

# Carb Counting and Meal Planning

Tools to help you plan your meals

Part of the Novo Nordisk  
diabetes education series

Favorably reviewed by:



**American Association of  
Diabetes Educators**

The favorably reviewed logo indicates this material has been reviewed for educational content and does not imply endorsement of any product.

---

The Novo Nordisk patient education materials were developed using information from the following sources: The American Association of Diabetes Educators, The American Diabetes Association, The American Dietetic Association, and The American Association of Clinical Endocrinologists. These booklets do not replace the advice of your healthcare provider. Be sure to consult your healthcare provider regarding your individual diabetes treatment plan.

# Carbohydrate counting

Carbohydrate or “carb” counting is a tool many people with diabetes use to make healthy food choices. Healthy eating, along with exercising regularly and taking medication, if necessary, can help you achieve your blood glucose goals.

## This booklet will help you:

- Learn the goals for healthy eating with diabetes
- Understand how to use carb counting to plan your meals and help manage your blood glucose levels



## Healthy eating goals

The basics for healthy eating are the same for people with diabetes as they are for everyone.

Healthy Eating Basics:

- Eat a wide variety of foods to get the energy, vitamins, and minerals you need
- Eat more whole grains, vegetables, fruits, and fat-free and low-fat dairy products
- Limit processed foods
- Eat less cholesterol, saturated fat, and *trans* fat



If you need to change your eating habits, it will take time. Start by trying to make one or two changes a week. Write down on a piece of paper the changes you would like to make this week. Then add new ideas to your list each week.

# Carb counting and diabetes

Carbohydrate is the nutrient in foods that raises blood glucose the most and the quickest after you eat. The other important nutrients – protein and fat – have much less effect on your blood glucose.



Carbohydrate counting can help you:

- Manage your blood glucose
- Be flexible in your choice of foods
- Eat more foods that you enjoy
- Have more freedom in choosing your meal times

To carb count you need to know which foods contain carbohydrate and then:

- Find the carb content of your favorite foods
- Figure how much carbohydrate you need each day
- Divide your carb allotment into meals and snacks

# Foods with carbohydrate

The foods that contain carbohydrate are:

- Starches – bread, cereal, crackers, rice, and pasta
- Starchy vegetables – potatoes, corn, peas, beans
- Non-starchy vegetables – green beans, broccoli, lettuce
- Fruit and fruit juice
- Milk and yogurt (hard cheese contains very little carbohydrate)
- Sugary foods – candy, regular soda pop, jelly
- Sweets – cakes, cookies, pies, ice cream



The only food groups that don't contain carbs are:

- Meats and meat substitutes, such as eggs and cheese
- Fats and oils

Since carbs raise blood glucose more than other nutrients, you may wonder why you should eat any foods with carbs. You need to eat foods with carbs because these are the foods that provide your body with energy.

Sweets are okay to include in your meal plan once in a while. But, be sure to read the Nutrition label before you eat. Sweets often contain a lot of carbohydrate, calories, and fat.

## How many carbs should you eat?

Experts recommend that about half of the calories you eat come from carbohydrate. This should be balanced with the medicines you take to manage your diabetes.

The number of calories you need each day depends on your height, weight, age, and activity level. You and your healthcare provider will decide how many calories you need each day.

The table below provides four sample meal plans. Each plan lists the total carbohydrate grams, the recommended number of food servings from each food group, and how many carbs are in these servings. To find out how much food is in a serving, see pages 15 thru 43 in this booklet.

Daily Calorie Goal					
	1,200	1,500	1,800	2,000	2,200
Total carbohydrate (grams/serving)	144	174	209	239	269
	Serv.	Serv.	Serv.	Serv.	Serv.
<b>Starches (15g)</b>	5	6	8	10	11
<b>Fruits (15g)</b>	2	3	3	3	4
<b>Milk &amp; yogurt (12g)*</b>	2	2	2	2	2
<b>Vegetables non-starchy (5g)</b>	3	3	4	4	4
Lean meat and meat substitutes	4 oz	6 oz	7 oz	8 oz	8 oz
Fats	6	7	7	7	8

**Bold = foods that contain carbohydrate** \* Fat-free

## Dividing daily carb goals into meals

Once you know the amount of carbohydrate and the number of servings from the different food groups you need to eat each day you can divide these amounts into your meals and snacks.

Eating at least three meals a day helps you balance the amount of carbohydrate you eat throughout the day to manage your blood glucose. Skipping meals can lead to hypoglycemia (low blood glucose), especially if you take insulin.



Whether you include one or more snacks in your meal plan is up to you and your healthcare provider.

The following page provides a sample 1,500 calorie meal plan.



# Sample meal plan

1,500 calories, 174 grams carbohydrate

Food	Amount	Food Group	Grams of Carb
<b>Breakfast</b>			
Bran flakes	1 1/2 cup	Starch	30
Milk, fat-free	1 cup	Milk	12
Banana	small (4 oz)	Fruit	15
<b>Meal total</b>			<b>57</b>
<b>Lunch</b>			
Sandwich of:			
Roast beef, lean sliced	2 oz	Meat	0
Cheese, sliced (part skim)	1 oz	Meat	0
Whole wheat bread	2 slices	Starch	30
Mayonnaise, reduced fat	1 tbsp	Fat	0
Baby carrots and grape tomatoes with low fat dressing as dip	1/2 cup each 2 tbsp	Vegetable Fat	5 0
Apple, large (8 oz)	1	Fruit	30
<b>Meal total</b>			<b>65</b>
<b>Dinner</b>			
Winter squash	1 cup	Starch	15
Whole wheat dinner roll with Margarine, regular tub	1 small 2 tsp	Starch Fat	15 0
Broccoli, steamed with lemon	1/2 cup	Vegetable	5
Salad: greens, cucumber, red pepper and Italian dressing	1 cup 1 tbsp	Vegetable Fat	5 0
Broiled flounder with lemon	3 oz	Meat	0
<b>Meal total</b>			<b>40</b>
<b>Evening Snack</b>			
Yogurt, plain, fat-free	2/3 cup (6 oz)	Milk	12
<b>Meal total</b>			<b>12</b>
<b>Total</b>			<b>174</b>

## Finding the carb in foods

One of your best sources of carb counts is the Nutrition Facts label on foods. Every Nutrition Facts label must list the serving size and servings per container. All the nutrition facts on the label are based on one serving of food.

The grams of Total Carbohydrate on the label are the key to carb counting. Ignore sugar grams. They are part of the total carb count.

<b>Check serving size</b>	<b>Nutrition Facts</b> Serving Size: 1 cup (40g) Servings Per Container: 13	
	Amount Per Serving	
	Calories 150	Calories from Fat 10
		% Daily Value*
	Total Fat 3g	4%
	Saturated Fat 0.5g	2%
	Trans Fat 0g	0%
	Cholesterol 0mg	0%
	Sodium 10mg	1%
	Total Carbohydrate 24g	9%
	Dietary Fiber 4g	15%
	Sugars 1g	
	Protein 5g	
	Vitamin A	4%
	Vitamin C	2%
	Calcium	20%
	Iron	4%
	<small>* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.</small>	

**Limit these nutrients**

**Portion of Daily Value, 5% is low 20% is high**

**Get enough of these**

*Illustration only.*

This label shows that there are 24 carb grams in 1 cup of this cereal. If your goal is to have 60 carbs for breakfast, you could have:

- 1 1/2 cups of cereal (36 grams)
- 1 cup of milk (13 grams) and
- 1 small sliced banana (11 grams)

# Learning to count carbohydrate

Most of us eat the same foods and the same mixture of foods day in and day out. To learn the amount of carbohydrate grams in the foods you eat most often, create a table similar to the one on this page.

### Sample Carb Counting Table

Food	Amount I Eat	Amount of Carb	Source
Oats (oatmeal), cooked	1/2 cup	15 grams	Exchange List: page 16
Blueberries	1/2 cup	10 grams	Carb List: page 39
Asparagus	1/2 cup cooked	5 grams	Exchange List: page 24



## Using Exchange Lists for meal planning

Exchange Lists can be used to count carbohydrate as well as calories. Within each list, every food contains about the same amount of carbohydrate, calories, protein, and fat.

In planning meals using Exchange Lists, you may substitute, or exchange, any food within a list for any other food on that list. Suppose your meal plan calls for 1 serving from the Fruit List at breakfast. You can choose 1/2 grapefruit, 1 small banana, or 1 serving of any other fruit on the list.

### *One Fruit Exchange*



The Exchange Lists include Starch, Fruit, Milk, Other Carbohydrates, Non-starchy Vegetable, Meat and Meat Substitutes, and Fat groups. There is also a group of “free foods” you can eat in moderate amounts at any time.

# Eating the right portions

It's important not only to eat the right types of foods, but also the right amounts. You can eat too much of healthy foods!

For example, a small 4-ounce apple (the size of a small fist) has about 15 carb grams. A large 8-ounce apple has about 30 grams of carbohydrate. That's a big difference!

Small Apple  
15 carb grams

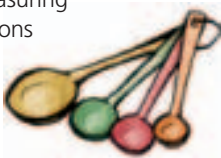


Store-size Apple  
30 carb grams

To eat the right portions you need to weigh and measure your foods. Do you need to do this every time you eat? No. But, it is helpful if you weigh and measure your foods when you get started with carb counting. It's also helpful if you weigh and measure your foods occasionally to make sure your portions have not grown over time.

