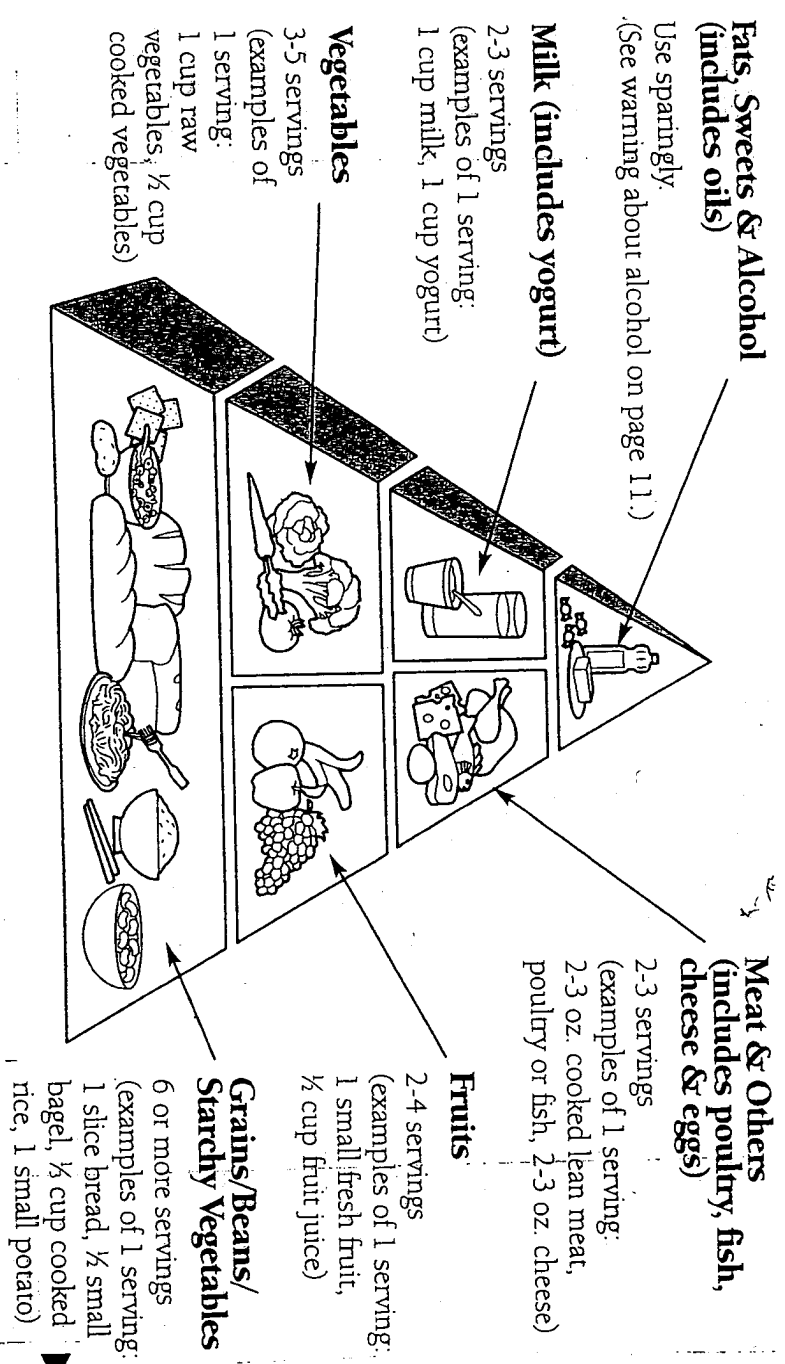


# This food pyramid is one tool

to help you eat a variety of healthy foods. It shows you the different food groups and the recommended number of servings to eat from each group.



