

# The Foods List for Diabetic Meal Planning

Dr. Rosemary  
Rodibaugh, RD, LD  
Professor - Nutrition

Tejaswini Mirji-Lakkundi  
MS, RDN, LD  
Program Technician

If you or someone you know has diabetes, you may be worried about what the future holds. Diabetes is likely to cause changes in your life, but with proper care, most people with diabetes can live much as they did before developing the disease.

Diabetes is a condition whereby the body does not make enough insulin or use it properly. Without insulin, the body cannot utilize food for energy. People with diabetes can have high blood glucose levels and many have high blood pressure, high cholesterol and triglyceride levels.

The two main types of diabetes are:

- Type 1 or insulin-dependent
- Type 2 or non-insulin-dependent

Type 1 is treated with daily insulin injections, regular exercise and a balanced meal plan. The daily meal plan is tailored to an individual's needs. It is likely to include three meals and two or three snacks eaten at set times each day. Type 2 is treated with an individualized diet plan that usually restricts calories so the individual can reach and maintain a healthy weight. Treatment also includes following a regular exercise plan. If diet and exercise do not control blood glucose, oral medication or insulin injections may be needed.

The nutritional goals for management of diabetes include the following:

- Maintain desirable blood glucose and blood lipid (fat) levels.

- Maintain optimal nutritional status.
- Reach and maintain a healthy weight.

Usually, a doctor will prescribe a visit with a registered dietitian (RD) or registered dietitian nutritionist (RDN) who can help the person with diabetes work out a specific meal plan. Often, the meal plan is a guide which shows the number of food choices to eat at each meal and snack using the food lists for diabetes.

The food lists for diabetes group foods together because they are alike. Foods on each list have about the same amount of carbohydrate, protein, fat and calories. In the amounts given, all choices on each list are equal. *Any food on the list can be exchanged or traded for any other food on the list.*

The lists are grouped into three main groups: carbohydrate group, protein group and fat group. The carbohydrate group contains the starch, fruit, milk, sweets, other carbohydrates and non-starchy vegetable lists. Grouping foods this way allows for more convenient exchange among these lists and more flexibility in choosing foods. The protein group contains lean, medium-fat, high-fat meat and plant-based foods list. The fat group contains monounsaturated, polyunsaturated and saturated fats lists.

Visit our web site at:  
<https://www.uaex.uada.edu>

## Starch List

Each item on this list contains approximately 15 grams of carbohydrate, 3 grams of protein, a trace of fat and 80 calories. Whole grain products average about 2 grams of fiber per serving. As a general rule, ½ cup of cooked cereal, grain or starchy vegetable, ⅓ cup cooked rice or pasta, ¾ to 1 ounce of most snack foods and 1 ounce of a bread product equal one serving.

### Dried Beans/Peas/Lentils

Beans and peas, cooked (such as kidney, white, lima, split, black-eyed) .....	½ cup
Baked beans .....	⅓ cup
Lentils, cooked .....	½ cup

### Starchy Vegetables

Corn .....	½ cup
Corn on the cob, 6-inch .....	1
Peas, green .....	½ cup
Potato, baked or broiled .....	1 small (3 oz)
Potato, French-fried, oven-baked .....	1 cup (2 oz)
Potato, mashed .....	½ cup
Squash, winter (acorn, butternut) .....	1 cup
Yam, sweet potato, plain .....	½ cup
Baked beans .....	⅓ cup

### Cereals/Grains/Pasta

Bran cereals .....	½ cup
Bulgur .....	½ cup
Cooked cereals .....	½ cup
Cornbread .....	1½ oz
Grits, cooked .....	½ cup
Cereals, ready-to-eat unsweetened .....	¾ cup
Cereals, sugar-coated .....	½ cup
Pasta, cooked .....	⅓ cup
Puffed cereal .....	1½ cups
Rice, white or brown (cooked) .....	⅓ cup
Shredded wheat .....	½ cup
Wheat germ .....	3 tablespoons