## Portion Control Tools

Measuring  
spoons



Food scale

Measuring cups



## Portion size is important

The best way to know your portion size is to use measuring cups or scales. Correct portions are important for healthy eating, and especially for people taking insulin, who adjust their insulin dosage needs based on the amount of carbohydrate in their food portion.



If you are dining out or unable to use measuring cups or scales, you can estimate serving sizes by using your hand:

- Your fist equals about 1 cup
- Your palm equals about 3 ounces
- Your thumb equals about 2 tablespoons or 1 ounce
- Your thumb tip equals about 1 teaspoon
- A handful equals about 2 ounces (1/4 cup) of a snack food



# Advanced carb counting

If you are using intensive insulin therapy to manage your blood glucose, you may want to progress to advanced carb counting.

The goal of advanced carb counting is to closely match the amount of rapid-acting insulin you take with the amount of carbs you eat. You can do this using a carb-to-insulin ratio.

You may need different insulin-to-carb ratios for different meals or times of the day. Your healthcare provider can refer you to a registered dietitian to help you learn how to do advanced carb counting.

For more information about intensive insulin therapy, ask your healthcare provider for a copy of the Novo Nordisk booklet *Intensive Insulin Therapy*.



## What have I learned?

Carbohydrate counting can help you manage your blood glucose levels. It also gives you more choices in what to eat, and more freedom in choosing when to eat.



This booklet has explained:

- Which foods contain carbohydrate
- How to estimate the amount of carbs in foods
- How to determine your daily carb goals, and
- How to count carbs to help manage your blood glucose

The carbohydrate lists and contact information in this booklet will help you develop a carb counting meal plan that is right for you. Talk to your healthcare provider or dietitian for more information about carb counting.



# Food Exchange Lists\*

The following pages contain calorie and carb counting lists and the Exchange Lists for Meal Planning. Both lists can be helpful if you use carbohydrate counting or the exchange system in planning your meals. You might find it useful to keep this booklet handy and refer to it often.

## Starch List

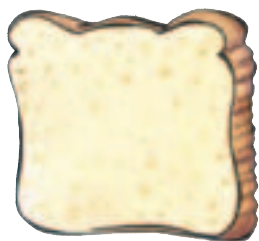
**One starch exchange equals 15 grams of carbohydrate, 3 grams of protein, 0 to 1 grams of fat, and 80 calories.**

### Bread

Bagel, 4 oz	1/4 (1 oz)
Bread, reduced-calorie	2 slices (1 1/2 oz)
Bread, white, whole-wheat, pumpernickel, rye	1 slice (1 oz)
Bread sticks, crisp, 4 in. x 1/2 in.	4 (2/3 oz)
English muffin	1/2
Hot dog bun or hamburger bun	1/2 (1 oz)
Naan, 8 in. x 2 in.	1/4
Pancake, 4 in. across, 1/4 in. thick	1
Pita, 6 in. across	1/2
Roll, plain, small	1 (1 oz)

\* The Exchange Lists are the basis of a meal planning system designed by a committee of the American Diabetes Association and The American Dietetic Association. While designed primarily for people with diabetes and others who must follow special diets, the Exchange Lists are based on principles of good nutrition that apply to everyone. Copyright © 2003 by the American Diabetes Association and The American Dietetic Association.

<b>Raisin bread</b> , unfrosted	1 slice (1 oz)
<b>Tortilla</b> , corn, 6 in. across	1
<b>Tortilla</b> , flour, 6 in. across	1
<b>Tortilla</b> , flour, 10 in. across	1/3
<b>Waffle</b> , 4 in. square or across, reduced-fat	1



## Cereals And Grains

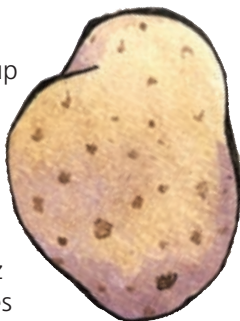
<b>Bran cereals</b>	1/2 cup
<b>Bulgur</b>	1/2 cup
<b>Cereals</b> , cooked	1/2 cup
<b>Cereals</b> , unsweetened, ready-to-eat	3/4 cup
<b>Cornmeal</b> (dry)	3 Tbsp
<b>Couscous</b>	1/3 cup
<b>Flour</b> (dry)	3 Tbsp
<b>Granola</b> , low-fat	1/4 cup
<b>Grape-Nuts</b> <sup>®</sup>	1/4 cup
<b>Grits</b>	1/2 cup
<b>Kasha</b>	1/2 cup
<b>Millet</b>	1/3 cup
<b>Muesli</b>	1/4 cup
<b>Oats</b>	1/2 cup
<b>Pasta</b>	1/3 cup
<b>Puffed cereal</b>	1 1/2 cups
<b>Rice</b> , white or brown	1/3 cup
<b>Shredded Wheat</b> <sup>®</sup>	1/2 cup
<b>Sugar-frosted cereal</b>	1/2 cup
<b>Wheat germ</b>	3 Tbsp



## Starch List *(continued)*

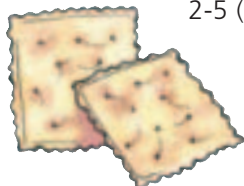
### Starchy Vegetables

Baked beans	1/3 cup
Corn	1/2 cup
Corn on cob, large	1/2 cob (5 oz)
Mixed vegetables	
with corn, peas or pasta	1 cup
Peas, green	1/2 cup
Plantain	1/2 cup
Potato, boiled	1/2 cup or 1/2 med (3 oz)
Potato, baked with skin	1/4 large (3 oz)
Potato, mashed	1/2 cup
Squash, winter	
(acorn, butternut, pumpkin)	1 cup
Yam, sweet potato, plain	1/2 cup



### Crackers And Snacks

Animal crackers	8
Graham crackers, 2 1/2 in. square	3
Matzoh	3/4 oz
Melba toast	4 slices
Oyster crackers	24
Popcorn (popped, no fat added or low-fat microwave)	3 cups
Pretzels	3/4 oz
Rice cakes, 4 in. across	2
Saltine-type crackers	6
Snack chips, fat-free or baked (tortilla, potato)	15-20 (3/4 oz)
Whole-wheat crackers, no fat added	2-5 (3/4 oz)



## Beans, Peas, And Lentils

*(Count as 1 starch exchange,  
plus 1 very lean meat exchange.)*

Beans and peas (garbanzo, pinto, kidney, white, split, black-eyed)	1/2 cup
Lima beans	2/3 cup
Lentils	1/2 cup
Miso**	3 Tbsp

## Starchy Foods Prepared With Fat

*(Count as 1 starch exchange,  
plus 1 fat exchange.)*

Biscuit, 2 1/2 in. across	1
Chow mein noodles	1/2 cup
Corn bread, 2 in. cube	1 (2 oz)
Crackers, round butter type	6
Croutons	1 cup
French-fried potatoes (oven baked) <sup>†</sup>	1 cup (2 oz)
Granola	1/4 cup
Hummus	1/3 cup
Muffin, 5 oz	1/5 (1 oz)
Popcorn, microwaved	3 cups
Sandwich crackers, cheese or peanut butter filling	3
Snack chips (potato, tortilla)	9-13 (3/4 oz)
Stuffing, bread (prepared)	1/3 cup
Taco shell, 6 in. across	2
Waffle, 4 in. square or across	1
Whole-wheat crackers, fat added	4-6 (1 oz)



<sup>†</sup> See also the Fast Foods list on page 32.

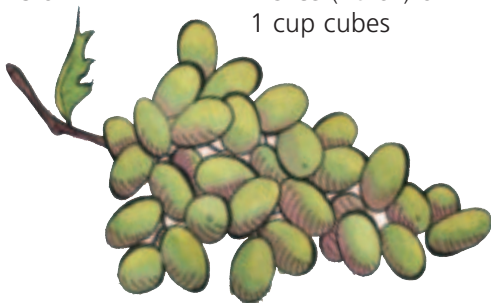
\*\* 400 mg or more of sodium per exchange.

