

| Food Exchange List | |
|---|----------------|
| CEREALS/GRAINS/PASTA = 15 grams of carbs/3 Protein/80 calories | |
| *Bran cereals, concentrated (such as Bran Buds, All Bran) | 1/3 cup |
| *Bran cereals, flaked | 1/2 cup |
| Bulgur (cooked) | 1/2 cup |
| Cooked cereals | 1/2 cup |
| Cornmeal (dry) | 2 1/2 tbsp |
| Grape Nuts | 3 tbsp |
| Grits (cooked) | 1/2 cup |
| Other ready-to-eat, unsweetened (plain) cereals | 3/4 cup |
| Pasta (cooked) | 1/2 cup |
| Puffed cereal | 1 1/2 cups |
| Rice, white or brown (cooked) | 1/3 cup |
| Shredded wheat | 1/2 cup |
| *Wheat germ | 3 tbsp |
| DRIED BEANS/PEAS/LENTILS = 15 grams of carbs/3 Protein/80 calories | |
| *Beans and peas (cooked) (such as kidney, white, split, black-eyed) | 1/3 cup |
| *Lentils (cooked) | 1/3 cup |
| *Baked beans | 1/4 cup |
| STARCHY VEGETABLES = 15 grams of carbs/3 Protein/80 calories | |
| *Corn | 1/2 cup |
| *Corn on the cob, 6 in. | 1 long |
| *Lima beans | 1/2 cup |
| *Peas, green (canned or frozen) | 1/2 cup |
| *Plaintain | 1/2 cup |
| Potato, baked 1 small | (3 oz) |
| Potato, mashed | 1/2 cup |
| Squash, winter (acorn, butternut) | 3/4 cup |
| Yam, sweet potato | 1/3 cup |
| BREAD = 15 grams of carbs/3 Protein/80 calories | |
| Bagel 1/2 | (1 oz) |
| Bread sticks, crisp, 4 in. long x 1/2 in. | 2 (2/3 oz) |
| Croutons low fat | 1 cup |
| English muffin | 1/2 |
| Frankfurter or hamburger bun | 1/2 (1 oz) |
| Pita, 6 in. across | 1/2 |
| Plain roll, small | 1 (1 oz) |
| Raisin, unfrosted | 1 slice |
| *Rye, pumpernickel | 1 slice (1 oz) |
| White (including French, Italian) | 1 slice(1 oz) |
| Whole wheat | 1 slice |

| CRACKERS/SNACKS = 15 grams of carbs/3 Protein/80 calories | |
|--|--------------------|
| Animal crackers | 8 |
| Graham crackers, 2 1/2 in. square | 3 |
| Matzoh | 3/4 oz |
| Melba toast | 5 slices |
| Oyster crackers | 24 |
| Popcorn (popped, no fat added) | 3 cups |
| Pretzels | 3/4 oz |
| Rye crisp (2 in. x 3 1/2 in.) | 4 |
| Saltine-type crackers | 6 |
| Whole-wheat crackers, no fat added (crisp breads such as Finn, Kavli, Wasa) | 2-4 slices(3/4 oz) |
| STARCHY FOODS PREPARED WITH FAT = 15 grams of carbs/3 Protein/80 calories (count as 1 starch/bread serving, plus 1 fat serving) | |
| Biscuit, 2 1/2 in. across | 1 |
| Chow mein noodles | 1/2 cup |
| Corn bread, 2-in. cube | 1 (2 oz) |
| Cracker, round butter type | 6 |
| French-fried potatoes (2 in. to 3 1/2 in. long) | 10 (1 1/2 oz) |
| Muffin, plain, small | 1 |
| Pancake, 4 in. across | 2 |
| Stuffing, bread (prepared) | 1/4 cup |
| Taco shell, 6 in. across | 2 |
| Waffle, 4 1/2 in. square | 1 |
| Whole-wheat crackers, fat added (such as Triscuits) | 4-6 (1 oz) |

