Summer Session 4

Making Wise Fat-Free Choices

During this session you will:

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

Review of Progress/Success

- **What were some of the fruits and vegetables you ate during the last few months?**
- **What low-fat methods did you use to prepare and serve your fruits and vegetables?**

Taking Stock

As part of the Dietary Study, you have been reducing the amount of fat in a number of different ways. One of your choices might include the use of reduced-fat commercial products, such as nonstick cooking spray or fat-free salad dressings.

During the past four years, there has been a rapid growth in the number of reduced-fat products in the market place. This increase has occurred because of the development and use of a wide variety of ingredients known as fat replacers.

Take a moment to review the reduced-fat commercial products you currently use. Think about some of the reasons you use (or do not use) these products.

- **What reduced-fat commercial foods do you frequently use?**
- **What are some of your reasons for using these products?**
- **How have reduced-fat commercial products helped you reach and maintain your WHI fat gram goal?**

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. How does your use of reduced-fat commercial products compare to other people in the United States?

Tables 1 and 2 below report the results of the 1996 Calorie Control Council National Survey. Table 1 shows reduced-fat products that were the most popular with consumers. Table 2 reports the main reasons why consumers used reduced-fat products.

Table 1:

Reduced-Fat Products Used	%
Skim or low-fat milk	66
Salad dressings/sauces/ mayonnaise	60
Cheese/dairy products	53
Margarine	50
Ice cream/frozen desserts	43
Chips/snack foods	43
Meat products	41
Cakes/baked goods	40

Table 2:

Reasons People Use Reduced-Fat Products	%
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

Reducing Fat Without Using Reduced-Fat Commercial Products

Some of you might be wondering, "Do I have to use these commercial products in order to meet my WHI fat gram goal?"

Reduced-fat commercial foods do help add variety to a low-fat eating pattern.

However, you can reach your WHI fat gram goal without using these commercial products. There are a number of non-commercial foods that are naturally low in fat, such as fruits, vegetables, grains, beans and legumes.

In addition, there are a variety of different methods you can use to lower the fat content of high-fat foods. For example, you could eat smaller servings, substitute a lower-fat food, or use a variety of low-fat preparation and cooking methods.

You could even use low-fat recipes, such as making your own yogurt cheese (recipe in Session 3 - first year materials).

- **What are some of the methods you use to reduce your fat without using reduced-fat products?**

As you see, you do not need to use reduced-fat commercial products to reach your WHI nutrition goals. The choice is yours to make.

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 answer these questions, it's important that you understand the information provided on food labels.

Looking At Nutrition Claims on Reduced-Fat Products

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 United States Department of Agriculture (USDA) published new food labeling regulations. These new regulations addressed many of the problems and helped restore the honesty of food labels.

Think about the last time you went grocery shopping. As you wandered around the store, did any new reduced-fat commercial foods attract your interest?

Think about the last time you picked up a reduced-fat product.

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

(*Note:* If you need to review label reading, look at the information in Session 4 - first year materials).

Even with the new label regulations, food labels can still create some confusion. For example, picture yourself at the grocery store, reading a fat-free pasta sauce label. It lists 0 grams of fat per serving, but the ingredient list contains olive oil and Romano cheese.

Are you wondering how a fat-free product can contain foods that are

fat? If you are, then it's a good time to review how the FDA defines nutrition label claims. Fill in Worksheet Summer 4-1 (pgs. 17-19) as you read this section on nutrition claims.

Fat -Free

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 grams of fat, it gets rounded up to 1 gram.

Why does the government allow fat-free products to have minor 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, this is not necessarily true.

- **What have you thought when you've seen the word "fat-free" on commercial foods?**

Another common thought that many people associate with the term *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's also calorie-free. Unfortunately, this is not the case! Even a fat-free food, such as the butter flavored mini popcorn rice cakes showed in Label #1 on Worksheet Summer 4-1, has calories.

Some commercial fat-free products (e.g., salad dressings, cheeses, dairy foods and margarines) offer a big savings in both fat and calories. However, fat-free snack foods and bakery products usually contain just as many calories as their regular counterparts. A lot of the calories come from sugar and other carbohydrates.

If you eat a lot of commercial fat-free foods and are gaining weight, you may want to look at your serving sizes. Also, look at how often you eat fat-free commercial products.

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

The nutritional claim *low-fat* is used when a food contains 3 or less grams of fat per serving. For an example, look at the tortilla chip label on Worksheet Summer 4-1 (Label #2). By the way, the claim "low" can also

be used with a number of different nutrients such as fat, saturated fat, cholesterol, calories, and sodium.