## Fruit List

**One fruit exchange equals 15 grams of carbohydrate and 60 calories. The weight includes skin, core, seeds, and rind.**

### Fruit

Apple, unpeeled, small	1 (4 oz)
Applesauce, unsweetened	1/2 cup
Apples, dried	4 rings
Apricots, fresh	4 whole (5 1/2 oz)
Apricots, dried	8 halves
Apricots, canned	1/2 cup
Banana, small	1 (4 oz)
Blackberries	3/4 cup
Blueberries	3/4 cup
Cantaloupe, small	1/3 melon (11 oz) or 1 cup cubes
Cherries, sweet, fresh	12 (3 oz)
Cherries, sweet, canned	1/2 cup
Dates	3
Figs, fresh	1 1/2 large or 2 medium (3 1/2 oz)
Figs, dried	1 1/2
Fruit cocktail	1/2 cup
Grapefruit, large	1/2 (11 oz)
Grapefruit sections, canned	3/4 cup
Grapes, small	17 (3 oz)
Honeydew melon	1 slice (10 oz) or 1 cup cubes



Kiwi	1 (3 1/2 oz)
Mandarin oranges, canned	3/4 cup
Mango, small	1/2 fruit (5 1/2 oz) or 1/2 cup
Nectarine, small	1 (5 oz)
Orange, small	1 (6 1/2 oz)
Papaya	1/2 fruit (8 oz) or 1 cup cubes
Peach, medium, fresh	1 (4 oz)
Peaches, canned	1/2 cup
Pear, large, fresh	1/2 (4 oz)
Pears, canned	1/2 cup
Pineapple, fresh	3/4 cup
Pineapple, canned	1/2 cup
Plums, small	2 (5 oz)
Plums, canned	1/2 cup
Plums, dried (prunes)	3
Raisins	2 Tbsp
Raspberries	1 cup
Strawberries	1 1/4 cup whole berries
Tangerines, small	2 (8 oz)
Watermelon	1 slice (13 1/2 oz) or 1 1/4 cup cubes



### Fruit Juice, Unsweetened

Apple juice/cider	1/2 cup
Cranberry juice cocktail	1/3 cup
Cranberry juice cocktail, reduced-calorie	1 cup
Fruit juice blends, 100% juice	1/3 cup
Grape juice	1/3 cup
Grapefruit juice	1/2 cup
Orange juice	1/2 cup
Pineapple juice	1/2 cup
Prune juice	1/3 cup

## Milk List

**One milk exchange equals 12 grams of carbohydrate and 8 grams of protein.**

### Fat-Free And Low-Fat Milk

*(0 to 3 grams fat per serving, 90 calories)*

Fat-free milk	1 cup
1/2% milk	1 cup
1% milk	1 cup
Buttermilk, low-fat or fat-free	1 cup
Evaporated fat-free milk	1/2 cup
Dry milk, fat-free	1/3 cup dry
Soy milk, low-fat or fat-free	1 cup
Yogurt, plain, fat-free	2/3 cup (6 oz)
Yogurt, flavored, fat-free sweetened with nonnutritive sweetener and fructose	2/3 cup (6 oz)

### Reduced-fat

*(5 grams fat per serving, 120 calories)*

2% milk	1 cup
Soy milk	1 cup
Plain low-fat yogurt	3/4 cup
Sweet acidophilus milk	1 cup

### Whole Milk

*(8 grams fat per serving, 150 calories)*

Whole milk	1 cup
Evaporated whole milk	1/2 cup
Goat's milk	1 cup
Kefir	1 cup
Yogurt, plain (made from whole milk)	3/4 cup



## Sweets, Desserts and Other Carbohydrates List

**One exchange equals 15 grams of carbohydrate (carb), or 1 starch, or 1 fruit, or 1 milk.**

Food	Serving Size	Exchanges Per Serving
Angel food cake, unfrosted	1/12th cake	2 carb
Brownie, small, unfrosted	2 in. square	1 carb, 1 fat
Cake, unfrosted	2 in. square	1 carb, 1 fat
Cake, frosted	2 in. square	2 carb, 1 fat
Cookies, sugar-free (1 oz)	3 sm or 1 lg	1 carb, 1-2 fat
Cookie or sandwich		
cookie with creme filling	2 small (2/3 oz)	1 carb, 1 fat
Cranberry sauce, jellied	1/4 cup	1 1/2 carb
Cupcake, frosted	1 small (2 oz)	2 carb, 1 fat
Doughnut,		
plain cake, medium	1 (1 1/2 oz)	1 1/2 carb, 2 fat
Doughnut, glazed,		
3 3/4 in. across	1 (2 oz)	2 carb, 2 fat
Energy, sport or breakfast bar	1 bar (1 1/3 oz)	1 1/2 carb, 0-1 fat
Energy, sport or breakfast bar	1 bar (2 oz)	2 carb, 1 fat
Fruit cobbler	1/2 cup (3 1/2 oz)	3 carb, 1 fat
Fruit juice bars,		
frozen, 100% juice	1 bar (3 oz)	1 carb
Fruit snacks, chewy (pureed		
fruit concentrate)	1 roll (3/4 oz)	1 carb
Fruit spreads, 100% fruit	1.5 Tbsp	1 carb
Gelatin, regular	1/2 cup	1 carb
Gingersnaps	3	1 carb
Granola or snack bar,		
regular or low-fat	1 bar (1 oz)	1 1/2 carb
Honey	1 Tbsp	1 carb
Ice cream	1/2 cup	1 carb, 2 fat
Ice cream, light	1/2 cup	1 carb, 1 fat
Ice cream, low-fat	1/2 cup	1.5 carb
Ice cream, fat-free,		
no sugar added	1/2 cup	1 carb



## Other Carbohydrates *(continued)*

Food	Serving Size	Exchanges Per Serving
<b>Jam or jelly, regular</b>	1 Tbsp	1 carb
<b>Milk, chocolate, whole</b>	1 cup	2 carb, 1 fat
<b>Pie, fruit, 2 crusts,</b> commercially prepared pie	1/6 of 8 in. pie	3 carb, 2 fat
<b>Pie, pumpkin or custard,</b> commercially prepared pie	1/8 of 8 in. pie	2 carb, 2 fat
<b>Pudding, regular</b> (made with low-fat milk)	1/2 cup	2 carb
<b>Pudding, sugar-free or</b> sugar-free & fat-free (made with fat-free milk)	1/2 cup	1 carb
<b>Reduced-calorie meal</b> replacement (shake)	1 can (10-11 oz)	1 1/2 carb, 0-1 fat
<b>Rice milk,</b> low-fat or fat-free, plain	1 cup	1 carb
<b>Rice milk, low-fat, flavored</b>	1 cup	1 1/2 carb
<b>Salad dressing, fat-free**</b>	1/4 cup	1 carb
<b>Sherbet, sorbet</b>	1/2 cup	2 carb
<b>Spaghetti or pasta sauce,</b> canned**	1/2 cup	1 carb, 1 fat
<b>Sports drinks</b>	8 oz (1 cup)	1 carb
<b>Sugar</b>	1 Tbsp	1 carb
<b>Sweet roll or Danish</b>	1 (2 1/2 oz)	2 1/2 carb, 2 fat
<b>Syrup, light</b>	2 Tbsp	1 carb
<b>Syrup, regular</b>	1 Tbsp	1 carb
<b>Syrup, regular</b>	1/4 cup	4 carb
<b>Vanilla wafers</b>	5	1 carb, 1 fat
<b>Yogurt, frozen</b>	1/2 cup	1 carb, 0-1 fat
<b>Yogurt, frozen, fat-free</b>	1/3 cup	1 carb
<b>Yogurt, low-fat with fruit</b>	1 cup	3 carb, 0-1 fat

\*\* 400 mg or more of sodium per exchange.

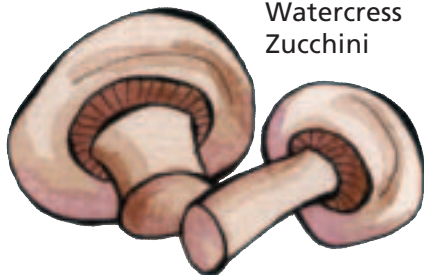
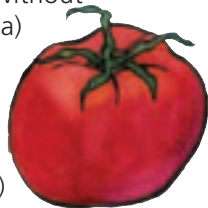
## Non-starchy Vegetable List

One vegetable exchange equals 5 grams of carbohydrate, 2 grams of protein, 0 grams of fat, and 25 calories.

*In general, one vegetable exchange is 1/2 cup cooked vegetables or vegetable juice or 1 cup of raw vegetables.*

Artichoke  
Artichoke hearts  
Asparagus  
Beans  
    (green, wax, Italian)  
Bean sprouts  
Beets  
Broccoli  
Brussels sprouts  
Cabbage  
Carrots  
Cauliflower  
Celery  
Cucumber  
Eggplant  
Green onions  
    or scallions  
Greens (collard, kale,  
    mustard, turnip)  
Kohlrabi  
Leeks

Mixed vegetables (without  
    corn, peas, or pasta)  
Mushrooms  
Okra  
Onions  
Pea pods  
Peppers (all varieties)  
Radishes  
Salad greens  
    (endive, escarole, lettuce,  
    romaine, spinach)  
Sauerkraut\*\*  
Spinach  
Summer squash  
Tomato  
Tomatoes, canned  
Tomato sauce\*\*  
Tomato/vegetable juice\*\*  
Turnips  
Water chestnuts  
Watercress  
Zucchini



## Meat And Meat Substitutes List

### Very Lean Meat And Substitutes List

**One exchange equals 0 grams of carbohydrate, 7 grams of protein, 0 to 1 grams of fat, and 35 calories.**

*One very lean meat exchange is equal to any one of the following items:*

<b>Poultry:</b> Chicken or turkey (white meat, no skin), Cornish hen (no skin)	1 oz
<b>Fish:</b> Fresh or frozen cod, flounder, haddock, lox (smoked salmon)**, halibut, trout; tuna fresh or canned in water	1 oz
<b>Shellfish:</b> Clams, crab, lobster, scallops, shrimp, imitation shellfish	1 oz
<b>Game:</b> Duck or pheasant (no skin), venison, buffalo, ostrich	1 oz
<b>Cheese with 1 gram or less of fat per ounce:</b>	
Fat-free or low-fat cottage cheese	1/4 cup
Fat-free cheese	1 oz
<b>Other:</b>	
Processed sandwich meats with 1 gram or less of fat per ounce, such as deli thin, shaved meats, chipped beef**, turkey ham	1 oz
Egg whites	2
Egg substitutes, plain	1/4 cup
Hot dogs with 1 gram or less of fat per ounce**	1 oz
Kidney (high in cholesterol)	1 oz
Sausage with 1 gram or less of fat per ounce	1 oz

*Count as one very lean meat and one starch exchange.*

<b>Beans, peas, lentils (cooked)</b>	1/2 cup
--------------------------------------	---------

\*\* 400 mg or more of sodium per exchange.