### Bread

Bagel .....	¼ large bagel (1 oz)
Bread, reduced-calorie, light .....	2 slices (1½ oz)

Bread-white, wheat, rye, raisin .....	1 slice (1 oz)
English muffin .....	½ muffin
Frankfurter or hamburger bun .....	½ bun (¾ oz)
Pancake, 4 inches across .....	1
Pita, 6 inches across .....	½ pita
Plain roll, small .....	1 small roll (1 oz)
Tortilla, (corn, white or wheat) 6 inches across .....	1 tortilla
Waffle, 4-inch square .....	1 waffle

### Crackers/Snacks

Animal crackers .....	8 crackers
Graham crackers, 2½ inches .....	3 crackers
Granola .....	1 bar or ¾ cup
Matzoth .....	¾ oz
Melba toast .....	4 pieces
Oyster crackers .....	20 crackers
Popcorn (popped, no fat added) .....	3 cups
Pretzels .....	¾ oz
Rice cakes, 4 inches across .....	2 cakes
Saltine-type crackers .....	6 crackers
Whole wheat crackers (baked) .....	5 regular or 10 thins (¾ oz)

### Starchy Foods Prepared With Fat

(Count as 1 starch/bread serving plus 1 fat serving.)

Biscuit, 2½ inches across .....	1 biscuit
Chow mein noodles .....	½ cup
Cracker, round butter type .....	6 crackers
Muffin, plain, small, homemade .....	1 oz
Stuffing, bread (prepared) .....	⅓ cup
Taco shell, 5 inches across .....	2 taco shells
Sandwich crackers, cheese/peanut butter .....	3 crackers

## Fruit List

Each item on this list contains about 15 grams of carbohydrate and 60 calories. Fresh, frozen and dry fruits are good sources of fiber per serving. Fruit juices contain very little dietary fiber.

Use fresh fruits or frozen or canned fruits without added sugar. Unless stated otherwise, the serving size for one fruit choice may include one of the following:

- 1 small fresh fruit (¾ to 1 cup)
- ½ cup of canned or frozen fruit or fruit juice
- ⅓ cup (2 tablespoons) of dried fruit

Apple (raw, 2 inches across) .....	1 apple (4 oz)
Applesauce (unsweetened) .....	½ cup
Apricots (medium, raw) .....	4 apricots
Apricots (canned) .....	½ cup
Banana (extra small) .....	1 banana (4 oz)
Blackberries (raw) .....	1 cup
Blueberries (raw) .....	¾ cup
Cantaloupe (cubes) .....	1 cup
Cherries (large, raw) .....	12 cherries
Cherries (canned) .....	½ cup
Figs (raw) .....	1½ large or 2 medium
Fruit cocktail (canned) .....	½ cup

Grapefruit (large) .....	½ fruit
Grapefruit, segments .....	¾ cup
Honeydew (cubes) .....	1 cup
Kiwi (sliced) .....	½ cup
Mandarin oranges .....	¾ cup
Mango (small) .....	½ mango or ½ cup
Nectarine (small) .....	1 nectarine
Orange (medium) .....	1 orange
Peach (medium) .....	1 peach (6 oz)
Peaches (canned) .....	½ cup
Pear .....	½ large pear (4 oz)

Pears (canned).....	½ cup
Pineapple (raw).....	¾ cup
Pineapple (canned).....	½ cup
Plums (small) .....	2 plums
Raspberries (raw).....	1 cup
Strawberries (raw, whole).....	1¼ cups
Tangerine (large).....	1 fruit
Watermelon, cubes .....	1¼ cups

**Dried Fruit**

Apples .....	4 rings
Apricots .....	8 halves
Dates .....	3 small
Figs.....	3 small

Prunes .....	3 medium
Raisins.....	2 tablespoons

**Fruit Juices**

Apple juice/cider .....	½ cup
Cranberry juice, 100% juice, no sugar added .....	½ cup
Grapefruit juice.....	½ cup
Fruit juice blends, 100% juice .....	⅓ cup
Grape juice .....	⅓ cup
Orange juice .....	½ cup
Pineapple juice.....	½ cup
Prune juice .....	⅓ cup