- **What low-fat commercial foods do you currently use?**

Percent Fat-Free

The nutritional term *percent fat-free* can be confusing. When people see this term they assume that a food listed as 98% fat free, contains 2% of its calories from fat. Unfortunately 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 the cream of chicken soup example on Worksheet Summer 4-1 (Label #3). It is labeled 98% fat-free, has no added fat and contains no more than 2 grams of fat per 100 grams of soup.

- **What label information have you used to evaluate a food labeled 95% or 98% fat-free?**

- **Have you been misled by the label "2% milk?"**

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 low-fat, 2% milk should not contain more than 3 grams of fat per cup, but it contains 5 grams! A new set of regulations that apply to milk will correct 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 nonfat milk will change to fat-free milk**

Even though the names will change, the actual fat content of the milks will remain the same.

Reduced-Fat

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 comparison statement on the reduced-fat potato chips (Label # 4 on Worksheet Summer 4-1). It states: "1/3 less fat than regular potato chips."

Light/Lite

When the descriptive terms *light* or *lite* are used on a commercial food it can mean two things: The food contains <u>at least 1/3 fewer calories</u> OR <u>50% less fat</u> than the reference food. The claim "light" could also refer to the sodium content of a low-fat, low-calorie food that has been reduced by 50%.

A *light* claim on a label must also be accompanied by information about

the comparison food. For example, the comparison statement on the Light Ranch salad dressing (Label #5 on Worksheet Summer 4-1) states: "50% less fat and 40% fewer calories than our regular dressing."

- **What other examples of comparison statements can you find on your *reduced-fat* or *light* labels?**

Commercial products that are labeled reduced-fat or light/lite have similar challenges. You cannot use the label claim or the comparison information to decide if the food is low in fat.

For example potato chips that contained 50% or even 25% less fat than regular potato chips might still have more fat than you want to eat to meet your WHI fat gram goal.

The key message 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?"**

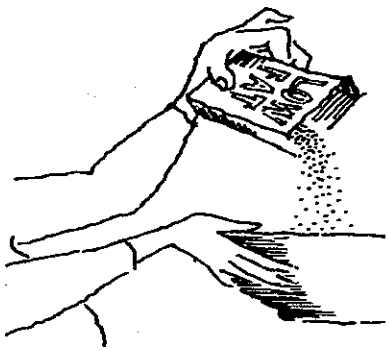
Closer Look at Fat Replacers

Fats contribute many important properties to foods. Besides adding flavor, they tenderize, add volume or bulk, provide smooth textures, provide structure, improve moisture retention, transport heat rapidly, and provide creaminess.

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 dressings) or applesauce (used in baked products).



Fat replacers could also be other forms of carbohydrate, such as a modified food starch or a plant-based gum. Both of these carbohydrates have a long history of use as fat replacers. The newest fat replacers have been developed from protein and from fat itself.

Safety Concerns

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

The FDA categorizes the substances that it reviews into 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 a specific product. Most of the fat replacers available today are categorized as GRAS substances.

GRAS Category

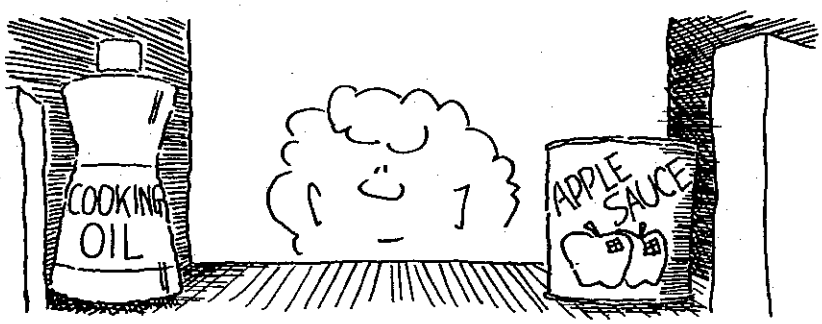
GRAS substances do not have to go through rigorous testing before they are used in foods. This is because they are recognized as safe by knowledgeable scientists. This "safe" designation usually occurs because the substances have a long history of safe use in foods.

Many GRAS substances are similar to substances already found in foods. Examples of GRAS substances used as fat replacers include: food starches, such as dextrins and plant-based gums, such as carrageenan (seaweed) and guar gum.

