. Therefore, many people may not recognize them as fat replacers.

- Fat replacers may be carbohydrate-, protein- or fat-based substances. The type of fat replacer(s) used in a food product depends largely on the properties of fat that need to be replaced. Let's look at the different types of fat replacers used in commercial products.
- As we talk about each type of fat replacer, I will ask you to use
 Worksheet Summer 4-2 to identify some of the different types of fat
 replacers and Worksheet Summer 4-3 (or real labels) to look for
 examples.

Carbohydrate-Based

- The first type of fat replacer to hit the market in the mid-1960's was carbohydrate-based. Many of the reduced-fat products introduced in recent years continue to use carbohydrate-based fat replacers.
- The main purpose of carbohydrate-based fat replacers is to reduce a food's caloric content. Carbohydrate fat replacers provide 0-4 calories per gram compared to 9 calories per gram that fat has.
- These fat replacers are widely used as thickeners, bulking agents, moisturizers, and stabilizers. They are also heat-stable for uses like baking. However, they do not melt, so they are not suitable for sautéing or frying foods.
- Carbohydrate-based fat replacers are used in a variety of foods: dairy products, sauces, frozen desserts, salad dressings, processed meats, baked goods, spreads, chewing gum and sweets.
- The first page of **Worksheet Summer 4-2** lists the different types of carbohydrate-based fat replacers. They can be starch-based, such as maltodextrins; plant-based gums or gels, such as carrageenan or guar gum; or simple sugar-based, such as polydextrose or sorbitol. The FDA has recognized many of these carbohydrate-based fat replacers as GRAS substances.
- Oatrim(marketed under the brand name of Replace™) is one of the newest carbohydrate-based fat replacers on the market. It is an oat-flour ingredient that has been added to some brands of skim milk to provide a fat-like creaminess.



Group Nutritionist Note: Have participants use **Worksheet Summer 4-3** (or their own sample labels) to identify and circle <u>carbohydrate-based fat</u> replacers.

• *Light Sour Cream* example: modified food starch, guar gum, carrageenan, carob bean gum.

Other fat replacers used in the food include: kosher gelatin (protein-based) and mono- and diglycerides (fat-based).

Use the "Light Sour Cream" sample on the first page of Worksheet
 Summer 4-3 and circle the ingredients that you can identify as possible carbohydrate-based fat replacers. Use Worksheet Summer 4-2 for help with identifying some of the common names used for the different kinds of carbohydrate-based fat replacers.



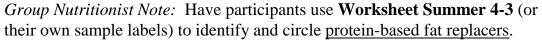
Q/A: (Ask for volunteers)

- What carbohydrate-based fat replacers can you find in the ingredient list for *Light Sour Cream* (or your own label)?

Protein-Based

- Protein-based fat replacers came along in the early 1990's. The simplest protein-based fat replacement strategy is to add milk protein and milk solids to reduced-fat products. Some of the ingredients used to increase milk solids are whey protein concentrates (e.g., Dairy-Lo®) and whey protein isolates. Other protein-based fat replacers include gelatin, isolated soy protein, and microparticulated protein (e.g., Simplesse®).
- Microparticulated protein is created by heating and blending protein at high temperatures. This process develops tiny particles that feel as if they "float over the tongue" to provide a creamy texture. This characteristic makes them well suited to replace the fat in dairy products.
- Egg white and milk-based protein concentrates used as fat replacers are
 only approved for use in frozen dessert-type foods. However, wheybased protein concentrates may also be used in reduced-fat versions of
 butter, sour cream, cheese, yogurt, salad dressing, margarine, mayonnaise,
 baked goods, coffee creamer, soups and sauces.
- Protein-based fat replacers cannot be used in fried foods or most baked goods because the protein will coagulate and lose its creaminess.

- Individuals who have an allergy to egg and/or cow's milk may experience allergic reactions if they eat foods that incorporate egg white and milk-based protein concentrates (e.g., whey protein concentrates, or Simplesse®). If you have allergies, be sure to check the ingredient list.
- Protein-based fat replacers will usually appear on the ingredient list as: gelatin, isolated soy protein, microparticulated egg white and milk protein, or whey protein concentrate.



- *Nonfat Peach Yogurt* example: kosher gelatin, whey protein concentrate Other types of fat replacers used in the food: corn starch
- Use sample # 2--"Nonfat Peach Yogurt" on **Worksheet Summer 4-3** and circle the ingredients that you can identify as possible protein-based fat replacers. Use **Worksheet Summer 4-2** for help with identifying some of the common names used for the different kinds of protein-based fat replacers.