**Milk List**

*Each serving of milk or milk product on this list contains about 12 grams of carbohydrate and 8 grams of protein. Calories vary depending on the amount of fat in the kind of milk you choose. The list is divided into fat-free (skim) and low-fat milk (1%), reduced-fat milk (2%) and whole milk.*

**Fat-Free (Skim) and Low-Fat Milk (1%)**

*(One exchange contains 12 grams of carbohydrate, 8 grams of protein, 0-3 grams of fat and 100 calories.)*

Milk .....	1 cup
Buttermilk .....	1 cup
Evaporated skim milk .....	½ cup
Dry nonfat milk .....	⅓ cup
Yogurt, plain or Greek .....	⅔ cup (6 oz)
Fruit-flavored yogurt with aspartame or non-nutritive sweetener.....	⅔ cup

**Reduced-Fat Milk (2%)**

*(One exchange contains 12 grams of carbohydrate, 8 grams of protein, 5 grams of fat and 120 calories.)*

Milk.....	1 cup
Yogurt, plain .....	⅔ cup

**Whole Milk**

*(One exchange contains 12 grams of carbohydrate, 8 grams of protein, 8 grams of fat and 150 calories.) Limit choices from the whole milk category as much as possible.*

Milk.....	1 cup
Evaporated milk .....	½ cup
Goat's milk .....	1 cup

**Other Carbohydrate List**

*Foods in this list can be substituted for foods from the starch, fruit or milk lists. Some will also count as one or more fat exchanges.*

<b>Food</b>	<b>Serving Size</b>	<b>Exchanges Per Serving</b>
Angel food cake, unfrosted.....	1/12 cake (about 2 oz) .....	2 carbohydrates
Brownie, small, unfrosted .....	1¼" square (about 1 oz) .....	1 carbohydrate, 1 fat
Cake, unfrosted .....	2" square (about 1 oz) .....	1 carbohydrate, 1 fat
Cake, frosted .....	2" square (about 2 oz) .....	2 carbohydrates, 1 fat
Cookie, chocolate chip .....	2 cookies (2¼" across) .....	1 carbohydrate, 2 fats
Doughnut, plain cake.....	1 medium .....	1½ carbohydrates, 2 fats
Doughnut, glazed .....	1 (3¾" across).....	2 carbohydrates, 2 fats
Fruit spreads, 100% fruit .....	1½ tablespoons.....	1 carbohydrate
Gelatin, regular .....	½ cup .....	1 carbohydrate
Ice cream.....	½ cup .....	1 carbohydrate, 2 fats
Ice cream, light .....	½ cup .....	1 carbohydrate, 1 fat
Ice cream, fat-free .....	½ cup .....	1½ carbohydrates
Ice cream, no sugar added.....	½ cup .....	1 carbohydrate, 1 fat
Pie, fruit, 2 crusts.....	1/6 of 8-inch pie .....	3 carbohydrates, 2 fats
Pie, pumpkin or custard.....	1/8 of 8-inch pie .....	1½ carbohydrates, 1½ fats
Pudding, regular, with reduced-fat milk .....	½ cup .....	2 carbohydrates
Pudding, sugar-free, fat-free milk.....	½ cup .....	1 carbohydrate
Snack chips, regular .....	1 oz .....	1 carbohydrate, 2 fats
Sherbet, sorbet .....	½ cup .....	2 carbohydrates
Spaghetti sauce, canned .....	½ cup .....	1 carbohydrate,
Sweet roll or Danish .....	1 pastry (2½ oz).....	2½ carbohydrates, 2 fats
Syrup, regular .....	1 tablespoon .....	1 carbohydrate
Yogurt, frozen, fat-free.....	1/3 cup .....	1 carbohydrate,
Yogurt, low-fat with fruit .....	.....	1 carbohydrate, 1 fat-free milk