II. Meat List

Each serving of meat and substitutes on this list contains about seven grams of protein. The amount of fat and number of calories vary, depending on what kind of meat or substitute is chosen. The list is divided into four parts, based on the amount of fat and calories: very lean meat, lean meat, medium-fat meat, and high-fat meat. One ounce (one meat exchange) of each of these includes the following nutrient amounts:

| | Carbohydrate (grams) | Protein (grams) | Fat (grams) | Calories |
|------------|---------------------------------|----------------------------|------------------------|-----------------|
| Very Lean | . | 7 | 0-1 | 35 |
| Lean | . | 7 | 3 | 55 |
| Medium-Fat | . | 7 | 5 | 75 |
| High-Fat | . | 7 | 8 | 100 |

You are encouraged to use more lean and medium-fat meat, poultry, and fish in your meal plan. This will help you to decrease your fat intake, which may help decrease your risk for heart disease. The items from the high-fat group are high in saturated fat, cholesterol, and calories.

You should limit your choices from the high-fat group to three times per week. Meat and substitutes do not contribute any fiber to your meal plan. Meats and meat substitutes that have 400 milligrams or more of sodium per exchange are indicated with the symbol #.

Tips

1. Bake, roast, broil, grill, or boil these foods rather than frying them with added fat.
2. Use a nonstick pan spray or a nonstick pan to brown or fry these foods.
3. Trim off visible fat before and after cooking.
4. Do not add flour, bread crumbs, coating mixes, or fat to these foods when preparing them.
5. Weigh meat after removing bones and fat and again after cooking. Three ounces of cooked meat are equal to about four ounces of raw meat. Some examples of meat portions are: 2 ounces meat (2 meat exchanges) = 1 small chicken leg or thigh, 1/2 cup cottage cheese or tuna; 3 ounces meat (3 meat exchanges) = 1 medium pork chop, 1 small hamburger, 1/2 of a whole chicken breast, 1 unbreaded fish fillet, cooked meat, about the size of a deck of cards.
6. Restaurants usually serve prime cuts of meat, which are high in fat and calories.

| Lean Meat and Substitutes | | |
|---|---|---------|
| One exchange is equal to any one of the following items: | | |
| Beef | USDA Good or Choice grades of lean beef, such as round, sirloin, and flank steak; tenderloin; and chipped beef# | 1 oz |
| Pork | Lean pork, such as fresh ham; canned, cured, or boiled ham#, Canadian bacon#, tenderloin | 1 oz |
| Veal | All cuts are lean except for veal cutlets (ground or cubed) | 1 oz |
| Poultry | Chicken, turkey, Cornish hen (without skin) | 1 oz |
| Fish | All fresh and frozen fish | 1 oz |
| | Crab, lobster, scallops, shrimp, clams (fresh or canned in water#) | 2 oz |
| | Oysters | 6 med |
| | Tuna# (canned in water) | 1/4 cup |
| | Herring (uncreamed or smoked) | 1 oz |
| | Sardines (canned) | 2 med |
| Wild Game | Venison, rabbit, squirrel | 1 oz |
| | Pheasant, duck, goose (without skin) | 1 oz |
| Cheese | Any cottage cheese | 1/4 cup |
| | Grated parmesan | 2 tbsp |
| | Diet cheese# (with fewer than 55 calories per ounce) | 1 oz |
| Other | 95% fat-free luncheon meat | 1 oz |
| | Egg whites | 3 |
| | Egg substitutes (with fewer than 55 calories per 1/4 cup) | 1/4 cup |
| Medium-Fat and Meat Substitutes | | |
| One exchange is equal to any one of the following items: | | |
| Beef | Most beef products fall into this category. Examples are: all ground beef, roast (rib, chuck, rump), steak (cubed, Porterhouse, T-bone), and meat loaf. | 1 oz |
| Pork | Most pork products fall into this category. (Examples: chops, loin roast, | 1 oz |