## Lean Meat And Substitutes List

**One exchange equals 0 grams of carbohydrate, 7 grams of protein, 3 grams of fat, and 55 calories.**

*One lean meat exchange is equal to any one of the following items:*

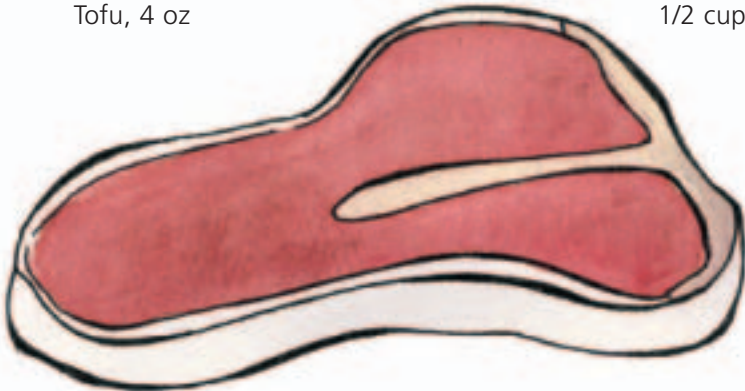
<b>Beef:</b> USDA Select or Choice grades of lean beef trimmed of fat, such as round, sirloin, and flank steak; tenderloin; roast (rib, chuck, rump); steak (T-bone, porterhouse, cubed); ground round	1 oz
<b>Pork:</b> Lean pork, such as fresh ham; canned, cured, or boiled ham; Canadian bacon**; tenderloin, center loin chop	1 oz
<b>Lamb:</b> Roast, chop, leg	1 oz
<b>Veal:</b> Lean chop, roast	1 oz
<b>Poultry:</b> Chicken, turkey (dark meat, no skin), chicken (white meat with skin), domestic duck or goose (well-drained of fat, no skin)	1 oz
<b>Fish:</b>	
Herring (uncreamed or smoked)	1 oz
Oysters	6 medium
Salmon (fresh or canned), catfish	1 oz
Sardines (canned)	2 medium
Tuna (canned in oil, drained)	1 oz
<b>Game:</b> Goose (no skin), rabbit	1 oz
<b>Cheese:</b>	
4.5%-fat cottage cheese	1/4 cup
Grated Parmesan	2 Tbsp
Cheeses with 3 grams or less fat per ounce	1 oz
<b>Other:</b>	
Hot dogs with 3 grams or less fat per ounce**	1 1/2 oz
Processed sandwich meat with 3 grams or less fat per ounce, (e.g., turkey pastrami or kielbasa)	1 oz
Liver, heart (high in cholesterol)	1 oz

## Medium-Fat Meat And Substitutes List

**One exchange equals 0 grams of carbohydrate,  
7 grams of protein, 5 grams of fat, and 75 calories.**

*One medium-fat meat exchange is equal  
to any one of the following items:*

<b>Beef:</b> Most beef products fall into this category (ground beef, meatloaf, corned beef, short ribs, Prime grades of meat trimmed of fat, such as prime rib)	1 oz
<b>Pork:</b> Top loin, chop, Boston butt, cutlet	1 oz
<b>Lamb:</b> Rib roast, ground	1 oz
<b>Veal:</b> Cutlet (ground or cubed, unbreaded)	1 oz
<b>Poultry:</b> Chicken (dark meat, with skin), ground turkey or ground chicken, fried chicken (with skin)	1 oz
<b>Fish:</b> Any fried fish product	1 oz
<b>Cheese:</b> With 5 grams or less of fat per ounce:	
Feta	1 oz
Mozzarella	1 oz
Ricotta, 2 oz	1/4 cup
<b>Other:</b>	
Egg (high in cholesterol, limit to 3 per week)	1
Sausage with 5 grams or less of fat per ounce	1 oz
Tempeh	1/4 cup
Tofu, 4 oz	1/2 cup



## High-Fat Meat And Substitutes List

**One exchange equals 0 grams of carbohydrate, 7 grams of protein, 8 grams of fat, and 100 calories.**

**Remember these items are high in saturated fat, cholesterol, and calories and may raise blood cholesterol levels if eaten on a regular basis.**

*One high-fat meat exchange is equal to any one of the following items:*

**Pork:** Spareribs, ground pork, pork sausage 1 oz

**Cheese:** All regular cheeses, such as American\*\*, Cheddar, Monterey Jack, Swiss 1 oz

**Other:** Processed sandwich meats with 8 grams or less of fat per ounce, such as bologna, pimento loaf, salami 1 oz  
Sausage, such as bratwurst, Italian, knockwurst, Polish, smoked 1 oz  
Hot dog (turkey or chicken)\*\* 1 (10/lb)  
Bacon 3 slices (20 slices/lb)  
Peanut butter (contains unsaturated fat) 1 Tbsp

*Count as one high-fat meat plus one fat exchange:*

**Hot dog** (beef, pork, or combination)\*\* 1 (10/lb)

## Fat List

### Monounsaturated Fats List

**One fat exchange equals 5 grams of fat and 45 calories.**

Avocado, medium	2 Tbsp (1 oz)
Oil (canola, olive, peanut)	1 tsp
Olives: ripe (black)	8 large
green, stuffed**	10 large
<b>Nuts:</b>	
almonds, cashews	6 nuts
mixed (50% peanuts)	6 nuts
peanuts	10 nuts
pecans	4 halves
<b>Peanut butter,</b>	
smooth or crunchy	1/2 Tbsp
<b>Sesame seeds</b>	1 Tbsp
<b>Tahini or sesame paste</b>	2 tsp

### Polyunsaturated Fats List

**One fat exchange equals 5 grams of fat and 45 calories.**

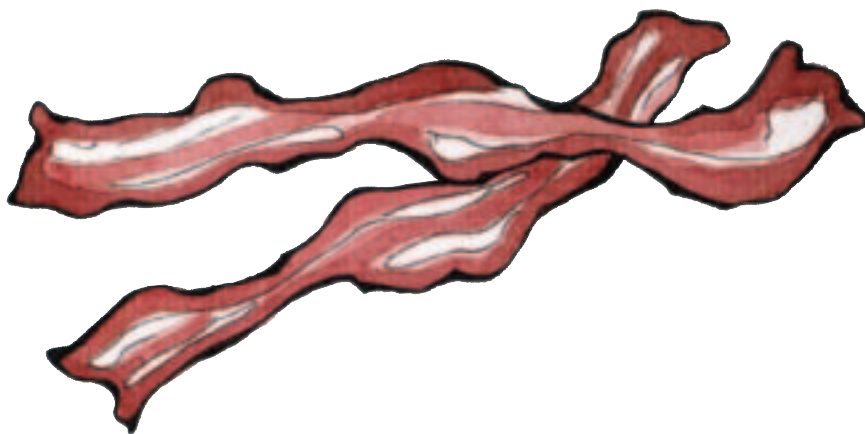
<b>Margarine:</b> stick, tub, or squeeze	1 tsp
lower-fat spread	
(30% to 50% vegetable oil)	1 Tbsp
<b>Mayonnaise:</b> regular	1 tsp
reduced-fat	1 Tbsp
<b>Nuts,</b> walnuts, English	4 halves
<b>Oil</b> (corn, safflower, soybean)	1 tsp
<b>Salad dressing</b>	
regular**	1 Tbsp
reduced-fat	2 Tbsp
<b>Miracle Whip Salad Dressing®</b>	
regular	2 tsp
reduced-fat	1 Tbsp
<b>Seeds:</b> pumpkin, sunflower	1 Tbsp

\*\* 400 mg or more of sodium per exchange.

## Saturated Fats List†

**One fat exchange equals 5 grams of fat and 45 calories.**

Bacon, cooked	1 slice (20 slices/lb)
Bacon, grease	1 tsp
Butter: stick	1 tsp
whipped	2 tsp
reduced-fat	1 Tbsp
Chitterlings, boiled	2 Tbsp (1/2 oz)
Coconut, sweetened, shredded	2 Tbsp
Coconut milk	1 Tbsp
Cream, half and half	2 Tbsp
Cream cheese	
regular	1 Tbsp (1/2 oz)
reduced-fat	1 1/2 Tbsp (3/4 oz)
Fatback or salt pork, see below†**	
Shortening or lard	1 tsp
Sour cream	
regular	2 Tbsp
reduced-fat	3 Tbsp



† Saturated fats can raise blood cholesterol levels if eaten on a regular basis.