## Non-Starchy Vegetable List

Each vegetable on this list contains about 5 grams of carbohydrate, 2 grams of protein, 0 grams of fat and 25 calories. Vegetables contain 2 to 3 grams of dietary fiber. Unless stated otherwise, one vegetable exchange is as follows:

- ½ cup of cooked vegetable or vegetable juice
- 1 cup of raw vegetables

Cucumber	Okra	Summer squash
Eggplant	Onions	Tomato
Greens (collard, kale, mustard, turnip)	Pea pods	Tomato sauce (unsweetened)
Green onions	Peppers (all varieties)	Tomato/vegetable juice
Kohlrabi	Radishes	Turnips
Leeks	Salad greens	Water chestnuts
Mixed vegetables (without corn, peas or pasta)	Sauerkraut, drained and rinsed	Watercress
Mushrooms, all kinds, fresh	Spinach	

## Protein List

Each serving of protein (meats and plant-based) on this list contains about 7 grams of protein. The amount of fat and calories varies, depending on the choice. The list is divided into lean protein, medium-fat protein, high-fat protein and plant-based protein. One protein exchange is as follows:

- 1 ounce of meat, poultry, fish or cheese
- ½ cup dried beans

### Lean Protein

(One exchange has 7 grams of protein, 2 grams fat and 45 calories and equals any one of the following items.)

Beef: USDA Select or Choice grades trimmed of fat, tenderloin; roast (round, sirloin, chuck, rump); steak (flank, T-bone, porterhouse, cubed); ground (90% or higher lean/10% or lower fat) .....	1 oz
Beef jerky .....	½ oz
Cheese with 3 grams or less fat per ounce:	
Nonfat or low-fat cheese .....	1 oz
Curd style cheese: cottage, ricotta .....	¼ cup
Eggs:	
Egg whites .....	2
Egg substitutes, plain .....	¼ cup
Fish:	
Fresh or frozen catfish, cod, flounder, haddock, halibut, trout; orange roughy, tilapia, tuna, fresh or canned in water, salmon (fresh or canned), smoked herring or salmon .....	1 oz
Sardines, canned .....	2 small sardines
Shellfish: clams, crab, lobster, scallops, shrimp, imitation shellfish .....	1 oz
Game: pheasant (no skin), rabbit, venison, buffalo, ostrich.....	1 oz
Lamb: roast, chop, leg.....	1 oz
Organ meats: heart, liver, kidney (high cholesterol).....	1 oz
Other:	
Hot dogs with 3 grams or less fat per ounce .....	1¾ oz
Processed sandwich meats with 3 grams or less fat per ounce, such as deli thin, shaved meats, chipped beef, turkey ham.....	1 oz
Pork: lean pork such as fresh ham; Canadian bacon, tenderloin; rib or loin chop/roast .....	1 oz
Poultry, without skin: chicken, domestic duck or goose, Cornish hen; lean ground turkey or chicken .....	1 oz
Sausage with 3 grams or less fat per ounce .....	1 oz
Veal: loin, chop, roast.....	1 oz

### Medium-Fat Protein

(One exchange has 0 grams of carbohydrate, 7 grams of protein, 5 grams of fat and 75 calories.)

Beef: ground beef (85% or lower lean/15% or higher fat), meatloaf, corned beef, short ribs, prime cuts (rib roast), tongue .....	1 oz
Fish: any fried fish product.....	1 oz
Roast.....	1 oz
Cheese: with 4-7 grams of fat per ounce:	
Ricotta.....	2 oz (¼ cup)
Feta, mozzarella, pasteurized processed cheese spread, reduced fat cheeses .....	1 oz
Egg .....	1 egg
Lamb: ground, rib, roast .....	1 oz
Pork: cutlet, ground, shoulder roast .....	1 oz

Poultry with skin: chicken, dove, pheasant, turkey, wild goose .....	1 oz
Sausage with 4-7 grams of fat per ounce .....	1 oz

### High-Fat Protein

(One exchange has 0 grams of carbohydrate, 7 grams of protein, 8 grams of fat and 100 calories.)