| | | |
|--|--|---------|
| | Boston butt, cutlets) | |
| Lamb | Most lamb products fall into this category (examples: chops, leg, roast) | 1 oz |
| Veal | Cutlet (ground or cubed, unbreaded) | 1 oz |
| Poultry | Chicken (with skin), duck or goose (well drained of fat), ground turkey | 1 oz |
| Fish | Tuna# (canned in oil and drained) | 1/4 cup |
| | Salmon# (canned) | 1/4 cup |
| Cheese | Skim or part-skim milk cheeses, such as: | |
| | Ricotta | 1/4 cup |
| | Mozzarella | 1 oz |
| | Diet cheeses# (with 56-80 calories per ounce) | 1 oz |
| Other | 86% fat-free luncheon meat# | 1 oz |
| | Egg (high in cholesterol, so limit to 3 per week) | 1 |
| | Egg substitutes (with 56-80 calories per 1/4 cup) | 1/4 cup |
| | Tofu (2 1/2 in. x 2 3/4 in. x 1 in.) | 4 oz |
| | Liver, heart, kidney, sweetbreads (high in cholesterol) | 1 oz |
| High-Fat Meat and Substitutes | | |
| Remember, these items are high in saturated fat, cholesterol, and calories, and should be eaten only three times per week. One exchange is equal to any one of the following items: | | |
| Beef | Most USDA Prime cuts of beef, such as ribs, corned beef# | 1 oz |
| Pork | Spareribs, ground pork, pork sausage! (patty or link) | 1 oz |
| Lamb | Patties (ground lamb) | 1 oz |
| Fish | Any fried fish product | 1 oz |
| Cheese | All regular cheese#, such as American, Blue, Cheddar, Monterey, Swiss | 1 oz |
| Other | Luncheon meat#, such as bologna, salami, pimiento loaf | 1 oz |
| | Sausage#, such as Polish, Italian | 1 oz |
| | Knockwurst, smoked | 1 oz |
| | Bratwurst#! | 1 oz |
| | Frankfurter# (turkey or chicken) (10/lb) | 1 frank |
| | Peanut butter (contains unsaturated fat) | 1 tbsp. |
| Count as one high-fat meat plus one fat exchange: | | |
| Frankfurter# | (beef, pork, or combination) (400 mg or more of sodium per exchange) (10/lb) | 1 frank |

III. Vegetable List

Each vegetable serving on this list contains about five grams of carbohydrate, two grams of protein, and twenty-five calories. Vegetables contain two to three grams of dietary fiber.

Vegetables that contain 400 mg of sodium per serving are identified with a # symbol.

Vegetables are a good source of vitamins and minerals. Fresh and frozen vegetables have more vitamins and less added salt. Rinsing canned vegetables will remove much of the salt. Unless otherwise noted, the serving size for vegetables (one vegetable exchange) is:

1/2 cup of cooked vegetables or vegetable juice

1 cup of raw vegetables

| | |
|-----------------------------|-----------------------------------|
| Artichoke (1/2 medium) | Eggplant |
| Asparagus | Greens (collard, mustard, turnip) |
| Beans (green, wax, Italian) | Kohlrabi |
| Bean sprouts | Leeks |
| Beets | Mushrooms, cooked |
| Broccoli | Okra |
| Brussels sprouts | Onions |
| Cabbage, cooked | Pea pods |
| Carrots | Peppers (green) |
| Cauliflower | Tomato (one large) |
| Rutabaga | Tomato/vegetable juice |
| Sauerkraut | Turnips |
| Spinach, cooked | Water chestnuts |
| Summer squash (crookneck) | Zucchini, cooked |

****Starchy vegetables such as corn, peas, and potatoes are found on the Starch/Bread List.**
 For "free" vegetables (i.e., fewer than ten calories per serving), see the Free Food List.
 # = 400 mg or more of sodium per serving.

IV. Fruit List

Each item on this list contains about fifteen grams of carbohydrate and sixty calories.

