

# VIRGINIA COOPERATIVE EXTENSION SERVICE

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## Lesson 4 Diet, Exercise, and Behavior Modification Weight Control by Mail

Dear Weight Control Member:

Now that you've learned something about nutrition, menu planning, and caloric intake you'd probably like to know how you can use all that information in preparing meals for yourself and your family. In this lesson we will talk about the principles of low calorie food preparation. I will give you hints and suggestions on how you can use your "old standby" recipes to prepare the same delicious meals you are used to preparing but with lower calorie content. I have not included many low calorie recipes per se. You can find many cookbooks specializing in low calorie foods in your local bookstore. Popular magazines often feature low calorie recipes. Try to find some of these. How about asking your friends? They're probably interested in searching out low calorie recipes too and would like to share with you. How about sharing your finds with us in the Extension Office? Happy hunting.

Attached to this lesson are seven copies of a "Record of Eating Habits" (348-212). Use these forms to record all your food intake for the next seven days. Record one day's intake on each sheet. Keep these records. We will analyze them next week.

I am returning the RECALL worksheet and computer printout for many of you with this lesson. For those of you who have not received the RECALL worksheet this week, it will be returned to you next week. When you do receive the RECALL printout, study it. I have made some comments on it. Read them. Examine your present nutrient intake. Can you see where it can be improved? Last week we discussed food sources of the major nutrients. Do you need to include more of some particular food in your diet? Go over last week's lesson and the computer printout and see how you can best meet your total nutrient needs.

Sincerely,

Extension Agent

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VPI 1. Low Calorie Cooking. Low calorie cooking must become second nature if weight loss is to be permanent. If, after losing weight, you return to a steady diet of high calorie foods without increasing activity, weight gain will result.

Low Calorie Eating (348-897), attached to this lesson, may be used as a background to study meal planning, serving size, and preparation methods. You will want to keep this publication for further study on your own.

Each of the six food groups in the DEB diet plans consists of foods of varying calorie content. Guidelines for keeping meals low calorie can be helpful.

- a. Here are some general "tips" for Low Calorie Cooking for the MILK GROUP. Look at the difference in caloric value of milk with various amounts of butterfat.

<u>MILK, 1 cup, 8 fluid ounces</u>	<u>CALORIES</u>
Skim, less than 1% fat	80
Reconstituted nonfat dry	80
Partially skimmed, 2% fat	145
Whole, 3.5-4% fat	170

Drink skim milk or buttermilk (made with skim milk) rather than whole milk.

For cooking, use reconstituted nonfat dry milk.

- b. Below are some general "tips" for Low Calorie Cooking for the MEAT GROUP. Methods of cooking meats greatly affect the number of calories per serving. Cook meat, poultry, and fish by roasting, broiling, or charcoaling rather than frying. Lemon juice, tomato juice, herbs, and spices can be used to add flavor and variety. Cook eggs in the shell or by poaching. Fry or scramble only if you use some of the planned fat allowance on your diet plan. The chart below demonstrates the difference in calorie value of chicken cooked by various methods. There are differences in the amount of tissue fat in the broiler-fryer and in the roasting chicken. For example, the roaster is an older fowl and has more fat and calories per ounce of raw weight than a broiler-fryer. However, even with this initial difference, the cooked fryer has more calories than a comparable amount of chicken broiled or roasted.

Chicken, 1 oz.\*

\*skinless & boneless weight after cooking

<u>Type</u>	<u>How Cooked</u>	<u>Calories</u>
Broiler-fryer	Broiled	40
Roaster	Roasted	55
Broiler-fryer	Fried	60

Differences between lean cuts of meat and cuts with more intrinsic fat or marbling (NOT separable fat) are seen in the next chart.

Beef, 1 oz.\*  
\*separable lean meat weight after cooking

<u>Marbling</u>	<u>Cut</u>	<u>How Cooked</u>	<u>Calories</u>
Less	Round	Broiled	55
	Arm Roast	Pot Roasted	55
	Flank	Braised	55
More	Chuck Roast	Braised	60
	T-Bone	Broiled	60
	Rib	Roasted	70

Select lean cuts of meat and cut off all visible fat from meat before cooking. Unless a planned fat exchange is used, do not cook with added fat. Since regular ground hamburger is high in fat, it is suggested that you choose round steak or another lean cut and ask the butcher to first trim the fat and then grind it for you.

Suit the cooking method to the cut. Not all very lean cuts can be broiled satisfactorily. Conversely, cuts suitable for broiling such as steaks have a high fat content.

Remove the skin from poultry before eating. Attached to the skin are layers of fat. Better yet, remove poultry skin and underlying fat before cooking. This way less fat drips through the meat, and you consume less. This works well in mixed dishes. You may want to cover plain skinned chicken with foil for at least part of the cooking time to prevent moisture loss.

Look at the additional calories added when poultry skin is eaten.

1 oz. Boneless, Roasted Chicken

Skinless = 50 calories

With skin = 70 calories

Buy water-packed canned fish or rinse oil-packed fish with hot water before using. There is a calorie difference between water-packed, drained solids, and oil-packed tuna.