Bacon, pork .....	2 slices
Bacon, turkey .....	3 slices
Cheese, regular: American, Cheddar, Swiss, Monterey Jack, blue-veined, brie, goat, Parmesan, queso .....	1 oz
Pork: spareribs, sausage .....	1 oz
Processed sandwich meats with 8 grams or more fat per ounce, such as bologna, hard salami, pastrami .....	1 oz
Sausage, such as bratwurst, chorizo, knockwurst, smoked, summer, Polish, Italian .....	1 oz

### Plant-Based Protein

(Read food labels to correctly understand carbohydrate content.)

'Bacon' strips, soy-based .....	2 strips (½ oz) = 1 lean protein
Baked beans, canned .....	½ cup = 1 lean protein + 1 starch
Beans and peas (black, garbanzo, kidney, lima, navy, pinto, white, black-eyed and split peas), cooked or canned, drained and rinsed .....	½ cup = 1 lean protein + 1 starch
'Beef' or 'sausage' crumbles, meatless .....	1 oz = 1 lean protein
'Chicken' nuggets, soy-based .....	2 nuggets (1½ oz) = 1 medium-fat protein + ½ carbohydrate
Edamame, shelled .....	½ cup = 1 lean protein + ½ carbohydrate
Falafel .....	3 patties (2 inches across) = 1 high-fat protein + 1 carbohydrate
Hot dog, meatless, soy-based .....	1 hot dog = 1 lean protein
Hummus .....	½ cup = 1 medium-fat protein + 1 carbohydrate
Lentils, cooked or canned, drained and rinsed .....	½ cup = 1 lean protein + 1 starch
Meatless burger, soy-based .....	3 oz = 2 lean proteins + ½ carbohydrate
Meatless burger, vegetables and starch based .....	1 patty (approximately 2½ oz) = 1 lean protein + ½ carbohydrate
Meatless, deli slices .....	1 oz = 1 lean protein
'Chicken' tenders or crumbles, meatless .....	2 oz = 1 lean protein + ½ carbohydrate
Nut spreads/butters: almond, cashew, peanut, soy nut .....	1 tablespoon = 1 high-fat protein
Refried beans, canned .....	½ cup = 1 lean protein + 1 starch
'Sausage' breakfast-type patties, meatless .....	1 (1½ oz) = 1 medium-fat protein
Soy nuts, unsalted .....	¾ oz = 1 medium-fat protein + ½ carbohydrate
Tempeh, plain .....	¼ cup (1½ oz) = 1 medium-fat protein
Tofu .....	½ cup (4 oz) = 1 medium-fat protein
Tofu, light .....	½ cup (4 oz) = 1 lean protein

## Fat List

*Fats are divided into three groups: unsaturated fats (monounsaturated, polyunsaturated), saturated fats (animal sources) and trans fat (very unhealthy, best avoided). Each serving on the fat list contains 5 grams of fat and 45 calories. Items on this list should be used sparingly.*

### Monounsaturated Fats

Avocado, medium .....	2 tablespoons (1 oz)
Oil (canola, olive, peanut) .....	1 teaspoon
Olives: ripe (black) .....	8 large
green, stuffed .....	10 large
Nuts:	
Almonds, cashews, mixed (50% peanuts) .....	6 nuts
Peanuts .....	10 nuts
Pecans .....	4 halves
Peanut butter, smooth or crunchy .....	1½ teaspoons

### Polyunsaturated Fats

Margarine (stick, tub, squeeze) .....	1 teaspoon
Margarine, reduced-fat .....	1 tablespoon
Mayonnaise, regular .....	1 teaspoon
Mayonnaise, reduced-fat .....	1 tablespoon
Oil (corn, safflower, soybean) .....	1 teaspoon
Salad dressings, regular .....	1 tablespoon

Salad dressings, reduced-fat (may

contain carbohydrate) .....	2 tablespoons
Seeds, pumpkin, sesame or sunflower .....	1 tablespoon