- Can anyone find a protein-based fat replacer on their food label?
- If yes, what words are used to describe it?
- What other carbohydrate-based fat replacers can you find?

Fat-Based

- Emulsifiers made from fat, such as lecithin, mono- and diglycerides and polysorbate, have been used in foods for many years. Manufacturers commonly use emulsifiers in reduced-fat baked goods to retain moisture and add air to increase volume. Emulsifiers also help keep fat dispersed in water-based products (e.g., low-fat commercial salad dressings and margarines).
- Mono- and diglycerides and many of the other emulsifiers are made from fat. However, manufacturers use them in very small amounts. For that reason, when emulsifiers are used to replace fat, the food is usually lower in both fat and calories.
- In 1997, three additional fat-based fat replacers have been used in commercial products: *salatrim* (sal-a-trim), *caprenin* (*ca-pree-nen*), and *olestra*.

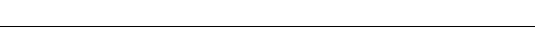
- Salatrim and caprenin are examples of reduced-calorie fat-based fat replacers. They are made out of fatty acids just like fat, but they are formulated in a way that your body doesn't fully digest or absorb them. The FDA has categorized both of these fat replacers as GRAS substances.
- When salatrim is used in a product, the name appears in the list of ingredients. Salatrim can be found for example in Hershey's TM Reduced-fat Baking Chips (semi-sweet chocolate chips). It is also found in other reduced-fat products with chocolate frostings. Caprenin used to be in the Milky Way II candy bar, however this candy bar is currently using a carbohydrate-based fat replacer instead of caprenin.
- Neither salatrim nor caprenin can be used to fry or sauté foods because they are not heat-stable. Both of these fat replacers have GRAS approval from the FDA.

Group Nutritionist Note: The following information has been provided for participants who want more technical details about salatrim and caprenin.

<u>Salatrim</u> is a reduced-calorie fat, composed of glycerol plus 3 short chain fatty acids (acetic, propionic and butyric) and 1 long chain fatty acid (stearic). Hence the acronym name, salatrim--short and long acyl trigyceride molecule). Salatrim is also only partially absorbed by the body and the caloric value is 5 kcal per gram.

<u>Caprenin</u> is a reduced-calorie fat (triglyceride) that contains three molecules of fatty acids (caprylic, capric, and behenic) combined into one structure. Caprylic and capric acids are extracted from coconut and palm kernel oils and behenic acid is extracted from rapeseed oil. Because behenic acid is only partially absorbed by the body, caprenin contributes 5 kcal per gram of fat, instead of 9 kcal.

- Olestra is another fat-based replacer. Olestra is the generic name for a preparation of sucrose polyesters that received FDA approval as a food additive in January 1996.
- Olestra has properties similar to those occurring in fat, but provides zero calories and no fat. It passes through the digestive tract, but is not absorbed into the body. This is due to its unique composition: table sugar chemically combined with fats from vegetable oil.



- Olestra's composition also makes it possible to use in frying. However, as promising as this fat replacer sounds, it also has some drawbacks.
- Studies have shown that olestra may cause intestinal cramps and loose stools in some people. In addition, clinical tests have shown that olestra reduces the absorption of fat-soluble nutrients, such as vitamins A, D, E, K, and carotenoids, when they are eaten at the same time as an olestracontaining product.
- To compensate for any interference with the absorption of fat-soluble vitamins, products with olestra have fat-soluble vitamins A, D, E, and K added. The FDA approval also requires products with olestra to have an information label designating that the product contains olestra and the possible side effects.
- In addition, the FDA has required manufacturers to continue studies on consumption and the long-term effects of olestra. These studies will be reviewed at an FDA Food Advisory Committee meeting in mid-1998.
- The FDA approved olestra's use in pre-packaged ready-to-eat savory (not sweet) snacks such as potato, corn and tortilla chips. In these foods, olestra can be used to replace 100% of the fat.
- OleanTM is the brand name for olestra. You can recognize foods that contain olestra by looking for the brand name OleanTM. At this time (1997), olestra-containing products are only available in a few cities throughout the U.S. So, you may not see OleanTM products in your store, but expect to see them in the near future.
- Several other fat-based fat replacers are in development stages. However, they would all be classified as food additives. This means that they would require FDA approval before being used in foods. One example of a fat-based fat replacer currently under review is esterified propoxylated glycerols, sometimes referred to as *EPGs*.