‡ Use a piece 1 in. x 1 in. x 1/4 in. if you plan to eat the fatback cooked with vegetables.

Use a piece 2 in. x 1 in. x 1/2 in. when eating only the vegetables with the fatback removed.

\*\* 400 mg or more of sodium per exchange.



## Free Foods List

A *free food* is any food or drink that contains less than 20 calories or less than or equal to 5 grams of carbohydrate per serving. Foods with a serving size listed should be limited to 3 servings per day. Be sure to spread them out throughout the day. If you eat all 3 servings at one time, it could raise your blood glucose level. Foods listed without a serving size can be eaten whenever you like.

### Fat-Free Or Reduced-Fat Foods

Cream cheese, fat-free, 1/2 oz	1 Tbsp
Creamers, nondairy, liquid	1 Tbsp
Creamers, nondairy, powdered	2 tsp
Mayonnaise, fat-free	1 Tbsp
Mayonnaise, reduced-fat	1 tsp
Margarine spread, fat-free	4 Tbsp
Margarine spread, reduced-fat	1 tsp
Miracle Whip®, fat-free	1 Tbsp
Miracle Whip®, reduced-fat	1 tsp
Nonstick cooking spray	
Salad dressing, fat-free or low-fat	1 Tbsp
Salad dressing, fat-free, Italian	2 Tbsp
Sour cream, fat-free, reduced-fat	1 Tbsp
Whipped topping, regular	1 Tbsp
Whipped topping, light or fat-free	2 Tbsp

### Sugar-Free Foods

Candy, hard, sugar-free	1 candy
Gelatin dessert, sugar-free	
Gelatin, unflavored	
Gum, sugar-free	

Jam or jelly, light	2 tsp
Sugar substitutes <sup>†</sup>	
Syrup, sugar-free	2 Tbsp

## Condiments

Catsup, 1 Tbsp	Soy sauce, regular or light, 1 Tbsp**
Horseradish	Salsa, 1/4 cup
Lemon juice	Taco sauce, 1 Tbsp
Lime juice	Vinegar
Mustard	Yogurt, 2 Tbsp
Pickle relish, 1 Tbsp	
Pickles, dill, 1 1/2 medium**	
Pickles, sweet (bread and butter), 2 slices	
Pickles, sweet (gherkin) 3/4 oz	

## Drinks

Bouillon, broth, consomme**
Bouillon or broth, low-sodium
Carbonated or mineral water
Club soda
Cocoa powder, unsweetened, 1 Tbsp
Coffee
Diet soft drinks, sugar-free
Drink mixes, sugar-free
Tea
Tonic water, sugar-free



## Seasonings

Be careful with seasonings that contain sodium or are salts, such as garlic or celery salt, and lemon pepper.

Flavoring extracts	Spices
Garlic	Tabasco® or hot pepper sauce
Herbs, fresh or dried	Wine, used in cooking
Pimento	Worcestershire sauce

\*\* 400 mg or more of sodium per exchange.

† Sugar substitutes, alternatives, or replacements that are approved by the Food and Drug Administration (FDA) are safe to use. Common brand names include: Equal® (aspartame), Sprinkle Sweet® (saccharin), Sweet One® (acesulfame K), Sweet-10® (saccharin), Sugar Twin® (saccharin), Sweet 'N Low® (saccharin), Splenda® (sucralose)

## Combination Foods List

Many of the foods we eat are mixed together in various combinations. These combination foods do not fit into any one exchange list. Often it is hard to tell what is in a casserole dish or a prepared food item. This is a list of exchanges for some typical combination foods. This list will help you fit these foods into your meal plan. Ask your dietitian for information about any other combination foods you would like to eat.

Soups	Serving Size	Exchanges Per Serving
Bean**	1 cup	1 carb 1 very lean meat
Cream, made with water**	1 cup (8 oz)	1 carb, 1 fat
Instant**	6 oz	1 carb
Instant, with beans/lentils**	8 oz	2 1/2 carbs 1 very lean meat
Split pea, made with water**	1/2 cup (4 oz)	1 carb
Tomato, made with water**	1 cup (8 oz)	1 carb
Vegetable beef, chicken noodle, or other broth-type**	1 cup (8 oz)	1 carb



\*\* 400 mg or more of sodium per exchange.

## Entrees

	Serving Size	Exchanges Per Serving
Chow mein, without noodles or rice**	2 cups (16 oz)	1 carb 2 lean meats
Tuna or chicken salad	1/2 cup (3 1/2 oz)	1/2 carb, 1 fat 2 lean meats
Tuna noodle casserole, lasagna, spaghetti with meatballs, chili with beans, macaroni and cheese**	1 cup (8 oz)	2 carbs 2 medium-fat meats

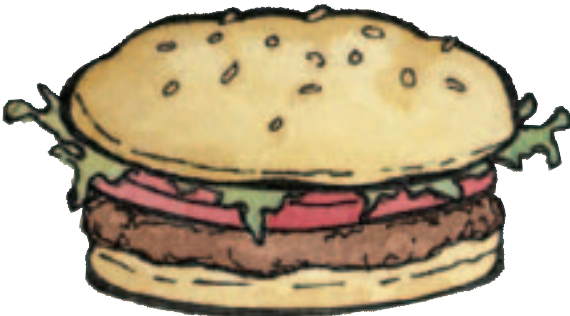


## Frozen Entrees & Meals

	Serving Size	Exchanges Per Serving
Dinner-type meal**	14 to 17 oz	3 carbs, 3 fats 3 medium-fat meats
Meatless burger, soy base	3 oz	1/2 carb 2 lean meats
Meatless burger, vegetable and starch base	3 oz	1 carb 1 lean meat
Pizza, cheese, thin crust**	1/4 of 12 inch pie (6 oz)	2 carbs 2 medium-fat meats 1 fat
Pizza, meat topping, thin crust**	1/4 of 12 inch pie (6 oz)	2 carbs 2 medium-fat meats 2 fats
Pot Pie**	1 (7 oz)	2 1/2 carbs, 3 fats 1 medium-fat meat
Entree or meal, with less than 340 calories**	about 8 to 11 oz	2 to 3 carbs 1 to 2 meats

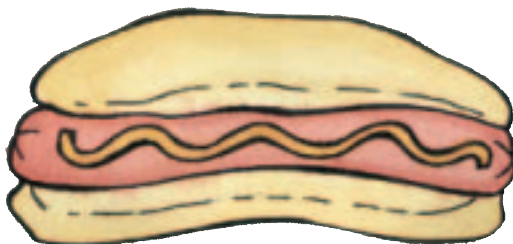
## Fast Foods\* List

	Serving Size	Exchanges Per Serving
Burrito with beef**	1 (5 to 7 oz)	3 carbs, 1 fat 1 medium-fat meat
Chicken nuggets**	6	1 carb, 1 fat 2 medium-fat meats
Chicken breast and wing, breaded and fried**	1 each	1 carb, 2 fat 4 medium-fat meats
Chicken sandwich, grilled**	1	2 carbs 3 very lean meats
Chicken wings, hot**	6 (5 oz)	1 carb, 4 fats 3 medium-fat meats
Fish sandwich, with tartar sauce**	1	3 carbs, 3 fats 1 medium-fat meat
French fries**	1 medium serving (5 oz)	4 carbs 4 fats
Hamburger, regular	1	2 carbs 2 medium-fat meats
Hamburger, large**	1	2 carbs, 1 fat 3 medium-fat meats



\* Ask at your fast-food restaurant for nutrition information about your favorite fast foods or check web sites.

\*\* 400 mg or more of sodium per exchange.



<b>Hot dog, with bun**</b>	1	2 carbs, 1 fat 1 high-fat meat
<b>Individual pan pizza**</b>	1	5 carbs, 3 fats 3 medium-fat meats
<b>Pizza, cheese, thin crust**</b>	1/4 of 12 inch pie (6 oz)	2 1/2 carbs 2 medium-fat meats
<b>Pizza, meat, thin crust**</b>	1/4 of 12 inch pie (6 oz)	2 1/2 carbs 2 medium-fat meats 1 fat
<b>Soft-serve cone</b>	1 small (5 oz)	2 1/2 carbs, 1 fat
<b>Submarine sandwich**</b>	1 sub (6 in)	3 carbs, 1 vegetable 2 medium-fat meats 1 fat
<b>Submarine sandwich, less than 6 grams of fat**</b>	1 sub (6 in)	2 1/2 carbs 2 lean meats
<b>Taco, hard or soft shell**</b>	1 (3 to 3 1/2 oz)	1 carb, 1 fat 1 medium-fat meat

\*\* 400 mg or more of sodium per exchange.