### Saturated Fats

Butter: stick .....	1 teaspoon
whipped .....	2 teaspoons
reduced fat .....	1 tablespoon
Bacon .....	1 slice
Chitterlings .....	½ oz (2 tablespoons)
Coconut, sweetened, shredded .....	2 tablespoons
Cream, light .....	1½ tablespoons
whipped or half and half .....	2 tablespoons
heavy, whipping .....	1 tablespoon
Sour Cream, regular .....	2 tablespoons
reduced fat .....	3 tablespoons
Cream cheese, regular .....	1 tablespoon
Cream cheese, reduced fat .....	1½ tablespoons
Salt pork .....	¼ oz

## Free Foods

---

A free food is any food or drink that contains less than 20 calories and 5 grams or less carbohydrate per serving. Use as much as you want for those items that have no serving size specified. Items that have a specific serving size should be limited to 3 servings per day.

### Fat-Free or Reduced-Fat Foods

Cream cheese, fat-free .....	1 tablespoon
Creamers, nondairy, liquid, flavored .....	1½ teaspoons
Creamers, nondairy, flavored, powdered.....	1 teaspoon
Creamers, nondairy, sugar-free, powdered, flavored.....	2 teaspoons
Mayonnaise, fat-free .....	1 tablespoon
Mayonnaise, reduced-fat.....	1 teaspoon
Margarine, fat-free.....	4 tablespoons
Margarine, reduced-fat.....	1 teaspoon
Salad dressing, mayonnaise-type, reduced fat .....	2 teaspoons
Salad dressing, fat-free .....	1 tablespoon
Salad dressing, fat-free, Italian .....	2 tablespoons
Salsa .....	¼ cup
Sour cream, fat-free or reduced fat.....	1 tablespoon
Whipped topping, light or fat-free.....	2 tablespoons
Whipped topping, regular .....	1 tablespoon

### Sugar-Free or Low-Sugar Foods

Candy, hard, sugar-free .....	1 candy
Gelatin, sugar-free	

Gum, sugar-free	
Jam/jelly, sugar-free .....	2 teaspoons
Pancake syrup, sugar-free .....	2 tablespoons
Sugar substitute	

### Drinks

Bouillon or broth without fat	
Bouillon, low-sodium	
Carbonated drinks, sugar-free	
Club soda	
Cocoa powder, unsweetened.....	1 tablespoon
Coffee/tea, unsweetened or with sugar substitute	
Drink mixes, sugar-free	
Tonic water, sugar-free	

### Condiments

Catsup .....	1 tablespoon
Horseradish	
Lemon or lime juice	
Dill pickles, unsweetened.....	1½ medium
Soy sauce, light or regular .....	1 tablespoon
Taco sauce .....	1 tablespoon
Vinegar	

## Combination Foods

---

Many foods we eat are combinations of foods that do not fit into only one exchange list. This list gives average values for some typical combination foods and can help you fit these foods into your meal plan.

Food	Amount	Exchange
Casseroles, homemade .....	1 cup (8 oz).....	2 carbohydrates + 2 medium-fat proteins
Cheese pizza, thin crust.....	¼ of 12" .....	2 carbohydrates + 2 medium-fat proteins
Pizza, meat topping, thin crust.....	¼ of 12" .....	2 carbohydrates + 2 medium-fat proteins + 1½ fat
Soups		
Bean or split pea .....	1 cup (8 oz).....	1½ carbohydrate + 1 lean protein
Cream, made with water .....	1 cup (8 oz).....	1 carbohydrate + 1 fat
Vegetable, beef or chicken noodle .....	1 cup (8 oz).....	1 carbohydrate + 1 lean protein

A meal plan for persons with diabetes is flexible and can be adjusted for varying needs, likes and dislikes. Check with your RD or RDN regularly to review your meal plan and ask any questions you may have. Your county Extension agent - family and consumer sciences can also provide information on healthy eating.

**Reference:** *Choose Your Foods – Food Lists for Diabetes*, The American Diabetes Association and the Academy of Nutrition and Dietetics, 2014.