Tuna, 1/4 Cup

<u>Type</u>	<u>How Canned</u>	<u>Calories</u>
Solids and Liquid	Water-pack	70
Drained Solids	Oil-pack	115
Solids and Liquid	Oil-pack	165

In the Six Food Group Diet Plan used for DEB, one ounce of lean meat is assumed to have ABOUT 55 calories, contributed by 7 grams of protein and 3 grams of fat. Meats listed as medium-fat contain approximately 75 calories and meats listed as high-fat contain approximately 100 calories per serving size.

Study the lower fat and calorie value of fish and poultry compared to red meats and beans as illustrated below.

<u>1 oz. Boneless Meat Servings</u>	<u>Total Calories</u>	<u>Calories from Fat</u>
Broiled Skinless Chicken	40	10
Broiled Halibut	50	20
Broiled Sirloin (Lean)	60	25
Roasted Ham (Lean)	60	25
White beans, cooked ( $\frac{1}{2}$ cup)	120	5
cooked w/pork, molasses and tomato sauce	190	55

You can see that beans are much higher in calories per  $\frac{1}{2}$  cup portion compared to 1 oz. servings of meat. However, beans are placed in the Meat Group because they contribute protein. The extra calories come from carbohydrate and that is why you must omit 1 bread exchange when you use them. Also, remember any additional ingredients used in preparation must be counted in as well.

- c. There are several low calorie methods for serving foods from the FRUIT GROUP.

Fresh, unsweetened canned, unsweetened frozen, or juice-packed fruits will be lower in calories than those packed in heavy syrups. Dried fruit contains the same number of calories as fresh (per unit) but, being dehydrated, has a smaller volume than fresh. If water- or juice-packed fruit is not available, then you could perhaps buy fruit in a light syrup and rinse the syrup off. Read the label on canned fruit to determine whether a water-pack, juice-pack, or sugar-syrup pack was used. The words dextrose, dextrin, sucrose, maltose, and corn syrup indicate that sugar has been added.

- d. VEGETABLE GROUP

A serving of vegetables is  $\frac{1}{2}$  cup and contains approximately 25 calories.

Avoid adding calories to vegetables by cooking them in water, consomme, bouillon, or clear broth. Do not add fat, unless you have planned for it. For example, to fix a 10 oz. package of frozen vegetable (about  $3\frac{1}{2}$  cup servings) you may add 3 planned fat exchanges equal to one tablespoon of margarine. Tomato juice or low calorie salad dressings in small amounts will add variety and flavor.

Below are some examples of vegetable and/or fruit combinations that might be used to add variety to the diet.

Tomato juice with lemon or bouillon  
 Carrots and brussels sprouts  
 Carrots and unsweetened pineapple chunks  
 Cooked cabbage and tomatoes  
 Eggplant, zucchini, tomatoes with  
     chopped onion and green pepper  
 Green and yellow beans  
 Zucchini and yellow summer squash

- e. What about low-calorie tips for the BREAD GROUP?

The bread list includes some vegetables such as beans, corn, potatoes, and winter squash, which have a greater amount of carbohydrate. Look at the caloric value of a 1/2 cup potato prepared in various ways.

One Small Potato  
(about 1/2 cup)

<u>Method of Preparation</u>	<u>Calories</u>
Baked	70
Mashed, with 2 Tbsp. whole milk	90
Mashed, with 2 Tbsp. whole milk and 1 Tbsp. butter	190
Fried, 1 Tbsp. fat	170
French fried (about 8 pieces 2" x 1/2" x 1/2")	125

The bread and cereal group does contribute small but important amounts of iron, B-vitamins, and protein to the diet. Try a variety of breads such as whole wheat, rye, raisin, etc.

Quick breads have more carbohydrate and fat and thus more calories per serving than yeast breads. Both quick breads and yeast breads have about two grams of protein per serving.

Use only planned fat exchanges for seasoning or as a spread.

- f. Foods from the FAT GROUP can be included in a calorie controlled diet. Use planned fat allowances for seasoning, spreads, salads, or cooking. Salad dressings have less fat than mayonnaise. Therefore, 1 fat exchange is 1 tablespoon of salad dressing or 1 teaspoon of mayonnaise. Remember to measure fat exchanges. You may want to measure and exhibit the following fat exchanges:

- |                          |                             |
|--------------------------|-----------------------------|
| 1 teaspoon mayonnaise    | 1 tablespoon salad dressing |
| 1 teaspoon vegetable oil | 1 teaspoon butter           |

All fatty foods are high in calories. Fat intake should be reduced but not eliminated on a weight reduction diet.

For food preparation, try non-stick cookware or spray coatings for cookware in place of fat.

- g. Items from the FREE FOODS category can be used in food preparation without regard to caloric value.