Fresh, frozen, and dry fruits have about two grams of fiber per serving. Fruits that have three or more grams of fiber per serving have a * symbol. Fruit juices contain very little dietary fiber. The carbohydrate and calorie contents for a fruit serving are based on the usual serving of the most commonly eaten fruits. Use fresh fruits or frozen or canned fruits with no sugar added. Whole fruit is more filling than fruit juice and may be a better choice for those who are trying to lose weight. Unless otherwise noted, the serving size for one fruit serving is:

1/2 cup of fresh fruit or fruit juice

1/4 cup dried fruit

| Fresh, Frozen, and Unsweetened Canned Fruit | |
|--|----------|
| Apples (raw, 2 in. across) | 1 |
| Applesauce (unsweetened) | 1/2 cup |
| Apricots (canned) (4 halves) | 1/2 cup |
| Banana (9 in. long) | 1/2 |
| Blackberries (raw) | 3/4 cup |
| *Blueberries (raw) | 3/4 cup |
| Cantaloupe (5 in. across) | 1/3 |
| Cantaloupe (cubes) | 1 cup |
| Cherries (large, raw) | 12 whole |
| Cherries (canned) | 1/2 cup |
| Figs (raw, 2 in. across) | 2 |
| Fruit cocktail (canned) | 1/2 cup |

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|--|-----------|
| Grapefruit (medium) | 1/2 |
| Grapefruit (segments) | 3/4 cup |
| Grapes (small) | 15 |
| Honeydew melon (medium) | 1/8 |
| Honeydew melon (cubes) | 1 cup |
| Kiwi (large) | 1 |
| Mandarin oranges | 3/4 cup |
| Mango (small) | 1/2 |
| Nectarines (2 1/2 in. across) | 1 |
| Orange (2 1/2 in. across) | 1 |
| Papaya | 1 cup |
| Peach (2 3/4 in. across) | 1 |
| Peaches (canned) (2 halves) | 1 cup |
| Pear (1/2 large) | 1 small |
| Pears (canned) (2 halves) | 1/2 cup |
| Persimmon (medium, native) | 2 |
| Pineapple (raw) | 3/4 cup |
| Pineapple (canned) | 1/3 cup |
| Plum (raw, 2 in. across) | 2 |
| *Pomegranate | 1/2 |
| *Raspberries (raw) | 1 cup |
| *Strawberries (raw, whole) | 1 1/4 cup |
| Tangerine (2 1/2 in. across) | 2 |
| Watermelon (cubes) | 1 1/4 cup |
| *Dried Fruit | |
| *Apples | 4 rings |
| *Apricots | 7 halves |
| Dates (medium) | 2 1/2 |
| *Figs | 1 1/2 |
| *Prunes (medium) | 3 |
| Raisins | 2 tbsp |
| Fruit Juice | |
| Apple juice/cider | 1/2 cup |
| Cranberry juice cocktail | 1/3 cup |
| Grapefruit juice | 1/2 cup |
| Grape juice | 1/3 cup |
| Orange juice | 1/2 cup |
| Pineapple juice | 1/2 cup |
| Prune juice | 1/3 cup |
| * = 3 grams or more of fiber per serving | |

V. Milk List

Each serving of milk or milk products on this list contains about twelve grams of carbohydrate and eight grams of protein. The amount of fat in milk is measured in percent of butterfat. The calories vary depending on the kind of milk chosen. The list is divided into three parts, based on the amount of fat and calories: skim/very low-fat milk, low-fat milk, and whole milk. One serving (one milk exchange) of each of these includes:

| Milk | Carbohydrate (grams) | Protein (grams) | Fat (grams) | Calories |
|---------|-------------------------|--------------------|----------------|----------|
| Skim | 12 | 8 | trace | 90 |
| Low-fat | 12 | 8 | 5 | 120 |
| Whole | 12 | 8 | 8 | 150 |

Milk is the body's main source of calcium, the mineral needed for growth and repair of bones. Yogurt is also a good source of calcium. Yogurt and many dry or powdered milk products have different amounts of fat. If you have questions about a particular item, read the label to find out the fat and calorie content.