# Carbohydrate Lists\*

## Grain Products



	1	195	38
<b>Bagel</b>	1	195	38
<b>Biscuit</b>	1	212	27
<b>Breads</b>			
Boston brown	1 slice	88	20
cracked wheat	1 slice	65	12
French	1 slice	81	15
Italian	1 slice	81	15
raisin	1 slice	71	14
rye	1 slice	83	16
white	1 slice	67	12
whole wheat	1 slice	69	13
pita	2 oz	130	30
<b>Bread crumbs</b>	1/4 cup	100	19
<b>Cereals</b>			
bran flakes	1 cup	100	22
bran flakes w/raisins	1 cup	190	46
corn flakes	1 cup	102	24
corn, puffed	1 cup	80	16
corn, frosted	1 cup	149	34
oat cereal	1 cup	83	17
rice, puffed	1 cup	56	13
wheat, puffed	1 cup	51	11
wheat flakes	1 cup	110	24

Measure  
Calories  
Carbs (g)

	Measure	Calories	Carbs (g)
wheat, shredded	1 cup	85	21
<b>Crackers</b>			
Graham	2	60	11
saltine	4	52	8
rye wafers	2	74	18
<b>Danish pastry</b>	1	266	26
<b>Doughnut</b>	1	198	23
<b>Muffin</b>			
corn	1 sm	174	29
English	1	134	26
<b>Pancakes</b>			
homemade	4"	86	11
from mix	4"	74	14
<b>Pasta</b>			
macaroni	1 cup	197	40
noodles	1 cup	213	40
spaghetti	1 cup	197	40
<b>Popcorn,</b>			
popped w/oil	1 cup	55	6
<b>Pretzel, hard</b>	1 oz	108	22
<b>Rice</b>			
brown	1 cup	216	45
enriched	1 cup	205	45
instant	1 cup	161	35
<b>Rolls</b>			
dinner	1	85	14
hamburger or hot dog	1	123	22
hard	1	140	25
<b>Waffles</b>			
homemade	1-7"	218	25
from mix	1-7"	218	26
<b>Wheat germ</b>	1/4 cup	111	14

\* Calculations from: Pennington, Jean A. Bowes & Church Food Values of Portions Commonly Used. Lippincott Williams & Wilkins. © 1998. The Food Processor® Nutrition Analysis and Fitness Software. Version 7.7. ESHA Research, Inc.

## Vegetables

	Measure	Calories	Carbs (g)		Measure	Calories	Carbs (g)
Artichoke	1	150	34				
Asparagus	1 cup	44	8				
<b>Beans</b>				<b>Lettuce</b>			
green	1 cup	40	9	iceberg	1 cup	7	1
lima	1 cup	216	39	leaf	1 cup	10	2
red kidney	1 cup	225	40	<b>Mushrooms</b>	1 cup	42	8
yellow	1 cup	255	45	<b>Mustard greens</b>	1 cup	20	3
<b>Beets</b>	1 cup	74	17	<b>Okra, pods</b>	8	27	6
<b>Beet greens</b>	1 cup	38	8	<b>Onions</b>			
<b>Broccoli</b>	1 cup	44	8	cooked	1/2 cup	46	11
<b>Brussel sprouts</b>	1 cup	60	14	raw	1/2 cup	30	7
<b>Cabbage</b>				<b>Parsnips</b>	1/2 cup	126	30
boiled	1 cup	34	7	<b>Peas</b>			
raw	1 cup	18	4	canned	1 cup	118	21
<b>Carrots</b>				fresh	1 cup	118	21
cooked	1 cup	70	16	frozen	1 cup	124	23
raw	1 med	31	7	<b>Peppers</b>			
<b>Cauliflower,</b>				green, sweet	1 cup	28	6
boiled	1 cup	28	5	hot chili, raw	1	18	4
<b>Celery</b>				<b>Potatoes</b>			
boiled, diced	1 cup	28	6	baked	1	220	51
raw, stalk	1	6	3	boiled	1	117	27
<b>Collards</b>	1 cup	35	8	French fried	20	200	31
<b>Corn, yellow</b>				mashed, w/milk	1 cup	162	37
on the cob	1 ear	83	19	scalloped	1 cup	210	26
canned	1 cup	132	30	<b>Radishes</b>	5	8	0
<b>Cucumber</b>	1/2 cup	7	1	<b>Sauerkraut</b>	1 cup	44	10
<b>Dandelion</b>				<b>Soybeans</b>	1 cup	298	17
greens	1 cup	34	7	<b>Spinach</b>	1 cup	42	7
<b>Eggplant,</b>				<b>Squash</b>			
boiled	1 cup	26	6	summer, boiled	1 cup	28	7
<b>Kale</b>	1 cup	42	7	winter, mashed	1 cup	80	21
<b>Lentils</b>	1 cup	230	40	<b>Sweet potatoes</b>			
				baked	1	117	28
				candied	1 cup	268	55





<b>Tomatoes</b>			
canned	1 cup	32	7
raw	1	26	6
<b>Tomato juice</b>	1 cup	40	10
<b>Tomato sauce</b>	1 cup	74	18
<b>Turnips</b>	1 cup	28	8
<b>Turnip greens</b>	1 cup	28	6
<b>Vegetables, mixed</b>	1 cup	107	24

Measure  
Calories  
Carbs (g)

<b>Plum</b>	1 med	36	9
<b>Prunes, dried</b>	4	80	21
<b>Raisins</b>	1 cup	435	112
<b>Raspberries</b>	1 cup	60	14
<b>Strawberries</b>	1 cup	45	11
<b>Tangerine</b>	1 med	37	9
<b>Watermelon</b>	1 cup	50	12
<b>Fruit juices</b>			
apple	1 cup	117	29
grapefruit	1 cup	95	23
orange	1 cup	112	26

## Fruits



<b>Apple</b>	1 med	81	21
<b>Applesauce, no sugar</b>	1 cup	104	28
<b>Apricots</b>	3 med	51	12
<b>Avocado</b>	1 med	306	12
<b>Banana</b>	1 med	105	27
<b>Blackberries</b>	1 cup	74	18
<b>Blueberries</b>	1 cup	80	21
<b>Cantaloupe</b>	1 cup	56	13
<b>Cherries, fresh</b>	10	34	8
<b>Dates, pitted, dried</b>	5	114	31
<b>Figs</b>	1	37	10
<b>Grapefruit</b>	1/2 med	40	10
<b>Grapes</b>	10	35	9
<b>Orange</b>	1 med	60	15
<b>Papaya</b>	1 med	119	30
<b>Peach</b>	1 med	37	10
<b>Pear</b>	1 med	98	25
<b>Pineapple</b>	1 cup	76	19

## Dairy Products

<b>Butter or Margarine</b>	1 Tbsp	108	0
<b>Cheese</b>			
American cheddar	1 oz	105	0
cottage, 2% cream	1 cup	203	8
Swiss	1 oz	99	1
<b>Cream</b>			
light	1 Tbsp	29	1
heavy	1 Tbsp	51	0
sour	1 cup	493	10
	1 Tbsp	26	1
<b>Ice Cream, vanilla</b>	1 cup	265	32
<b>Ice Milk</b>	1 cup	184	30

Measure  
Calories  
Carbs (g)



## Milk

	<i>Measure</i>	<i>Calories</i>	<i>Carbs (g)</i>
buttermilk	1 cup	99	12
chocolate, 2%	1 cup	180	26
evaporated	1 cup	340	25
powdered, nonfat	1 cup	244	35
1%	1 cup	102	12
nonfat	1 cup	86	12
whole	1 cup	150	11

## Yogurt

plain, low-fat	8 oz	155	18
fruit	8 oz	217	41

## Eggs

whole	1	75	1
white only	1	17	0
<b>Duck</b>	3 oz	171	0
<b>Ham, cured</b>	3 oz	151	0
<b>Lamb</b>			
chop, loin	3 oz	270	0
leg, roasted	3 oz	205	0
rib, roasted	3 oz	305	0
<b>Pork</b>			
chop	3 oz	216	0
roast, loin	3 oz	178	0
<b>Turkey, breast</b>	3 oz	160	0
<b>Veal</b>			
cutlet	3 oz	242	0

## Meat & Poultry



<b>Bacon, slices</b>	3	110	0
<b>Beef</b>			
corned, brisket	3 oz	214	0
hamburger	3 oz	246	0
roast, pot	3 oz	274	0
roast, rib	3 oz	326	0
roast, rump	3 oz	181	0
steak, broiled			
porterhouse	3 oz	262	0
round	3 oz	195	0
sirloin	3 oz	228	0
<b>Chicken</b>			
stewed	3 oz	309	0
fried, breast, battered	3 oz	220	8
roasted	3 oz	168	0

## Seafood

<b>Bass</b>	3 oz	124	0
<b>Bluefish</b>	3 oz	135	0
<b>Clams, raw</b>	3 oz	63	2
<b>Cod</b>	3 oz	90	0
<b>Crabmeat,</b> canned	3 oz	80	0
<b>Fish sticks</b>	4	308	27
<b>Flounder</b>	3 oz	100	0
<b>Haddock</b>	3 oz	140	0
<b>Halibut</b>	3 oz	119	0
<b>Herring</b>	3 oz	173	0
<b>Lobster</b>	3 oz	83	1
<b>Oysters, raw</b>	3 oz	70	4
<b>Perch</b>	3 oz	100	0
<b>Salmon</b>	3 oz	127	0
canned w/bone	3 oz	118	0
<b>Sardines,</b> canned	3 oz	177	0

Scallops	3 oz	113	3
Shrimp	3 oz	132	1
Swordfish	3 oz	132	0
Trout	3 oz	144	0
Tuna, canned			
in oil	3 oz	158	0
in water	3 oz	99	0