Group Nutritionist Note: Have participants use **Worksheet Summer 4-3** (or their own sample labels) to identify and circle <u>fat-based fat replacers.</u>

• Fudge Dipped Granola Bar: soy lecithin and salatrim Other types of fat replacers used in the food: date paste, glycerin, polydextrose, modified food starch, apple fiber, sorbitol.

• Use the Fudge Dipped Granola Bar sample #3 on **Worksheet Summer 4-3** and circle the ingredients that you can identify as possible fat-based fat replacers. Use **Worksheet Summer 4-2** for help with identifying some of the common names used for the different kinds of fat-based fat replacers.



Q/A: (Ask for volunteers)

- What fat-based fat replacers can you find on your labels?
- What other types of fat replacers can you identify on the food label (carbohydrate- or protein-based)?
- If you want to read more about fat replacers and their uses, look through your Resource material after our group meeting. Resource Summer 4-1 at the end of your Participant session materials provides a description of the different types of fat replacers.

WHI Guidelines for Commercial Fat-Free Foods

PURPOSE: Participants identify why the fat in commercial fat-free foods needs to be counted in the WHI eating pattern.

Large Group Discussion (10 minutes)

- ♦ Use real labels or Overheads Summer 4-3 and Summer 4-4 to explain the WHI guidelines for counting the fat in :
 - Fat-free commercial foods.
 - Commercial foods with "available fat" claim.
- ♦ Key point -- participants understand the rationale behind WHI guidelines for counting fat in commercial foods.
- Each month more and more fat-free food choices become available at your local grocery store. So, it's a great time to take a look at your use of fat-free commercial foods and decide how best to fit them into a balanced low-fat eating pattern.
- Before you purchase or eat a new fat-free food product, think about how you might answer some of these questions:
 - ➤ How much variety will this food add to your current eating pattern?
 - ➤ What food(s) will this new fat-free food replace? Or will it be extra food?
 - ➤ Is the serving size on the package realistic for you, or would it be easy for you to eat 3 or more servings at a time?
- Fat-free or olestra-containing food products, eaten in moderate amounts, offer a way to add variety to a low-fat eating pattern. However, commercial fat-free products need to be used in combination with other naturally low-fat choices (e.g., fruits, vegetables and grains).



Group Nutritionist Note: Use real labels or **Overheads Summer 4-3** and **Summer 4-4** to provide examples:

- "Trivial sources" of fat in *fat-free* foods,
- A product label with the term "available fat."

Fat-Free Commercial Products

- Most of you are probably aware of the WHI guideline for counting fatfree commercial foods. The reason for this guideline is make you aware that all foods contain some fat, even commercial foods that are labeled fat-free. This guideline asks you to:
 - > Record 1 gram of fat whenever you eat 3 servings of a commercial fat-free food.
- The reason for this guideline is that commercial fat-free foods may not be totally free of fat. As you can see from the fat-free cracker example shown on the overhead (Summer 4-3), even though the fat grams say zero, the ingredient list indicates that there are trivial sources of fat in this product.
- So, using the WHI guideline for counting fat-free commercial foods:

Q/A:

- How many crackers could you eat before you had 3 servings?
- How do you currently keep track of the fat-free commercial foods you eat?

Commercial Foods with "Available Fat"

- A second WHI guideline relates to reduced-fat products using the nutritional term "available fat."
 - ➤ Use the *Total Fat* value when recording fat grams for a commercial product with "available fat."
- Foods that contain reduced-calorie fat replacers, such as salatrim or caprenin may have the term "available" fat on their labels. For example, look at the label for *Fudge-Dipped Granola Bars* (Overhead Summer 4-4).
- The fats that make up reduced-calorie fat replacers are only partially digested. The WHI Dietary Study looks at exposure to fat. So even though these reduced-fat products may provide fewer calories from fat, the body still "sees" the fat.
- For this reason, ignore the "available fat" claims on the *Nutrition Facts* panel. Instead, use the *Total Fat* number when calculating your fat grams.