Milk can be drunk or added to cereal or other foods. Many tasty dishes, such as sugar-free pudding, are made with milk (see the Combination Foods list). Add life to plain yogurt by adding one of your fruit servings to it.

| Skim and Very Low-Fat Milk | |
|---|---------|
| Skim milk | 1 cup |
| 1/2% milk | 1 cup |
| 1% milk | 1 cup |
| Low-fat buttermilk | 1 cup |
| Evaporated skim milk | 1/2 cup |
| Dry nonfat milk | 1/3 cup |
| Plain nonfat yogurt | 8 oz |
| Low-Fat Milk | |
| 2% milk | 1 cup |
| Plain low-fat yogurt (with added nonfat milk solids) | 8 oz |
| Whole Milk | |
| The whole-milk group has much more fat per serving than the skim and low-fat groups. Whole milk has more than 3 1/4% butterfat. Try to limit your choices from the whole-milk group as much as possible. | |
| Whole milk | 1 cup |
| Evaporated whole milk | 1/2 cup |
| Whole milk plain yogurt | 8 oz |

VI. Fat List

Each serving on the fat list contains about five grams of fat and forty-five calories.

The foods on the fat list contain mostly fat, although some items may also contain a small amount of protein. All fats are high in calories and should be carefully measured. Everyone should modify fat intake by eating unsaturated fats instead of saturated fats. The sodium content of these foods varies widely. Check the label for sodium information.

| Unsaturated Fats | |
|---|---------------|
| Avocado | 1/8 medium |
| Margarine | 1 tsp |
| #Margarine, diet | 1 tbsp |
| Mayonnaise | 1 tsp |
| #Mayonnaise (reduced-calorie) | 1 tbsp |
| Nuts and Seeds: | |
| Almonds, dry roasted | 6 |
| Cashews, dry roasted | 1 tbsp |
| Pecans | 2 |
| Peanuts (small) | 20 |
| Peanuts (large) | 10 |
| Walnuts | 2 whole |
| Other nuts | 1 tbsp |
| Seeds (except pumpkin), pine nuts, sunflower (without shells) | 1 tbsp |
| Pumpkin seeds | 2 tsp |
| Oil (corn, cottonseed, safflower, soybean, sunflower, olive, peanut) | 1 tsp |
| #Olives (small) | 10 |
| #Olives (large) | 5 |
| Salad dressing, mayonnaise-type, regular | 2 tsp |
| Salad dressing, mayonnaise-type reduced- calorie | 1 tbsp |
| Salad dressing, all varieties, regular | 1 tbsp |
| #Salad dressing, reduced-calorie (2 tbsp of low-calorie dressing is a free food) | 2 tbsp |
| Saturated Fats | |
| Butter | 1 tsp |
| #Bacon | 1 slice |
| Chitterlings | 1/2 oz |
| Coconut, shredded | 2 tbsp |
| Coffee whitener, liquid | 2 tbsp |
| Coffee whitener, powder | 4 tsp |

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| Cream (light, coffee, table) | 2 tbsp |
| Cream, sour | 2 tbsp |
| Cream (heavy, whipping) | 1 tbsp |
| Cream cheese | 1 tbsp |
| #Salt pork | 1/4 oz |
| # = 400 mg or more of sodium if more than one or two servings are eaten. | |

Free Foods

A free food is any food or drink that contains fewer than twenty calories per serving. You can eat as much as you want of items that have no serving size specified. You may eat two or three servings per day of those items that have a specific serving size. Be sure to spread them out through the day.

| Drinks | |
|--------------------------------|-----------|
| #Bouillon or broth without fat | |
| Bouillon, low-sodium | |
| Carbonated drinks, sugar-free | |
| Carbonated water | |
| Club soda | |
| Cocoa powder, unsweetened | (1 tbsp) |
| Coffee/tea | |
| Drink mixes, sugar-free | |
| Tonic water, sugar-free | |
| Fruit | |
| Cranberries, unsweetened | (1/2 cup) |
| Rhubarb, unsweetened | (1/2 cup) |
| Vegetables (raw, 1 cup) | |
| Cabbage | |
| Celery | |
| #Chinese cabbage | |
| Cucumber | |
| Green onion | |
| Hot peppers | |
| Mushrooms | |
| Radishes | |
| #Zucchini | |
| Salad Greens | |
| Endive | |
| Escarole | |
| Lettuce | |