## Beverages

	Measure	Calories	Carbs (g)
<b>Alcoholic</b>			
beer	12 oz	146	13
beer, light	12 oz	99	5
wine	4 oz	82	2
<b>Carbonated drinks</b>			
diet soft drink	12 oz	4	0
colas	12 oz	152	39
fruit flavored soft drink	12 oz	182	49
ginger ale	12 oz	124	32
root beer	12 oz	160	42



## Combination foods



<b>Beef</b>			
potpie	7 oz	330	38
stew	1 cup	194	17
<b>Chicken potpie</b>	1	545	42
<b>Chili con carne</b>			
with beans	1 cup	286	30
<b>Franks and beans</b>	1 cup	368	40
<b>Macaroni and cheese</b>			
1 cup	1 cup	430	40
3 oz	3 oz	130	13
1 slice	1 slice	153	18
<b>Pizza</b>			
<b>Spaghetti with meat sauce</b>	1 cup	332	40
<b>Taco</b>	1	210	21
<b>Turkey patty</b>	1	181	10
<b>Soups, canned (with water)</b>			
bean, bacon	1 cup	170	23
beef with vegetables	1 cup	80	10
chicken noodle	1 cup	74	9
clam chowder, Manhattan	1 cup	78	12
consommé, beef	1 cup	50	4
consommé, chicken	1 cup	20	1
cream of chicken	1 cup	108	9

Measure  
Calories  
Carbs (g)

cream of mushroom	1 cup	120	9
minestrone	1 cup	77	11
split pea	1 cup	170	25

### Soups, dry, (water added)

chicken noodle	1 cup	60	9
onion	1 cup	27	5
tomato	1 cup	103	19

### Soups, canned, (milk added)

clam chowder, New England	1 cup	164	17
tomato	1 cup	161	22
oyster stew	1 cup	233	11

Measure

Calories

Carbs (g)

## Desserts & Sweets



### Cake

angel food	1 oz	73	16
carrot			
with frosting	1/12	484	52
cheesecake	1/12	457	32
devils food			
with frosting	1/6	323	47
fruitcake	1 1/2 oz	139	27
gingerbread	1/9	263	36
pound	1/16	229	25
sponge	1/12	187	36
yellow			
with frosting	1/8	243	36

### Candy

bar	1 oz	140	19
caramels	1 oz	108	22

fudge	1 oz	108	23
gum drops	1 oz	109	28
hard	1 oz	112	28

### Chocolate

milk	1 oz	145	17
bittersweet	1 oz	133	19
semi-sweet	1 oz	156	17
syrop	1 Tbsp	51	12

### Cookies

brownie	1	112	12
butter	1-2"	23	3
chocolate chip	1	78	10
fig bars	1	56	11
sugar	1	72	10

### Cupcakes

frosted	1	173	28
Custard	1 cup	324	47

### Frosting

chocolate	1 Tbsp	70	12
coconut	1 Tbsp	49	12
frosting glaze, homemade	1 Tbsp	71	15

### Gelatin

regular	1 cup	160	40
sugar-free	1 cup	16	2
Honey	1 Tbsp	64	17

### Jams and preserves

Jellies	1 Tbsp	48	13
Marshmallows	1 Tbsp	51	14

### Marshmallows

Molasses	1 oz	90	23
----------	------	----	----

### Molasses

Pie, homemade	1 Tbsp	55	14
apple	1/8 pie	411	58
blueberry	1/8 pie	360	50
cherry	1/8 pie	486	70

Measure

Calories

Carbs (g)

custard	1/8 pie	262	34
lemon			
meringue	1/8 pie	362	50
pecan	1/8 pie	503	64
pumpkin	1/8 pie	316	41
<b>Popsicle</b>	2 oz	42	11

### Puddings

chocolate, with low-fat milk	1/2 cup	151	28
rice, homemade	1/2 cup	217	40
tapioca, homemade	1/2 cup	190	26

### Sherbet

1 cup	254	55
-------	-----	----

### Sugar, white

1 Tbsp	50	13
--------	----	----

### Syrup

corn, dark	1 Tbsp	56	15
maple	1 Tbsp	52	13

Measure

Calories

Carbs (g)

## Miscellaneous



<b>Barbecue sauce</b>	1 Tbsp	12	2
-----------------------	--------	----	---

<b>Catsup, tomato</b>	1 Tbsp	16	4
-----------------------	--------	----	---

<b>Cocoa,</b> mix with milk	1 cup	213	30
--------------------------------	-------	-----	----

<b>Coconut,</b> fresh shredded	1 cup	283	12
-----------------------------------	-------	-----	----

### Dressings

blue cheese	1 Tbsp	77	1
-------------	--------	----	---

Italian, low-cal	1 Tbsp	15	2
------------------	--------	----	---

<b>Garlic</b>	1 clove	5	1
---------------	---------	---	---

<b>Mayonnaise</b>	1 Tbsp	100	0
-------------------	--------	-----	---

<b>Mustard</b>	1 tsp	4	0
----------------	-------	---	---

### Nuts

almonds	1 cup	870	26
---------	-------	-----	----

cashews	1 cup	749	37
---------	-------	-----	----

peanuts	1 cup	837	27
---------	-------	-----	----

pecans	1 cup	768	15
--------	-------	-----	----

walnuts	1 cup	654	14
---------	-------	-----	----

### Olives

green	4	18	0
-------	---	----	---

black	4	20	1
-------	---	----	---

<b>Peanut butter</b>	1 Tbsp	95	3
----------------------	--------	----	---

### Pickles

dill	1 slice	1	0
------	---------	---	---

relish	1 Tbsp	20	5
--------	--------	----	---

sweet gherkins	1	20	5
----------------	---	----	---

Measure

Calories

Carbs (g)

# Food Exchange Lists Index

## A

Almonds 29  
American cheese 28  
Angel food cake 22  
Animal crackers 17  
Apple 19  
Apple juice/cider 20  
Apples, dried 19  
Applesauce 19  
Apricots 19  
Artichoke 24  
Asparagus 24  
Avocado 29

## B

Bacon 28, 30  
Bacon grease 30  
Bagel 15  
Baked beans 17  
Baked potato 17  
Banana 19  
Bean soup 33  
Bean sprouts 24  
Beans 18, 24, 25  
Beef 26, 27  
Beets 24  
Biscuit 18  
Black-eyed peas 18  
Blackberries 19  
Blueberries 19  
Boiled potatoes 17  
Bologna 28  
Boston butt 27  
Bouillon 32  
Bran cereal 16  
Bratwurst 28  
Bread 15

Bread sticks 15  
Breakfast bar 22  
Broccoli 24  
Broth 32  
Brownie 22  
Brussels sprouts 24  
Buffalo 25  
Bulgur 16  
Burrito 35  
Butter 30  
Buttermilk 21

## C

Cabbage 24  
Cake 22  
Canadian bacon 26  
Candy 31  
Canola oil 29  
Cantaloupe 19  
Carbonated water 32  
Carrots 24  
Cashews 29  
Catfish 26  
Catsup 32  
Cauliflower 24  
Celery 24  
Cereal 16  
Cheddar 28  
Cheese 25, 26, 27, 28  
Cherries 19  
Chicken 25, 26, 27  
Chicken noodle soup 33  
Chicken nuggets 35  
Chicken salad 34  
Chicken sandwich 35  
Chicken wings 35  
Chili 34  
Chipped beef 25

Chitterlings 30  
Chocolate Milk 23  
Chow mein 34  
Chow mein noodles 18  
Clams 25  
Club soda 32  
Cocoa powder 32  
Coconut 30  
Coconut milk 30  
Cod 25  
Coffee 32  
Collard greens 24  
Condiments 32  
Consomme 32  
Cookies 22  
Cooking spray 31  
Corn 17  
Corn bread 18  
Corn oil 29  
Corn on cob 17  
Corned beef 27  
Cornish hen 25  
Cornmeal 16  
Cottage cheese 25  
Couscous 16  
Crab 25  
Crackers 18  
Cranberry juice 20  
Cranberry sauce 22  
Cream 30  
Cream cheese 30, 31  
Cream soup 33  
Creamer 31  
Croutons 18  
Cucumber 24  
Cupcake 22

## D

Danish 23  
Dates 19  
Deli meats 25, 26, 28  
Desserts 22  
Diet soft drinks 32  
Doughnut 22  
Drink mixes 32  
Dry milk 21  
Duck 25, 26

## E

Egg 27  
Egg substitutes 25  
Egg whites 25  
Eggplant 24  
Endive 24  
Energy bar 22  
English muffin 15  
Escarole 24  
Evaporated milk 21

## F

Fast Foods 35  
Fatback 30  
Feta 27  
Figs 19  
Fish 25, 26, 27  
Fish sandwich 35  
Flavoring extracts 32  
Flounder 25  
Flour 16  
French fries 18, 35  
Fried chicken 35  
Frozen entrees & meals 34  
Fruit 19  
Fruit cobbler 22  
Fruit cocktail 19  
Fruit juice 20