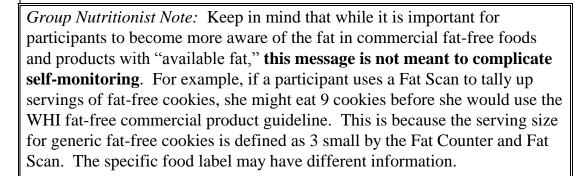




Q/A: (Ask the group):

So, if you ate one Fudge-Dipped Granola Bar:

- How many grams of fat would you record if you ate one granola bar? (Note: The answer is 3 grams).
- There are a number of different products currently on the market that use *salatrim* and have the *available fat* claim. Two examples are: Hershey'sTM Reduced-Fat Baking Chips and Snackwell'sTM Fudge Dipped Granola Bars.
- The makers of salatrim and the FDA are discussing the interpretation of the term *available fat*, but currently there is no agreed upon definition. At this time (Spring '97), the nutrient claim of *available fat* is not authorized by the FDA. However, the FDA has proposed amending the food labeling laws to allow the use of the claim, *available fat*. We will keep you informed if this situation changes.



General Message for Nutritionists and Participants:

- 1. Participants need to become more aware of the serving size on the label and how it compares to their usual serving.
- 2. Unless a participant is frequently using fat-free commercial products OR eating large amounts, don't worry about complicating self-monitoring by having the participant record the extra grams of fat they may occasionally eat.
- 3. On the other hand, if a participant is a frequent and "heavy" user of fatfree commercial products, they may need some individual counseling to point out the need for moderation and/or more accurate recording. For example, the Nutritionist may want to negotiate the "fat-free guideline" for the participant's specific pattern of use.

• Now it's time to apply some of the information we have been talking about. This is your opportunity to evaluate your own label-reading skills using the information we discussed to make decisions about food choices.

Making Low-Fat Choices to Enhance Variety and Moderation

PURPOSE: Participants identify ways they can balance their use of reduced-fat commercial products with natural low-fat foods.

Small or Large Group Activity (10 minutes)

- ♦ Participants use Worksheet Summer 4-4 to apply their label reading knowledge for fat-related claims and ingredients. Activity can be done individually, in pairs, or teams (3-4 people).
 - Set up label reading stations with "mock" label-reading situations.
 - Use real food labels (or samples provided).
 - Use open-ended questions in Summary for general sharing and discussion of activity.
- ♦ Key point -- participants practice label reading skills to help balance the use of reduced-fat commercial foods and naturally low-fat fruits, vegetables, and grains.
- No matter what headlines make the news, nutrition advice remains the same for healthy low-fat eating.
 - ➤ Eat a wide variety of low-fat foods from all food groups: grains, beans/legumes, fruits, vegetables, low-fat dairy, and lean meats, poultry or fish.
 - ➤ Go easy on the fats, oils, and sweets.
 - Remember that fat-free commercial products may not be totally free of fat or calories.

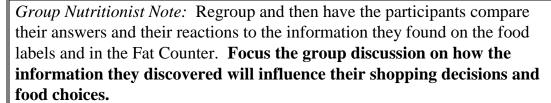


Group Nutritionist Note: Set up "mock" label-reading stations with: food labels, Fat Counters, pencils/pens and magnifying glasses (if necessary). Ask participants to use **Worksheet Summer 4-4** to make food choice decisions. Allow participants time to work in small groups, or individually. Then discuss their thoughts and decisions in the large group.

Note: Nutritionists may modify or add "mock" situations and labels to meet the needs of your participants.

• So, your WHI nutrition goals help you reach and maintain a healthy low-fat eating pattern. However, sometimes it seems easier to talk about making low-fat eating decisions than to actually go to the store, read labels and make choices. We have an activity to help you think about and apply some of the information we discussed today.

- There are a number of "mock" situations described on **Worksheet Summer 4-4**. These situations ask you to make some shopping and eating decisions. As you work though the situations, think of the importance of variety and moderation in a low-fat eating pattern.
- You can work by yourself, with a partner, or as part of a small team.
 Read each "mock" situation. Then use the food labels, a Fat Counter and
 Worksheet Summer 4-4 to respond to the questions and make your decisions.
- Have fun! See how you can apply your label reading facts and skills. After everyone has had a chance to complete all the "mock" situations, we'll regroup and discuss your answers and reactions to this activity.



<u>Use the suggested Summary questions shown below</u> (or similar open-ended questions) to encourage sharing and identify participants who may need additional clarification or help.

Resource materials for **Worksheet Summeer 4-4** activity found in Supplemental Group Nutritionist Resource Materials Section at end of module.



- Q/A: (Ask all participants to participate and share how they plan to use the information they learned about fat-free commercial foods and label reading):
 - What label information was new to you?
 - How will the information you learned about *fat-free* commercial foods change the way you think about, or record these foods?
 - How will you use the label-reading information you received today to help you evaluate the food choices you make?