| | |
|--|------------|
| Romaine | |
| Spinach | |
| Sweets | |
| Candy, hard, sugar-free | |
| Gelatin, sugar-free | |
| Gum, sugar-free | |
| Jam/jelly, sugar-free | (2 tsp) |
| Pancake syrup, sugar-free | (1-2 tbsp) |
| Sugar substitutes (saccharin, aspartame) | |
| Whipped topping | (2 tbsp) |
| Condiments | |
| Catsup | (1 tbsp) |
| Horseradish | |
| Mustard | |
| #Pickles, dill, unsweetened | |
| Salad dressing, low-calorie | (2 tbsp) |
| Taco sauce | (1 tbsp) |
| Vinegar | |
| Nonstick pan spray | |

| | |
|--|---------------------------------|
| Seasonings | |
| Seasonings can be very helpful in making foods taste better. Be careful of how much sodium you use. Read labels to help you choose seasonings that do not contain sodium or salt. | |
| Basil (fresh) | Lemon pepper |
| Celery Seeds | Lime |
| Cinnamon | Lime Juice |
| Chili powder | Mint |
| Chives | Onion powder |
| Curry | Oregano |
| Dill | Paprika |
| Flavoring extracts (vanilla, almond, walnut, butter, peppermint, lemon, etc.) | Pepper |
| Garlic | Pimento |
| Garlic powder | Spices |
| Herbs | #Soy sauce |
| Hot pepper sauce | Soy sauce, low sodium ("lite") |
| Lemon | Wine, used in cooking (1/4 cup) |
| Lemon juice | Worcestershire sauce |

Combination Foods

Much of the food we eat is mixed together in various combinations. These combination foods do not fit into only one exchange list. It can be quite hard to tell what is in a certain casserole dish or baked food item. Following is a list of average values for some typical combination foods to help you fit these foods into your meal plan. Ask your dietitian for information about any other foods you'd like to eat. The American Diabetes Association/American Dietetic Association *Family Cookbooks* and the American Diabetes Association *Holiday Cookbook* have many recipes and further information about many foods, including combination foods. Check your library or local bookstore.

| Food | Amount | Exchanges |
|--|--|--|
| Casserole, homemade | 1 cup (8 oz) | 2 medium-fat meat, 2 starches, 1 fat |
| #Cheese pizza, thin crust | 1/4 of a 15-oz size pizza or a 10" pizza | 1 medium-fat meat, 2 starches, 1 fat |
| *#Chili with beans (commercial) | 1 cup (8 oz) | 2 medium-fat meat, 2 starches, 2 fats |
| *#Chow mein (without noodles or rice) | 2 cups (16 oz) | 2 lean meat, 1 starch, 2 vegetable |
| #Macaroni and cheese | 1 cup (8 oz) | 1 medium-fat meat, 2 starches, 2 fats |
| Soup | | |
| *#Bean | 1 cup (8 oz) | 1 lean meat, 1 starch, 1 vegetable |
| #Chunky, all varieties | 10 3/4-oz can | 1 medium-fat meat, 1 starch, 1 vegetable |
| #Cream (made with water) | 1 cup (8 oz) | 1 starch, 1 fat |
| #Vegetable or broth | 1 cup (8 oz) | 1 starch |
| #Spaghetti and meatballs (canned) | 1 cup (8 oz) | 1 medium-fat meat, 1 fat, 2 starches |
| Sugar-free pudding (made with skim milk) | 1/2 cup | 1 starch |
| If beans are used as a meat substitute: | | |
| *Dried beans, *peas, *lentils | 1 cup (cooked) | 1 lean meat, 2 starches |

Foods for Occasional Use

Moderate amounts of some foods can be used in your meal plan, in spite of their sugar or fat content, as long as you can maintain blood-glucose control. The following list includes average exchange values for some of these foods. Because they are concentrated sources of carbohydrate, you will notice that the portion sizes are very small. Check with your dietitian for advice on how often and when you can eat them.