	1,200	1,500	1,800	2,000	2,500	Other:
<b>Carbohydrates</b>	(11)	(13)	(16)	(17)	(22)	
Starch	5	7	8	9	11	
Fruit	3	3	4	4	6	
Milk	2	2	3	3	3	
Vegetables	2	2	3	4	5	
Other						
<b>Meat &amp; Meat Substitutes</b>	4	4	6	6	8	
<b>Fat</b>	3	4	4	5	6	

PLEASE VISIT [WWW.DIABETES.ORG](http://WWW.DIABETES.ORG) FOR ADDITIONAL INFORMATION ON MEAL PLAN RECOMMENDATIONS FROM THE AMERICAN DIABETES ASSOCIATION.

## Carbohydrate Counting

Carbohydrate (starch and sugar) is the main item in food that raises blood sugar. When using Carbohydrate Counting for diabetes meal planning, only keep track of the foods that contain carbohydrate. All the carbohydrate-containing foods are in the shaded area of the food lists. The amount of carbohydrate that's best for you may be given either as a number of servings or as a number of grams. In Carbohydrate Counting, a serving from any of these high carbohydrate groups is considered to be equal: Starch, Fruit, Milk, Other Carbohydrates (Sweets). **Note that it takes three vegetable servings to provide the same amount of carbohydrates as other carbohydrate food groups.** Use nutrition labels to find the carbohydrate value of foods not included on the lists.

## Exchange Meal Plans

An exchange meal plan shows you which foods to eat and in what portions. Foods are divided into groups of like foods: Carbohydrates (Starches, Fruits, Milk, Vegetables, and Other Carbohydrates), Meat and Meat Substitutes, and Fats. Your own plan will consist of a certain number of servings from each group. The exact number depends on your energy needs. The table below the Food Guide Pyramid shows the number of servings from each group that make up several commonly used calorie levels.

# Exchange lists

## Meat and meat substitutes

Choose very lean and lean meat options whenever possible.

1 exchange (1 oz., unless other measure noted) = 7 g protein

### VERY LEAN MEAT AND SUBSTITUTES

0-1 g fat, 35 calories:

chicken or turkey (white meat, no skin), tuna (fresh or canned in water), ¼ cup nonfat or low-fat cottage cheese, 2 egg whites

### LEAN MEAT AND SUBSTITUTES

3 g fat, 55 calories:

lean beef trimmed of fat (such as sirloin), ground round, chicken or turkey (dark meat, no skin), lean pork (such as fresh ham), tuna (canned in oil, drained), ¼ cup 4.5%-fat cottage cheese, cheeses with 3 g or less fat per oz.

### MEDIUM-FAT MEAT AND SUBSTITUTES

5 g fat, 75 calories:

ground beef (or chicken or turkey), corned beef, pork chops, chicken (with skin – dark meat or fried), fried fish, cheeses with 5 g or less of fat per oz., 1 egg (limit to 3 per week), 1 cup soy milk, 4 oz. or ½ cup tofu

### HIGH-FAT MEAT AND SUBSTITUTES

8 g fat, 100 calories:

ground pork, pork sausage, all regular cheeses (such as American, cheddar or Swiss), 1 chicken or turkey hot dog (10/lb.), 3 slices bacon (20 slices/lb.), 1 hot dog\* (beef, pork or combination – 10/lb.), 2 Tbsp. peanut butter.\*\*

\*Count as 1 high-fat meat plus 1 fat exchange.

\*\*Count as 1 high-fat meat plus 2 fat exchanges.

## Milk

1 exchange = 12 g carbohydrate, 8 g protein

Milk – nonfat or low-fat (1%) .....	1 cup
.....	(includes 0-3 g fat)
Milk – reduced fat (2%) .....	1 cup
.....	(includes 5 g fat)
Low-fat yogurt (plain) .....	¾ cup
.....	(includes 5 g fat)

## Starch

1 exchange = 15 g carbohydrate, 3 g protein, 0-1 g fat, 80 calories

Bagel .....	½ (1 oz.)
Beans and peas* (garbanzo, pinto, kidney, white, split, black-eyed) .....	½ cup
Bread .....	1 slice (1 oz.)
English muffin .....	½
Cereals (cooked) .....	½ cup
Cereal (unsweetened, ready-to-eat) .....	¾ cup
Corn or green peas .....	½ cup
Pancakes (4 inches across) .....	2
Pasta .....	½ cup
Potato (baked or boiled) .....	1 small (3 oz.)
Potato (mashed) .....	½ cup
Rice (white or brown) .....	½ cup
Tortilla (6 inches across) .....	1

\*Count as 1 starch exchange plus one very lean meat exchange.