Food Additive Category

On the other hand, food additives undergo rigorous 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. Ingredients categorized as food additives include substances with no history of use in the food supply. So, the FDA requires that these substances undergo a longer testing and review period before approval.

To gain FDA approval, manufacturers must test their products and submit the results to the FDA for review. Then they have to wait for agency approval before using their product in foods. *Olestra* is an example of a fat replacer that the FDA classifies as a food additive.



Types of Fat Replacers

Generally, fat-replacer substances appear on ingredient lists under their common names rather than their trade names. Thus, most 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 take a look at the different types of fat replacers used in commercial products.

Carbohydrate-Based
The first type of commercial 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. 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 (pg. 20) provides a list of different types of carbohydrate-based fat replacers. They can be starch-based, such as maltodextrins; plant-based gums or gels, such as pectin or guar gum; or simple sugar-based, such as polydextrose or sorbitol.

Oatrim (marketed under the brand name of Replace™) is one of the newest carbohydrate-based fat replacers. It is an oat-flour ingredient that has been added to some brands of skim milk to provide a fat-like creaminess.

Use your own labels or the Sample Label #1 on Worksheet Summer 4-3 (pgs. 22) and Worksheet Summer 4-2 to identify carbohydrate-based fat replacers. Some examples are already circled on the worksheet to get you started. However, there are many more carbohydrate-based fat replacers to identify. Circle the examples you find.

- **What carbohydrate-based fat replacers can you find on your labels?**

Protein-Based
Protein-based fat replacers came along in the early 1990s. The simplest forms of protein-based fat replacers used are milk protein and milk solids. Some examples include: whey protein concentrates and whey protein isolates.

The first page of Worksheet Summer 4-2 provides a list of different types of protein-based fat replacers. This type of fat replacer usually appears on the ingredient list as: *gelatin, isolated soy protein, whey protein concentrate and microparticulated egg white and milk protein.*

Microparticulated protein is created by heating and blending protein at high temperatures. This process creates tiny particles that feel as if they "float over the tongue" to provide a creamy texture.

Egg white and milk-based protein concentrates are used to replace the fat in frozen desserts. However, whey-based protein concentrates are also used in reduced-fat versions of dairy foods, salad dressings, baked goods, soups and sauces.

Protein-based fat replacers cannot be used in fried foods or most baked goods because high heat makes the proteins congeal and lose their creamy texture.

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, such as whey protein concentrates. If you have allergies, be sure to check the ingredient list.

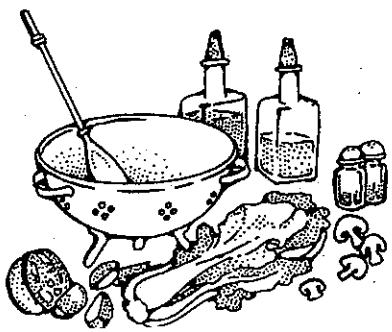
Use your own labels or the Sample Label #2 on Worksheet Summer 4-3 and Worksheet Summer 4-2 to identify protein-based fat replacers. Circle the examples you find.

- **What protein-based fat replacers can you find on your labels?**

Fat-Based

The second page of Worksheet Summer 4-2 provides a list of different types of fat-based fat replacers.

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 keep the fat dispersed in water-based products, such as low-fat salad dressings and margarines.

Mono- and diglycerides and other emulsifiers are made from fat, but manufacturers can 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.

As of 1997, three additional fat-based fat replacers have been approved for use by the FDA: *salatrim, caprenin* 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 put together in a way that your body doesn't fully digest or absorb. The FDA has categorized both of these fat replacers as GRAS substances.

Salatrim can be found in reduced-fat chocolate

baking chips and other reduced-fat products with frosting. Caprenin is not currently used in commercial products. Neither salatrim nor caprenin are heat-stable, so they cannot be used to fry or sauté foods.

Olestra is another fat-based fat replacer. Olestra is the generic name for a preparation of sucrose polyesters. It 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 make-up: 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 olestra-containing product.

To compensate for any interference with the absorption of fat-soluble vitamins, products with olestra are required to have fat-soluble vitamins A, D, E, and K added. The FDA approval also requires products with olestra to have an information label indicating 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.

Olean™ is a brand name of olestra. You can recognize foods that contain olestra by looking for the brand name Olean™ listed on the label. Currently, the FDA has approved olestra's use in pre-packaged ready-to-eat savory (not sweet) snacks such as potato, corn and tortilla chips.

Several other fat-based fat replacers are in development stages. However, they would all be classified as food additives by FDA's safety review process. This means that they would require FDA approval before being used in foods.