| Food | Amount | Exchanges |
|--|----------------------------|--------------------|
| Angel-food cake | 1/12 cake | 2 starches |
| Cake, no icing | 1/12 cake (3-in. square) | 2 starches, 2 fats |
| Cookies | 2 small (1 3/4 in. across) | 2 starches, 1 fat |
| Frozen fruit yogurt | 1/3 cup | 1 starch |
| Gingersnaps | 3 | 1 starch |
| Granola | 1/4 cup | 1 starch, 1 fat |
| Granola bars | 1 small | 1 starch, 1 fat |
| Ice cream, any flavor | 1/2 cup | 1 starch, 2 fats |
| Ice milk, any flavor | 1/2 cup | 1 starch, 1 fat |
| Sherbet, any flavor | 1/4 cup | 1 starch |
| #Snack chips, all varieties | 1 oz | 1 starch, 2 fats |
| Vanilla wafers | 6 small | 1 starch, 2 fats |
| # = If more than one serving is eaten, these foods have 400mg or more of sodium. | | |

Management Tips

Make Changes Gradually

Don't try to do everything all at once. It may take longer to accomplish your goals, but the changes you make will be permanent.

Set Short-term, Realistic Goals

If weight loss is your goal, try to lose two pounds in two weeks, not twenty pounds in one week. Walk two blocks at first, not two miles. Success will come more easily, and you'll feel good about yourself.

Reward Yourself

When you achieve your short-term goal, do something special for yourself: go to a movie, buy a new shirt, read a book, visit a friend.

Measure Foods

It is important to eat the right serving sizes of food. You will need to learn how to estimate the amount of food you are served. You can do this by measuring all the food you eat for a week or so. Measure liquids with a measuring cup. Some solid foods (such as tuna, cottage cheese, and canned fruits) can also be measured with a measuring cup. Measuring spoons are used for measuring smaller amounts of other foods (such as oil, salad dressing, and peanut butter). A scale can be very useful for measuring almost anything, especially meat, poultry, and fish. All food should be measured or weighed after cooking. Some food you buy uncooked will weigh less after you cook it. This is true of most meats. Starches often swell in cooking, so a small amount of uncooked starch will become a much larger amount of cooked food. The following table shows some of the changes:

| Starch Group | Uncooked | Cooked |
|---------------------|-------------------------------|---------------|
| Oatmeal | 3 level tbsp | 1/2 cup |
| Cream of wheat | 2 level tbsp | 1/2 cup |
| Grits | 3 level tbsp | 1/2 cup |
| Rice | 2 level tbsp | 1/2 cup |
| Spaghetti | 1/4 cup | 1/2 cup |
| Noodles | 1/3 cup | 1/2 cup |
| Macaroni | 1/4 cup | 1/2 cup |
| Dried beans | 3 tbsp | 1/3 cup |
| Dried peas | 3 tbsp | 1/3 cup |
| Lentils | 2 tbsp | 1/3 cup |
| Meat Group | | |
| Hamburger | 4 oz | 3 oz |
| Chicken | 1 small drumstick | 1 oz |
| | 1/2 of a whole chicken breast | 3 oz |

Read Food Labels

Remember, dietetic does not mean diabetic! When you see the word "dietetic" on a food label, it means that something has been changed or replaced. It may have less salt, less fat, or less sugar. It does not mean that the food is sugar-free or calorie-free. Some dietetic foods may be useful. Those that contain twenty calories or less per serving may be eaten up to three times a day as free foods.

Know Your Sweeteners

Two types of sweeteners are on the market: those with calories and those without calories. Sweeteners with calories (such as fructose, sorbitol, and mannitol) may cause cramping and diarrhea when used in large amounts. Remember, these sweeteners do have calories, which can add up. Sweeteners without calories include saccharin and aspartame (Equal, Nutrasweet) and may be used in moderation

Plan for Exercise

You may need to make some changes in your meal plan or insulin dose when you begin an exercise program. Check with your dietitian or doctor about this. Be sure to carry some form of carbohydrate with you to treat low blood glucose (for example, dried fruit or glucose tablets). Additional information on these topics is available from your dietitian or doctor.