## Fruit

1 exchange = 15 g carbohydrate, 60 calories (weight includes skin, core, seeds and rind)

Apple (unpeeled) .....	1 small (4 oz.)
Banana .....	1 small (4 oz.)
Canned peaches or pears .....	½ cup
Orange, grapefruit or apple juice .....	½ cup
Raisins .....	2 Tbsp.
Strawberries .....	1¼ cup whole berries
Watermelon .....	1 slice (13½ oz.) or 1¼ cup cubes

## Vegetable

1 exchange (½ cup cooked, 1 cup raw) = 5 g carbohydrate, 2 g protein, 0 g fat, 25 calories

Asparagus	Greens (collard, kale, mustard)
Beans (green)	Mushrooms
Beets	Onions
Broccoli	Pea pods
Cabbage	Peppers (all varieties)
Carrots	Salad greens (lettuce, spinach)
Cauliflower	Summer squash
Celery	Tomato
Cucumber	Turnips
Eggplant	Zucchini

### List 3 - Vegetables

(5 grams carbohydrate, 2 grams protein, and 25 calories per serving)

Vegetables are a great source of vitamins and minerals and many also provide some fiber. A serving is 1/2 cup of cooked vegetables, 1/2 cup of vegetable juice, or 1 cup of raw vegetables. (Starchy vegetables like potatoes, corn, and peas are listed with Starches/Breads — List 1. Vegetables with fewer than 20 calories per serving are listed with Free Foods — List 7.)

Beans (green, waxed, Italian, snap)	Onion
Bean sprouts	Pea pods or snow peas
Beets	Peppers
Broccoli	☑ Sauerkraut
Cactus leaves (nopales)	Spinach
Cabbage	Squash (summer, crook neck, zucchini, calabazita)
Carrots	Tomato
Eggplant	Tomato or vegetable juice
Greens	☑
Jicama	Water chestnuts
Mushrooms	
Okra	

### List 4 - Fruits

(15 grams carbohydrate and 60 calories per serving)

Fruits provide important vitamins and minerals and can be a good source of fiber. To get the most fiber from fruits, eat the edible peelings.

You can estimate the serving size for fruits that aren't on the list as follows:

Fresh, canned, or frozen fruit, no sugar added	1/2 cup
Dried fruit	1/4 cup

#### Serving Size

Apple; raw (2" across)	1
Applesauce; no sugar added	1/2 cup
☑ Banana (medium)	1/2
☑ Berries (raspberries, boysenberries)	1 cup
☑ Berries (blackberries, blueberries)	3/4 cup
Cantaloupe or honeydew melon	1 cup
Cherries; raw (large)	12
Grapefruit (medium)	1/2
Grapes (small)	15
Mamey (medium)	1/2
Mandarin oranges	3/4 cup
Mango; fresh (small)	1/2
Orange (2 1/2" across)	1
Papaya	1 cup
Peach or pear (2 3/4" across)	1 whole
Pineapple; fresh	3/4 cup
Plums; raw (2" across)	2
Raisins	2 Tbsp
Watermelon	1 1/4 cup

### List 5 - Milk and Milk Products

Milk and milk products supply calcium and other minerals, vitamins, protein, and carbohydrates. Choose low-fat and skimmed varieties for health. They have less fat, calories, and cholesterol than whole milk products.