- |             |                              |              |
|-------------|------------------------------|--------------|
| Coffee      | Gelatin, unsweetened         | Pepper       |
| Tea         | Lemon juice                  | Spices       |
| Soda Water  | Mustard                      | Herbs        |
| Clear Broth | Pickles, sour or dill        | Onion juice  |
| Bouillon    | Noncaloric sugar substitutes | Onion powder |
| Consomme    |                              | Vinegar      |

2. Adapting Your Favorite Recipes. Look at the Worksheet "Determination of Food Exchanges from a Recipe" (348-340) attached to this lesson. Below are some examples of how to determine the number of food exchanges from a recipe.

<u>Chili</u>	<u>Number of Exchanges</u>	<u>Calories in one Exchange</u>	<u>Total Calories</u>
1 pound ground lean beef	12 Meat* + 6 Fat	55 + 20	930
2 tablespoons minced onions	Free	-	-
1 teaspoon monosodium glutamate	Free	-	-
½ teaspoon garlic salt	Free	-	-
2 cups (1 lb. can) tomatoes	4 Vegetable	25	100
1 tablespoon chili powder	Free	-	-
2 cups (1 lb. can) kidney beans, drained	4 Meat + 4 Bread	55 + 70	500
			<u>1500</u>

Brown beef and onions in non-stick pan. Drain off fat. Combine with other ingredients. Simmer until thickened. Makes 6 servings, approximately 1 cup/serving.

1 serving =  $16/6 = 2\frac{1}{2}$  Meat;  $2/3$  Bread;  $1500/6 = 250$  calories.

\*Meat exchanges are calculated on cooked weight. About 1 ounce of weight is lost per 4 ounces of raw meat when cooking. Therefore, one pound of lean beef will lose about 4 ounces of weight when cooked.

<u>Apple Muffins</u>	<u>Number of Exchanges</u>	<u>Calories in one Exchange</u>	<u>Total Calories</u>
3 small apples (2½)	3 Fruit	40	120
3 eggs	3 Meat	75	225
Sugar substitute equal to			
3 tablespoons sugar	Free	--	--
½ teaspoon vanilla	Free	--	--
¼ teaspoon cloves	Free	--	--
¼ teaspoon cinnamon	Free	--	--
3 slices bread	3 Bread	70	210
			<u>555</u>

Grate apples coarsely. Set aside. Beat eggs, sugar substitute, vanilla, and spices. Crumble bread into egg mixture and mix well. Blend in grated apples. Spoon mixture into 6 non-stick muffin pans. Bake at 375° F. for about 45 minutes. Let cool before removing from pan. Makes 6 servings.

1 serving =  $3/6 = \frac{1}{2}$  Meat;  $3/6 = \frac{1}{2}$  Fruit;  $3/6 = \frac{1}{2}$  Bread;  $555/6 = 95$  calories.

<u>Fruit Flavored Milk</u>	<u>No. of Exchanges</u>	<u>Calories</u>
1/3 cup nonfat dry milk	1 Milk	80
½ cup unsweetened orange juice	1 Fruit	40
		<u>120</u>

Pour juice into bowl and place milk powder on surface. Beat until all milk is dissolved. Chill. Makes 1 serving.

1 serving = 1 Milk; 1 Fruit, 120 calories

<u>Whipped Nonfat Dry Milk</u>	<u>Exchanges</u>	<u>Calories</u>
½ cup <u>ice</u> water	Free	--
1/3 cup nonfat milk powder	1 Milk	80
2 teaspoons lemon juice	Free	--
Sugar substitute equal to 2 tablespoons sugar	Free	--

Place ice water and lemon juice in small deep bowl which has been chilled. Sprinkle dry milk on top. Beat until stiff enough to hold soft peaks with a rotary beater (about 15 minutes) or use an electric mixer. Fold in sugar substitute. Makes 8 servings (2 tablespoons/serving).

1 serving = 1/8 Milk; 10 calories. It is not necessary to count exchanges or calories if having only one serving.

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<u>Zero Salad Dressing</u>	<u>No. of Exchanges</u>	<u>Calories</u>
1 cup tomato juice	2 Vegetable	50
½ cup lemon juice	Free	--
2 tablespoons finely chopped onion	Free	--
Salt and pepper to taste	Free	--
		50

For variety add chopped parsley, diced green pepper, dill seed, horseradish, or other seasonings.

Combine ingredients and simmer for 5 minutes. Pour into a clean jar with a lid. Refrigerate. Use on raw vegetable salads or heat to serve on meats. Makes 7 servings (3 tablespoons/serving)

1 serving = too few calories to count (7 calories)

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### 3. Summary

Objectives Checklist--You should now be able to:

- \_\_\_ 1. Identify those low calorie cooking techniques for each of the six food groups.
- \_\_\_ 2. Explain how decreasing use of sugar and fat will assist in weight reduction.
- \_\_\_ 3. Calculate calories and food groups in recipes.

Activities Checklist--

- \_\_\_ 1. Continue to follow diet plan and keep weight graph.
- \_\_\_ 2. Determination of Food Exchanges from a Recipe. RETURN
- \_\_\_ 3. Fill-in "Record of Eating Habits" (348-212) for one week. KEEP