Use your own labels or the Sample Label # 3 on Worksheet Summer 4-3 and Worksheet Summer 4-2 to identify fat-based fat replacers. Circle the examples you find.

- **What fat-based fat replacers can you find on your labels?**

If you want to read more about fat replacers and their uses, look at Resource Summer 4-1 (pgs. 32-34) at the end of your Participant session materials. It provides a description of the different types of fat replacers.

WHI Guidelines for Commercial Fat-Free Foods

Each month, a greater number of fat-free products 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.

Here are a few questions to help you think about commercial fat-free foods:

- **How much variety will this new fat-free food add to my current WHI eating pattern?**
- **What food(s) will this new fat-free food replace? OR will it be extra food?**
- **Is the label serving size realistic for me (or would it be easy for me to eat 3 or more servings at a time)?**

Fat-free commercial products, eaten in moderate amounts, offer a way to add variety to a low-fat eating pattern. However, these need to be used in combination with other naturally low-fat choices (e.g., fruits, vegetables and grains).

Fat-Free Commercial Products

Most of you are probably aware of the WHI guideline for counting fat-free commercial products:

- **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. For example, look at the ingredient list for the fat-free cracker shown be-

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	0%

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

low. Even though the label lists the grams of fat as "0 grams" for 7 crackers, the ingredient list indicates that there are trivial sources of fat.

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.*"**

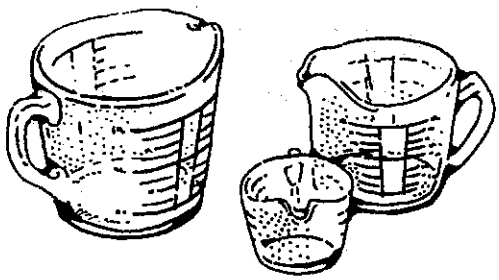
Nutrition Facts	
Serving Size 1 bar (28g)	
Servings Per Container About 8	
Amount Per Serving	
Calories: 110	Calories from Fat 15
	% Daily Value
Total Fat 3g**	
** Contains 2.5 g of Salatrim per serving, only 55% of which is used by the body. Therefore this product contains 1.5g of available total fat.	

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 granola bar label shown below. It contains salatrim.

The fats that make up reduced-calorie fat replacers such as salatrim are only partially digested. However, 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. So, if you ate one granola bar, you would record 3 grams of fat.

The makers of salatrim and the FDA are discussing the interpretation of the term "available fat." 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 "available fat" claim. We will keep you informed if this situation changes.



Making Low-Fat Choices to Enhance Variety and Moderation

No matter what headlines make the news, your WHI nutrition goals help you reach and maintain a healthy low-fat eating pattern. They provide the basic nutrition advice you need for healthy low-fat eating. Some additional tips are:

- **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.**

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 that will help you use some of the label information you've learned in this session. It will also help you begin to evaluate some of your fat-free commercial food choices.

There are a number of "mock" situations described on Worksheet Summer 4-4 (pgs. 24-26). These situations ask you to make some shopping and eating decisions. As you work through the situations, think of the importance of variety and moderation in your low-fat eating pattern.

When you are working through the "mock" situations, use the following:

- **Your own food labels or the samples provided**
- **Your Fat Counter**
- **Worksheet Summer 4-4**

Have fun! See how you can apply your new label reading facts and skills.

Summary

Reduced-fat commercial products provide a powerful tool to help you meet your WHI nutrition fat gram goals. However, it is important to remember the following points when using reduced-fat commercial products:

First, commercial reduced-fat products are not required to meet WHI nutrition goals.

Second, fat-free commercial products may not be free of fat or calories.

And finally, reduced-fat products need to be blended into an eating pattern that includes a wide variety of foods: fruits, vegetables, grains, low-fat dairy products, beans and legumes, and lean meat, poultry or fish.

Resource Summer 4-4 (pg. 37) at the back of this session provides some tips to help you cook with fat-free Home Activity

Questions for Thought:

- **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

Areas to work on during the next three months:

- **During the next three months, 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.**
- **Look at the different types of reduced-fat commercial foods you currently use. Compare your normal serving sizes to the serving sizes provided on the label.**
- **If you are using more than 3 servings of the same (or different) fat-free foods at a meal, take a look at some ways you could:**
  - More accurately record your use of fat-free commercial products. Be sure to 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 at your meals and snacks.
  - Add your own ideas.

Evaluation:

Ways I have modified my use of fat-free commercial products:

_____

_____