Group Nutritionist Note: The answers for **Worksheet Summer 4-4** have <u>NOT</u> be included in the Summer, Year 4 Participant materials. We recommend that the Group Nutritionist discuss the answers with participants who miss this session. The participant's responses to the label-reading activity could be discussed when a make-up session is completed (via phone, mail or in person).

SUMMARY

Large Group Discussion (15 minutes)

Discuss issues and identify participants who need more help.

♦ Focus on how this fat-related label information can help participants make decisions about their use of reduced-fat commercial foods.

QA:

- (See open-ended questions suggested above)
- Even though reduced-fat commercial products provide a powerful tool to help you meet your WHI nutrition goals, it is also important to remember the following points when using these products:
 - ➤ Commercial reduced-fat products are not required to meet WHI nutrition goals.
 - Fat-free commercial products may not be free of fat or calories. They are not meant to be a cure-all.
 - ➤ Commercial reduced-fat products need to be blended into an eating pattern that includes a wide variety of foods, particularly fruits, vegetables and grains.
- If you are not sure about your current use or serving size of fat-free commercial products, now is a good time to take another look.
- During the next three months, I would like you to evaluate the different types of fat-free or reduced-fat commercial foods you use. Compare your normal serving sizes to the serving size provided on the label.

- If you are using more than 3 servings of a commercial fat-free food at a meal, take a look at some ways you could:
 - More accurately record your use of these commercial products. Use the WHI guideline for counting commercial fat-free foods (refer to your Fat Counter, page 5).
 - ➤ Consider reducing the serving size of a commercial fat-free food you frequently use.
 - Substitute or alternate your use of commercial fat-free sweets and snacks with other naturally low-fat foods, such as fruits, vegetables and grains.
 - ➤ Use a combination of ideas to increase the variety and lower the fat content of the foods you eat.
 - Add your own ideas.

HOME ACTIVITY

Lecture (5 minutes)

- ♦ Assign 3 Fat Scans (or other self-monitoring method).
- ♦ Suggest activities to work on during the next 3 months. Answer questions.
- In addition, use your Fat Scan (or other self-monitoring method) to keep track of your grams of fat and servings of fruits/vegetables and grains. Please keep at least one Fat Scan (or other tool) each month.

FOOD TASTING

Food Tasting (15 minutes)

♦ Feature reduced-fat food products and/or recipes that feature a reduced-fat food. (See serving size activity suggestion, *Group Nutritionist Note*, pg. 3)

Most Popular Reduced-Fat Products

	Percent of Reduced-Fat Consumers
Skim or low-fat milk	66
Salad dressings, sauces or mayonnaise	60
Cheese/dairy products (yogurt, sour cream)	53
Margarine	50
Ice cream/frozen desserts	43
Chips/snack foods	43
Meat products	41
Cakes/baked goods	40

Source: Calorie Control Council 1996 National Survey

Reasons Why People Use Reduced-Fat Products

	Percent of Reduced-Fat Consumers
To stay in better overall health	79
To reduce fat	69
To eat healthier foods	68
To reduce cholesterol	60
To reduce calories	55
To maintain current weight	54
To maintain an attractive physical appearance	52
To reduce weight	40

Source: Calorie Control Council 1996 National Survey

Counting Fat-Free Commercial Foods

 Record 1 gram of fat when you eat 3 servings of a commercial fat-free food

Cracked Pepper Cracker

Nutrition Facts		
Serving Size 7 crackers (15g) Servings Per Container About 10		
Amount Per Serving		
Calories 60	Calories from Fat 0	
	% Daily Value	
Total Fat 0g		

Ingredients: Enriched wheat flour, sugar, salt, leavening, poppy seeds*, onion powder, emulsifiers (sodium stearoyl lactylate*, soy lecithin*), natural flavor, garlic powder, cracked black pepper

^{*}ADDS TRIVIAL AMOUNT OF FAT

Counting Commercial Foods with Claim "Available Fat"

• Use Total Fat value on Nutrition Facts panel

Fudge-Dipped Granola Bars

Nutrition Facts			
Serving Size	1 bar (28g)		
Servings Per Container 8			
Amount Per Serving			
Calories 110	Calories from Fat 15		
	% Daily Value		
Total Fat 3g**			

** Contains 2.5g of salatrim per serving, only 55% of which is used by the body. Therefore this product contains 1.5g of available total fat.