Fruit juice bars 22  
Fruit juice blends 20  
Fruit snacks 22  
Fruit spreads 22

## G

Game 25, 26  
Garbanzo beans 18  
Garlic 32  
Gelatin 22, 31  
Gingersnaps 22  
Goat's milk 21  
Goose 26  
Graham crackers 17  
Granola 16, 18  
Granola bar 22  
Grape juice 20  
Grape-Nuts® 16  
Grapefruit 18  
Grapefruit juice 20  
Grapes 19  
Green beans 24  
Green onions 24  
Greens 24  
Grits 16  
Ground beef 27  
Ground chicken 27  
Ground lamb 27  
Ground pork 28  
Ground turkey 27  
Gum 31

## H

Haddock 25  
Half and half 30  
Halibut 25  
Ham 26  
Hamburger 35  
Hamburger bun 15  
Heart 26

Herbs 32  
Herring 26  
Honey 22  
Honeydew 19  
Horseradish 32  
Hot dog 25, 26, 28, 36  
Hot dog bun 28  
Hummus 18

## I

Ice cream 22, 36  
Imitation shellfish 25  
Instant soup 33  
Italian beans 24  
Italian sausage 28

## J

Jam 23, 32  
Jelly 23, 32

## K

Kale 24  
Kasha 16  
Kefir 21  
Ketchup 32  
Kidney 25  
Kidney beans 18  
Kielbasa 26  
Kiwi 20  
Knockwurst 28  
Kohlrabi 24

## L

Lamb 26, 27  
Lard 30  
Lasagna 34  
Leeks 24  
Lemon juice 32  
Lentil soup 33  
Lentils 18, 25

Lettuce 24  
Lima beans 18  
Lime juice 32  
Liver 26  
Lobster 25  
Lox 25

## M

Macaroni and cheese 34  
Mandarin orange 20  
Mango 20  
Margarine 29, 31  
Mashed potatoes 17  
Matzoh 17  
Mayonnaise 29, 31  
Meal replacement shake 23  
Meat 25, 26, 27, 28  
Meatless burger 34  
Meatloaf 27  
Melba toast 17  
Melon 19  
Milk 21  
Millet 16  
Mineral water 32  
Miracle Whip® 29, 31  
Miso 18  
Mixed nuts 29  
Mixed vegetables 17, 24  
Monterey jack 29  
Mozzarella 27  
Muesli 16  
Muffin 18  
Mushrooms 24  
Mustard 32  
Mustard greens 24

## N

Naan 15  
Nectarine 20  
Nuts 29

## O

Oats 16  
Oil 29  
Okra 24  
Olive oil 29  
Olives 29  
Onions 24  
Orange 20  
Orange juice 20  
Ostrich 25  
Oyster crackers 17  
Oysters 26

## P

Pancake 15  
Papaya 20  
Parmesan cheese 26  
Pasta 16  
Pasta sauce 23  
Pea pods 24  
Peach 20  
Peanut butter 28, 29  
Peanut oil 29  
Peanuts 29  
Pear 20  
Peas 17, 18, 25  
Pecans 29  
Pepper sauce 32  
Peppers 24  
Pheasant 25  
Pickle relish 32  
Pickles 32  
Pie 23  
Pimento 32  
Pimento loaf 28  
Pineapple 20  
Pineapple juice 20  
Pinto beans 18  
Pita 15

Pizza 34, 36  
Plantain 17  
Plums 20  
Polish sausage 28  
Popcorn 17, 18  
Pork 26, 27, 28  
Pork chop 26, 27  
Pork sausage 28  
Pot Pie 34  
Potato 17  
Potato chips 18  
Poultry 25, 26, 27  
Pretzels 17  
Prime rib 27  
Prune juice 20  
Prunes 20  
Pudding 23  
Puffed cereal 16  
Pumpernickel 15  
Pumpkin seeds 29

## R

Rabbit 26  
Radishes 24  
Raisin bread 16  
Raisins 20  
Raspberries 20  
Rice 16  
Rice cakes 17  
Rice milk 23  
Ricotta 27  
Roll 15  
Romaine 24  
Rye bread 15

## S

Safflower oil 29  
Salad dressing 23, 29, 31  
Salad greens 24  
Salami 28



Salmon 25, 26  
Salsa 32  
Salt pork 30  
Saltine-type crackers 17  
Sandwich cookie 22  
Sandwich meats 25, 25, 28  
Sardines 26  
Sauerkraut 24  
Sausage 25, 27, 28  
Scallions 24  
Scallops 25  
Seeds 29  
Sesame paste 29  
Sesame seeds 29  
Shake 23  
Shellfish 25  
Sherbet 23  
Short ribs 27  
Shortening 30  
Shredded Wheat® 16  
Shrimp 25  
Smoked salmon 25  
Smoked sausage 28  
Snack bar 22  
Snack chips 17, 18  
Soups 33  
Sour cream 30, 31  
Soy burger 34  
Soy milk 21  
Soy sauce 32  
Soybean oil 29  
Spaghetti 34  
Spaghetti sauce 23  
Spareribs 28  
Spices 32  
Spinach 24  
Split pea soup 33  
Split peas 18  
Sport bar 22  
Sports drinks 23

Squash 17, 24  
Starchy vegetables 17  
Steak 26  
Strawberries 20  
Stuffing 18  
Submarine sandwich 36  
Sugar 23  
Sugar substitutes 32  
Sugar-frosted cereal 16  
Summer squash 24  
Sunflower seeds 29  
Sweet acidophilus milk 21  
Sweet potato 17  
Sweet roll 23  
Sweets 22  
Swiss cheese 28  
Syrup 23, 32

## T

Tabasco® 32  
Taco 36  
Taco sauce 32  
Taco shell 18  
Tahini paste 29  
Tangerines 20  
Tea 32  
Tempeh 27  
Tofu 27  
Tomato 24  
Tomato juice 24  
Tomato sauce 24  
Tomato soup 33  
Tonic water 32  
Tortilla 16  
Tortilla chips 18  
Trout 25  
Tuna 25, 26  
Tuna noodle casserole 34  
Tuna salad 34  
Turkey 25, 26

Turkey ham 25  
Turkey pastrami 26  
Turnip greens 24  
Turnips 24

## V

Vanilla wafers 23  
Veal 26, 27  
Vegetable beef soup 33  
Vegetable burger 34  
Vegetable juice 24  
Venison 25  
Vinegar 32

## W

Waffle 16, 18  
Walnuts 29  
Water chestnuts 24  
Watercress 24  
Watermelon 20  
Wax beans 24  
Wheat germ 16  
Whipped topping 31  
White beans 18  
Wheat crackers 17, 18  
Wine 32  
Winter squash 17  
Worcestershire sauce 32

## Y

Yam 17  
Yogurt 21, 23, 32

## Z

Zucchini 24

## Create your personalized meal plan.

Food Item

**Breakfast**

Carbohydrate

_____	_____
_____	_____
_____	_____
_____	_____

Total carbohydrate \_\_\_\_\_

**Lunch**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total carbohydrate \_\_\_\_\_

**Dinner**

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Total carbohydrate \_\_\_\_\_

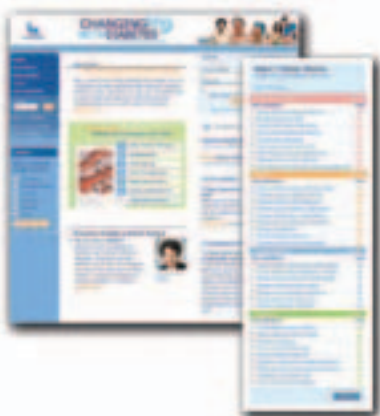
**Snacks**

_____	_____
_____	_____

Total carbohydrate \_\_\_\_\_

# CHANGINGlife WITHDIABETES

Enjoy the benefits and support of the FREE *Changing Life With Diabetes* program. Simply enroll online at [ChangingDiabetes-us.com](http://ChangingDiabetes-us.com). Take advantage of our online menu planner which offers a variety of tools to help you create delicious, diabetes-friendly meals. The Menu Planner is just one of the many innovative solutions offered at [ChangingDiabetes-us.com](http://ChangingDiabetes-us.com) to help you manage your diabetes. So join today!



Another program that will help you manage your diabetes is the FREE Novo Nordisk Tip Line. Call 1-800-260-3730 to hear information on a number of diabetes self-care topics, such as:

- Insulin delivery made easy
- Helping a loved one cope with diabetes, and
- Guidelines for healthy meal planning

The Novo Nordisk Diabetes Tip Line is available 24/7—so, call today to make the most of this helpful service.

# Novo Nordisk is dedicated to changing diabetes.

Defeating diabetes is our  
passion and our business.

As a leader and innovator in diabetes, Novo Nordisk is dedicated to improving diabetes care worldwide and bringing hope to the millions of people living with diabetes.

The *Changing Life With Diabetes* educational series is designed to help patients and caregivers, in cooperation with their healthcare provider, improve their understanding and care of diabetes.



- Diabetes & You • Avoiding Diabetes Complications • Introduction to Insulin
- Diabetes and Exercise • Your Blood Glucose Diary • Intensive Insulin Therapy
- Understanding Diabetes Care • Carb Counting & Meal Planning

The photographs used in this booklet are for illustration only. The models in the photographs do not necessarily have diabetes or other ailments or use or endorse any products mentioned.