#### Skim Milk and Skim Milk Products

(12 grams carbohydrate, 8 grams protein, 1 gram fat, and 90-110 calories per serving)

#### Serving Size

Skim, 1/2%, or 1% milk	8 oz
Buttermilk (low-fat)	8 oz
Yogurt (nonfat, plain or artificially sweetened)	8 oz
Hot cocoa from mix (artificially sweetened)	1 envelope

#### Low-fat Milk and Low-fat Milk Products

(12 grams carbohydrate, 8 grams protein, 3 or more grams fat, and 120-150 calories per serving)

2% milk	8 oz
Yogurt (low-fat, plain)	8 oz

#### Whole Milk and Whole Milk Products

(12 grams carbohydrate, 8 grams protein, 5 or more grams fat, 150-170 calories per serving)

To reduce your intake of cholesterol and saturated fat, limit or avoid foods in this group.

Whole milk	8 oz
Yogurt, regular, plain	8 oz

### List 6 - Fats

(5 grams fat and 45 calories per serving)

Fats add flavor and moisture to foods but provide few nutrients, such as vitamins and minerals. The serving sizes of all fats are small. Choose unsaturated fats instead of saturated fats to help lower blood cholesterol levels.

#### Unsaturated Fats

#### Serving Size

Avocado, 4" across	1/8
Margarine, stick, tub	1 tsp
Margarine, diet	1 Tbsp
Mayonnaise, regular	1 tsp
Mayonnaise, reduced-calorie	1 Tbsp
Pesto sauce	2 tsp
Salad dressing, regular	1 Tbsp
Salad dressing, reduced-calorie	2 Tbsp
Oil (canola, corn, safflower, sunflower, olive, soybean, peanut, sesame)	1 tsp
Nuts or seeds	1 Tbsp

#### Saturated Fats

Bacon	1 slice
Butter	1 tsp
☑ Chicken fat, pork fat, or beef fat	1 tsp
☑ Lard	1 tsp
Nondairy creamer, liquid	2 Tbsp
Nondairy creamer, powdered	4 tsp
Cream (light, table, coffee, sour)	2 Tbsp
Cream cheese	1 Tbsp

# Meal Planning

## List 1 - Starches/Breads

(15 grams carbohydrate, 3 grams protein, 1 gram fat, and 80 calories per serving)

These foods are the cornerstone of every healthy eating plan. Most of their calories come from carbohydrates, a good source of energy. Many foods from this group also give you needed fiber, vitamins, and minerals. Prepare and eat starchy foods with as little added fat as possible by limiting butter, margarine, shortening, and oil.

This is just a few of the many available starchy foods. Estimate a single serving size for foods that aren't on the list as follows:

Starchy vegetables, grains, pasta	1/2 cup
Breads and cereals	1 oz
Cooked dried beans of all types	1/3 cup

### Cereals/Beans/Grains/ Pasta

Cereal; cooked (oatmeal, cream of wheat, rice, etc)	1/2 cup
Cereal; dry (less than 100 calories per serving) (Serving sizes vary.)	(see box)

☑ Beans; cooked or canned (all kinds)	1/3 cup
Rice; cooked (all kinds)	1/3 cup
Pasta; cooked (all kinds)	1/2 cup

### Starchy Vegetables

☑ Corn; cooked or canned	1/2 cup
Corn meal; uncooked (masa or matzo meal)	2 Tbsp
☑ Corn on the cob (6" piece)	1
Malanga; cooked	1/3 cup
☑ Peas (green); cooked or canned	1/2 cup
Plantain (green, mature); cooked	1/3
Potato; baked, broiled, steamed	1 small (3 oz)
Squash (winter, acorn, hubbard)	3/4 cup
Yam or sweet potato	1/3 cup

### Breads

Bread (whole wheat, rye, white)	1 oz. slice
Bagel	1/2 (1 oz)
Sandwich bun or roll (hamburger, hot-dog, kaiser)	1/2
Roll (dinner, hard)	1 small
English muffin	1/2
Pita pocket bread (6"-8" across)	1/2
Tortilla (6" corn or 8" flour)	1
Dumplings or gnocchi; steamed	2 small

## Crackers/Snacks

Graham crackers (squares)	3
Crackers (80 calories/serving)	4-6
Pretzels (hard)	3/4 oz
Popcorn (plain, popped)	3 cups

## Starches/Breads With Fat

(15 grams carbohydrate, 3 grams protein, 5 or more grams fat, and 125-150 calories per serving)

Count as 1 Starch/Bread AND 1 Fat serving.

Biscuit (2 1/2")	1
☑ Corn, taco, or tortilla chips	1 oz
☑ Potato chips	10
Refried beans	1/3 cup
Spaghetti sauce or marinara sauce	1/2 cup
Rice (fried, Spanish)	1/3 cup

## List 2 - Meat and Meat Substitutes

Small servings of meat and meat substitutes provide ample protein to meet daily needs. For better health, choose lean meats, fish, and poultry more often than medium- and high-fat meats and cheeses.

### Lean Meats

### Serving Size

(7 grams protein, 3 grams fat, and 55 calories per serving)

Cheese with 1-3 grams fat per oz	1 oz
Chicken or turkey, skin removed	1 oz
Lean beef (round, extra lean ground round, flank steak)	1 oz
Lean pork (☑ Canadian bacon, ☑ ham)	1 oz
Fish; fresh or frozen	1 oz
Menudo (tripe soup)	1/2 cup
Shellfish (clams, crab, lobster, octopus, ☑ shrimp, or squid)	2 oz
☑ Tuna; canned in water	1/4 cup
Cottage cheese (low-fat)	1/4 cup

### Medium-fat Meats

(7 grams protein, 5 grams fat, and 75 calories per serving)

Beef, pork, or lamb (most cuts)	1 oz
Cheese with 4-5 grams fat per oz	1 oz
☑ Egg	1
☑ Liver	1 oz
Cheese, low-fat, part skim (queso jalisco, queso fresco, ricotta, string cheese)	1 oz
Tofu	1/2 cup

### High-fat Meats

(7 grams protein, 8 grams fat, and 100 calories per serving)

☑ Cheese with 6-8 grams fat per oz	1 oz
Peanut butter (smooth or chunky)	1 Tbsp
☑ Prime beef or corned beef	1 oz
☑ Spareribs or barbecue	1 oz
☑ Sausage, wieners, chorizo, salami, kielbasa, or Spam®	1 oz
☑ Chitterlings	1 oz

## Fast 7 - Free Foods

Each free food or drink contains fewer than 20 calories per serving. Eat as much as you want of the free foods that have no serving size. Eat up to 3 servings per day of free foods that have serving sizes listed. For better blood sugar control, spread your servings of these extra foods through the day.

### Drinks

- Bouillon or broth, fat-free
- Coffee or tea
- Soft drinks, calorie-free

### Sweet

#### Substitutes

- Gelatin, sugar-free
- Jam or jelly, sugar-free (2 tsp)
- Whipped topping (2 Tbsp)

### Fruits

- Cranberries or rhubarb, no sugar added (1/2 cup)

### Condiments

- Spreadable fruit, no sugar added (1 tsp)

### Vegetables

- Celery
- Cilantro
- Cucumber
- Onions
- Peppers (hot, chile)
- Radishes
- Salad greens (all types)
- Salsa (all kinds)

### Condiments

- Catsup (1 Tbsp)
- Dill pickles, unsweetened
- Horseradish
- Hot sauce
- Mustard
- Salad dressing, low-calorie (2 Tbsp)
- Taco sauce (2 Tbsp)
- Vinegar

## Picking in Fast Foods

Every day, it's estimated that one in every two Americans eats out. Fast foods are so common that it's smart to learn how to fit them into your diabetes plan. Here is a short list of fast foods with their exchange values. It includes some of the healthier choices available from some of the major fast food chains.

### McDonald's

- McLean Deluxe 2 Starch/Bread
- Chef Salad 2 Lean Meat
- Lite Vinaigrette 1 Vegetable
- AppleBran Muffin 2 Medium Fat Meat
- 2 1/2 Starch/Bread

### Pizza Hut

- Thin 'n Crispy Cheese Pizza 2 Starch/Bread
- (medium, 2 slices) 1 Vegetable
- 3 Medium Fat Meat

### Taco Bell

- Taco (regular) 1 Starch/Bread
- 2 Lean Meat
- Tostado 2 Medium Fat Meat
- 1 Starch/Bread
- 1 Fat
- Chicken Fajita 1 Starch/Bread
- 2 Medium Fat Meat

### Wendy's

- Grilled Chicken Sandwich 2 Starch
- 3 Lean Meat
- Chili, Large Bowl 2 Starch/Bread
- 3 Lean Meat

### Seasonings

Seasonings can be used as desired. If you are following a low-sodium diet, be sure to read the labels and avoid seasonings that contain sodium or salt.

- Flavoring extracts (vanilla, almond, butter, etc)
- Garlic or garlic powder
- Herbs, fresh or dried
- Lemon or lemon juice
- Lime or lime juice

- Onion powder
- Paprika
- Pepper
- Pimento
- Spices
- Soy sauce
- Worcestershire sauce

# Daily Meal Plan/1800 Calories

Carbohydrate: 224 g 50% of total calories  
 Protein: 90 g 20% of total calories  
 Fat: 60 g 30% of total calories

These two menus show some of the ways the exchange lists can be used to add variety to your meals. Use the exchange lists to plan your own menus.

## Breakfast

- 2 Starch/Bread (List 1)
- 1 Fruit (List 4)
- 1 Milk (List 5)
- 1 Fat (List 6)

### Sample Menu 1

- 1/2 cup bran flakes cereal
- 1 slice whole wheat toast
- 1/2 banana
- 8 oz skim or 1% milk
- 1 tsp margarine

### Sample Menu 2

- 1 bagel (whole wheat or pumpernickel)
- 3/4 cup mandarin oranges, drained and mixed with
- 1 cup lemon nonfat yogurt
- 1 Tbsp cream cheese

## Lunch

- 2 Starch/Bread (List 1)
- 3 Meat (List 2)
- 0-2 Vegetable (List 3)
- 1 Fruit (List 4)
- 1 Fat (List 6)

- 2 slices whole wheat bread
- 3 oz sliced lean ham
- Carrot sticks, radishes\*
- 1 apple
- 1 Tbsp reduced-calorie mayonnaise
- OR 1 tsp margarine

- 2 slices rye bread
- 3 oz sliced turkey
- Sliced tomato, lettuce on sandwich\*
- 1 1/4 cups watermelon
- 1 Tbsp reduced-calorie mayonnaise

## Dinner

- 3 Starch/Bread (List 1)
- 3 Meat (List 2)
- 2 Vegetable (List 3)
- 1 Fruit (List 4)
- 2 Fat (List 6)

- 1 small dinner roll
- 2/3 cup brown rice
- 3 oz baked chicken
- 1 cup cooked broccoli
- 1 cup raspberries
- 1 tsp margarine
- 1 Tbsp regular salad dressing
- Green salad\*

- 1 small dinner roll or tortilla
- 1 cup corn or malanga
- 3 oz flank steak, broiled or grilled
- 1 cup green beans
- 1 cup cantaloupe/honeydew melon salad
- 2 tsp margarine for corn

## Evening Snack

- 1 Starch/Bread (List 1)
- 1 Fruit (List 4)
- 1 Milk (List 5)

- 3 graham cracker squares
- 1 small peach or pear
- 8 oz sugar-free hot cocoa

- 1 oz (1 1/2 cups) puffed wheat or rice cereal
- 1/2 banana
- 8 oz skim or 1% milk

\*From List 7 - Free Foods

Key: oz = ounce

Tbsp = tablespoon

tsp = teaspoon

## Individualized Menu

Calories:  
 Carbohydrate:  
 Protein:  
 Fat:

## Breakfast

Time:

## Lunch

Time:

## Dinner

Time:

## Evening Snack

Time: