



CENTER FOR
WOUND CARE AND HEALING

DIABETES AND YOUR DIET

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INTRODUCTION TO DIABETES AND YOUR DIET

Diabetes mellitus is a group of diseases characterized by high blood glucose levels resulting from defects in insulin secretion, insulin action or both. Individuals with diabetes cannot produce or respond to insulin. Insulin is a hormone produced in the pancreas that is needed for the use or storage of body fuels. Without insulin hyperglycemia occurs.

Diabetes is a chronic disease that requires changes for a life time. The management of your diabetes will include:

- Medical Nutritional Therapy (Your Diet)
- Medications
- Exercise
- Blood Glucose Monitoring
- Self-Management

Your diet is essential to your diabetes care and management. The basic goal of your diet is to maintain a blood glucose level that is as near to normal as possible. Maintaining blood glucose levels is done by balancing food, insulin and physical activity.

Your physician has ordered your diet based on your particular needs. Your diet was planned to provide you with your prescribed calories, carbohydrates, protein and fats.

Definitions:

Hypoglycemia

Low body sugar (glucose) level (usually below 70 mg/dL) which can be cause by one of the following:

- administration of too much insulin
- too little food
- delayed or missed meals or snacks
- increased exercise

Insulin

A hormone released from the beta cells of the pancreas that enables cells to metabolize and store glucose and other fuels.

Polydipsia

Excessive thirst

Polyuria

Excessive urination

Definitions

Type 2 Diabetes

Usually occurs in persons over than 30 years, previously known as non-insulin-dependent diabetes mellitus (NIDDM)

Ketoacidosis (DKA)

Severe, uncontrolled diabetes, resulting from insufficient insulin. Ketone bodies build up in the blood

Diabetes Mellitus (GDM)

Glucose intolerance which occurs in pregnancy.

Glucose

The main monosaccharide in blood. An important source of energy. Found in fruits, sweet corn, honey, corn syrup.

Fructose

A monosaccharide occurring in fruit, honey, and some vegetables. Sweetest of the monosaccharides.

Sucrose

Ordinary table sugar

Sorbitol

Sugar alcohol occurring naturally

INTRODUCTION TO DIABETES AND YOUR DIET

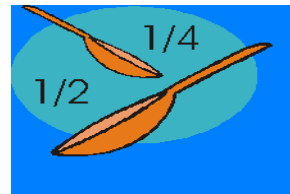
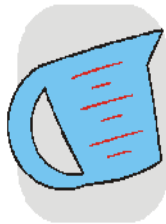
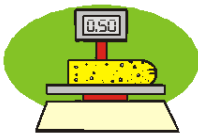
BASIC RULES

1. Eat only the amount of food planned for your diet - not more - not less.
2. Follow your prescribed meal pattern closely, do not skip meals.
3. Set regular eating hours that fit your daily schedule. This is very important. Your body responds best to regulation.
4. You can eat practically all foods.
5. You don't need "special" or "diet" foods.
6. Portion control is the key to good blood sugar maintenance. Weigh and measure foods carefully.
7. Concentrated forms of sugar and foods containing a large amount of sugar should be avoided.

WEIGHING AND MEASURING

To ensure portion control you will need to weigh/measure food portions accurately.

1. You will need a set of measuring cups, measuring spoons, and a small scale.
2. Measure foods after they have been cooked.
3. Measurements should be level, so even off the top of foods in cups or spoons.
4. Use a food scale to measure ounces of meat, fish, poultry and other foods that cannot be measured in cups. Remember to weigh only what you eat, not bones, fat gristle, etc.
5. You will eventually learn to recognize the portion sizes by sight and will only need to measure periodically to check yourself.



MACRO NUTRIENT AND CALORIC VALUES FOR EXCHANGE LIST

GROUPS/LIST	CARBOHYDRATE (g)	PROTEIN (g)	FAT (g)	CALORIES (g)
Carbohydrates				
Starch	15	3	≤1	80
Fruit	15	-	-	60
Milk				
Skim	12	8	0-3	90
Reduced Fat	12	8	5	120
Whole	12	8	8	150
Other carbohydrates	15	Variable	Variable	Variable
Vegetables	5	2	-	25
Meat and Substitutes				
Very lean	-	7	0-1	35
Lean	-	7	3	55
Medium-fat	-	7	5	75
High-fat	-	7	8	100
Fat	-	-	5	45

Reference: *Krause's Food, Nutrition and Diet Therapy*, L. Kathleen Mahan and Sylvia Escott-Stump 10th ed. 2000

Exchange List for Meal Planning*

STARCH LIST

Cereals, grains, pasta, breads, crackers, snacks, starchy vegetables and cooked beans, peas, and lentils are starches. In general, one starch is equivalent to:

- ½ cup of cereal, grain, pasta, or starchy vegetable
- 1 oz. of a bread product, such as 1 slice of bread
- ¾ to 1 oz of most snack foods (Some snack foods may also have added fat.)

Selection Notes

1. Starchy vegetables prepared with fat count as one starch and one fat.
2. Bagels or muffins can be 2 oz., 3 oz., or 4 oz., in size, and can, therefore, count as two, three or four starch choices
3. Beans, peas, and lentils are also found on the Meat and Meat Substitutes list.
4. Regular potato chips and tortilla chips are found on the Other Carbohydrates list.
5. Most of the serving sizes are measured after cooking.

One starch exchange equals 15 g carbohydrate, 3 g protein, 0-1 fat, and 80 calories

Bread

Bagel	½ (1 oz.)	Pita, 6 in. across	½
Bread (reduced calorie)	2 slices (1½ oz.)	Raisin bread, unfrosted	1 slice (1 oz.)
Bread, white, whole-wheat, pumpernickel, rye	1 slice (1 oz.)	Rolls, plain, small	1 (1 ounce)
Bread sticks, crisp, 4 in.	2 (1 oz.)	Tortilla, corn 6 in. across	1
English muffin	½	Tortilla, flour 6 in. across	1
Hot dog or hamburger bun	½ (1 oz.)	Waffle, 4½ in. square, reduced-fat	1

Cereals and Grains

Bran cereals	½ cup	Millet	¼ cup
Bulgur	½ cup	Muesli	¼ cup
Cereals	½ cup	Oats	½ cup
Cereals, unsweetened, ready-to-eat	¾ cup	Pasta	½ cup
Cornmeal (dry)	3 tbsp	Puffed cereal	1½ cup
Couscous	½ cup	Rice milk	½ cup
Flour (dry)	3 tbsp	Rice, white or brown	½ cup
Granola, low-fat	¼ cup	Shredded Wheat®	½ cup
Grape-Nuts®	¼ cup	Sugar-frosted cereals	½ cup
Grits	½ cup	Wheat germ	3 tbsp
Kasha	½ cup		

Exchange List for Meal Planning*(continued)

Starchy Vegetables

Baked beans	½ cup	Potato, baked or boiled	1 small (3 oz.)
Corn	½ cup	Potato, mashed	½ cup
Corn on cob , medium	1 (5 oz.)	Squash, winter (acorn, butternut)	1 cup
Mixed vegetables with corn, peas, or pasta	1 cup	Yams, sweet potato, plain	½ cup
Peas, green	½ cup		
Plantain	½		

Crackers and Snacks

Animal crackers	8	Pretzels	¾ oz.
Graham crackers, 2½ in. square	3	Rice cakes, 4 in. across	2
Matzoh	¾ oz.	Saltine-type crackers	6
Melba toast	4 slices	Snack chips, fat-free (tortilla, potato)	15-20 (¾ oz.)
Oyster crackers	24	Whole-wheat crackers, no fat added	2-5 (¾ oz.)
Popcorn (popped, no fat added or low-fat microwave)	3 cups		

Beans, Peas, Lentils

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

Beans and peas (garbanzo, pinto, kidney, white, split, black-eyed)	½ cup	Lima beans	½ cups
		Lentils	½ cup
		Miso*	

*=400 mg or more sodium per exchange

Starchy Foods Prepared with Fat

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

Biscuit, 2½ in. across	1	Pancake, 4 in. across	2
Chow mein noodles	½ cup	Popcorn, microwave	3 cups
Corn bread, 2 in. cube	1 (2 oz.)	Sandwich crackers, cheese or peanut butter filling	3
Crackers, round butter type	6	Stuffing, bread (prepared)	⅓ cup
Croutons	1 cup	Taco shells, 6 in. across	2
French-fried potatoes	16-25 (3 oz)	Waffle, 4½ in square	1
Granola	¼ cup	Whole-wheat crackers, fat added	4-6 (1 oz)
Muffin, small	1 (1½ oz.)		

Exchange List for Meal Planning*(continued)

Fruit List

Fresh, frozen, canned, and dried fruits and fruit juices are on this list. In general, one fruit exchange is equivalent to:

- 1 small to medium fresh fruit
- ½ cup of canned or fresh fruit or fruit juice
- ¼ cup of dried fruit

Selection Notes

1. Count ½ cup cranberries or rhubarb sweetened with sugar substitutes as free foods.
2. Encourage patients to read the Nutritional Facts on the food label. If one serving has more than 15 g carbohydrate, the size serving will need to be adjusted.
3. Fresh, frozen, and dried fruits have about 2g fiber per choice.
4. Portion size for canned fruits are for the fruit and a small amount of juice.
5. Whole fruit is more filling than fruit juice and may be a better choice.
6. Food labels for fruits may contain the words “no sugar added” or “unsweetened.” This means that no sucrose (table sugar) has been added.
7. Generally, fruit canned in extra light syrup has the same amount of carbohydrate per serving as the “no sugar added” or the juice pack. All canned fruits on the fruit list are based on one of these three types of pack.

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

Fruit Juices

Apple juice/cider	½ cup	Orange juice	½ cup
Cranberry juice cocktail	⅓ cup	Pineapple juice	½ cup
Cranberry juice cocktail, (reduced-calorie)	1 cup	Prune juice	⅓ cup
Fruit juice, blends, 100 % juice	⅓ cup		
Grape juice	⅓ cup		
Grapefruit juice	½ cup		

Exchange List for Meal Planning* (continued)

Fruit List

Fruit	
Apple unpeeled, small	1 (4 oz.)
Applesauce, unsweetened	½ cup
Apples, dried	4 rings
Apricots, fresh	4 whole (5½ oz)
Apricots, dried	8 halves
Apricots, canned	½ cup
Banana, small	1 (4oz)
Blackberries	¾ cup
Blueberries	¾ cup
Cantaloupe, small	(1oz) or 1 cup cubes
Cherries, sweet, fresh	12 (3 oz.)
Cherries, sweet, canned	½ cup
Dates	3
Figs, fresh	1½ large or 2 medium (3½ oz.)
Figs, dried	1½
Fruit cocktail	½ cup
Grapefruit, large	½ (1 oz)
Grapefruit sections, canned	¾ cup
Grapes, small	17 (3 oz)
Honeydew, melon	1 slice (10 oz) or 1 cup cubes
Kiwi	1 (3½ oz)
Mandarin oranges, canned	¾ cup
Mango, small	½ fruit (5½ oz) or ½ cup
Nectarine, small	1 (5 oz)
Orange, small	1 (6½ oz)
Papaya	½ fruit (8 oz) or 1 cup cubes
Peaches, medium, fresh	1 (6 oz.)
Peaches, canned	½ cup
Pear, large, fresh	½ (4 oz.)
Pears, canned	½ cup
Pineapple, fresh	¾ cup
Pineapple, canned	½ cup
Plums, small	2 (5 oz.)
Plums, canned	½ cup
Prunes, dried	3
Raisins	2 tbsp
Raspberries	1 cup
Strawberries	1¼ cup whole berries
Tangerines, small	2 (8 oz)
Watermelon	1 slice (13½ oz) or 1¼ cup cubes

Milk List

Different types of milk and milk products are on this list. Cheeses are on the Meat list and cream and other dairy fats are on the Fat list. Based on the amount of fat they contain, milk are divided into fat-free/low-fat milk, reduced-fat milk, and whole milk. One choice of these includes:

	Carbohydrate (g)	Protein (g)	Fat (g)	Calories
Fat-free/low-fat	12	8	0-3	90
Reduced-fat	12	8	5	120
Whole	12	8	8	150

Exchange List for Meal Planning* (continued)

Milk List (continued)

Selection Notes

1. One cup equals 8 fluid ounces or ½ pt.
2. Chocolate milk, frozen yogurt, and ice cream are on the Other Carbohydrates list.
3. Nondairy creamers are on the Free Foods list.
4. Rice milk is on the Starch list.
5. Soy milk is on the Medium-fat Meat list.

One milk exchange equals 12 g carbohydrate and 8 g protein.

Fat-free and Low-fat Milk (0-3 g fat per serving)

Fat-free milk	1 cup	Plain nonfat yogurt	¾ cup
½% milk	1 cup	Nonfat or low-fat fruit-flavored yogurt sweetened with aspartame or with a non-nutritive sweetener	1 cup
1% milk	1 cup		
Fat-free or low-fat buttermilk	1 cup		
Evaporated fat-free milk	½ cup		
Fat-free dry milk	⅓ cup dry		

Reduced-fat Milk (5 g fat per serving)

Whole Milk (8 g fat per serving)

2% milk	1 cup	Whole milk	1 cup
Plain low-fat yogurt	¾ cup	Evaporated whole milk	½ cup
Sweet acidophilus milk	1 cup	Goat's milk	1 cup
		Kefir	1 cup

Exchange List for Meal Planning*(continued)

Other Carbohydrates List

Food choices from this list can be substituted for a starch, fruit, or milk choice. However, they do not contain as many important vitamins and minerals as the choices on the Starch, Fruit, or Milk list. Some choices will also count as one or more fat choices.

Selection Notes

1. Because many of these foods are concentrated sources of carbohydrate and fat, the portion size are often very small.
2. Many fat-free or reduced-fat products made with fat replacers contain carbohydrates. When eaten in large amounts, they may need to be counted.
3. Fat-free salad dressings can be found in smaller amounts on the Free Foods list.

One exchange equals 15 g carbohydrate, or 1 starch, or 1 fruit, or 1 milk

Food	Serving Size	Exchanges Per Serving
Angel food cake, unfrosted	1/12 cake	2 carbohydrate
Brownie, small, unfrosted	2 in. square	1 carbohydrate, 1 fat
Cake, unfrosted	2 in. square	1 carbohydrate, 1 fat
Cake, frosted	2 in. square	2 carbohydrates, 1 fat
Cookie, fat-free	2 small	1 carbohydrate
Cookie, or sandwich cookie with creme filling	2 small	1 carbohydrate, 1 fat
Cranberry sauce, jellied	¼ cup	1½ carbohydrates
Cupcake, frosted	1 small	2 carbohydrates, 1 fat
Doughnut, plain cake	1 medium (1½ oz)	1½ carbohydrates, 1 fat
Doughnut, glazed	3¾ in. across (2 oz)	2 carbohydrates, 2 fats
Fruit juice bars, frozen, 100% juice	1 bar (3 oz)	1 carbohydrate
Fruit snacks, chewy (pureed fruit concentrate)	1 roll (¾ oz)	1 carbohydrate
Fruit spreads, 100% fruit	1 tbsp	1 carbohydrate
Gelatin, regular	½ cup	1 carbohydrate
Gingersnaps	3	1 carbohydrate
Granola bar	1 bar	1 carbohydrate, 1 fat
Granola bar, fat-free	1 bar	2 carbohydrates
Honey	1 tbsp	1 carbohydrate
Ice cream	½ cup	1 carbohydrate, 2 fats
Ice cream, light	½ cup	1 carbohydrate, 1 fat

Exchange List for Meal Planning*(continued)

One exchange equals 15 g carbohydrate, or 1 starch, or 1 fruit, or 1 milk

Food	Serving Size	Exchanges Per Serving
Ice cream, fat-free, no sugar added	½ cup	1 carbohydrate
Jam or jelly, regular	1 tbsp	1 carbohydrate
Milk, chocolate, whole	1 cup	2 carbohydrates, 1 fat
Potato chips	12-18 (1oz)	1 carbohydrate, 2 fats
Pudding, regular (made with low-fat milk)	½ cup	2 carbohydrates
Pudding, sugar-free (made with low-fat milk)	½ cup	1 carbohydrate
Salad dressing, fat-free*	¼ cup	1 carbohydrate
Sherbet, sorbet	½ cup	2 carbohydrates
Spaghetti or pasta sauce, canned*	½ cup	1 carbohydrate, 1 fat
Sugar	1 tbsp	1 carbohydrate
Sweet roll or Danish	1 (2½ oz)	2½ carbohydrates, 2 fats
Syrup, light	2 tbsp	1 carbohydrate
Syrup, regular	1 tbsp	1 carbohydrate
Syrup, regular	¼ cup	4 carbohydrates
Tortilla chips	6-12 (1 oz)	1 carbohydrate, 2 fats
Vanilla wafers	5	1 carbohydrate, 1 fat
Yogurt, frozen, low-fat, fat-free	½ cup	1 carbohydrate, 0-1 fat
Yogurt, frozen, fat-free, no sugar added	½ cup	1 carbohydrate
Yogurt, low-fat with fruit	1 cup	3 carbohydrates, 0-1 fat

Vegetable List

In general, one vegetable exchange is equivalent to:

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

Selection Notes

1. One or two vegetable choices at a meal or snack do not have to be counted because they contain only small amounts of calories or carbohydrates.
2. Three cups or more of raw vegetables or 1½ cups of cooked vegetables at one meal count as 1 carbohydrate choice
3. Starchy vegetables such as corn, peas, winter squash, and potatoes that contain larger amounts of calories and carbohydrates are on the Starch list.
4. Tomato sauce is different from spaghetti sauce, which is on the Other Carbohydrate list.

Exchange List for Meal Planning* (continued)

Vegetable List

One vegetable exchange equals 5 g carbohydrates, 2 g protein, 0 g fat, and 25 calories.

Artichoke	Green onions or scallions	Sauerkraut*
Artichoke hearts	Greens (collards, kale, mustard, turnips)	Spinach
Asparagus	Kohlrabi	Summer squash
Beans (green, wax, Italian)	Leeks	Tomato
Bean sprouts	Mixed vegetables (without corn, peas, or pasta)	Tomatoes, canned
Beets	Mushrooms	Tomato sauce*
Broccoli	Okra	Tomato/vegetable juice
Brussel sprouts	Onions	Turnips
Cabbage	Pea pods	Water chestnuts
Carrots	Peppers (all varieties)	Watercress
Cauliflower	Radishes	Zucchini
Celery	Salad greens (endive, escarole, lettuce, romaine, spinach)	
Cucumber		
Eggplant		

*= 400 mg or more sodium per exchange

Meat and Meat Substitute List

Meat and meat substitutes that contain both protein and fat are on this list. In general, one meat exchange is equivalent to:

- 1 oz meat, fish, poultry, or cheese
- ½ cup beans, peas, and lentils

Based on the amount of fat they contain, meats are divided into very lean, lean, medium-fat, and high-fat lists. One ounce (one exchange) of each of these includes:

	Carbohydrate (g)	Protein (g)	Fat (g)	Calories
Very lean	0	7	0-1	35
Lean	0	7	3	55
Medium-fat	0	7	5	75
High-fat	0	7	8	100

Exchange List for Meal Planning*(continued)

Meat and Meat Substitute List

Selection Notes

1. Meat should be weighted after cooking and removing bones and fat. Four ounces raw meat is equal to 3 ounces cooked meat. Following are some examples of meat portions:
1 ounce cheese= 1 meat choice and is about the size of a 1-in cube
2 ounces meat= 2 meat choices, such as
 1 small chicken leg or thigh
 ½ cup cottage cheese or tuna
3 ounces meat= 3 meat choices and is about the size of a deck of cards, such as
 1 medium pork chop
 1 small hamburger
 ½ of a whole chicken breast
 1 unbreaded fish fillet
2. Patient should limit choices from the high-fat group to three times per week or less
3. Most grocery stores stock Select and Choice grades of meat. Select graded of meat are the leanest meats. Choice grades contain a moderate amount of fat, and Prime cuts of meat have the highest amount of fat.
4. “Hamburger” may contain added seasoning and fat, but ground beef does not.
5. Encourage patients to read labels to find products that are low in fat and cholesterol (5 g or less fat per serving)
6. Dried beans, peas, and lentils are also found on the Starch list.
7. Peanut butter, in smaller amounts, is also found on the Fat list.
8. Bacon, in smaller amounts, is also found on the Fat list.
9. Some processed meats, seafood, and soy products may contain carbohydrates when consumed in large amounts. If so, these should be counted as a carbohydrate choice as well as a meat choice.

Meal Planning Tips:

1. **Bake, roast, broil, grill, poach, steam, or boil these foods rather than frying**
2. **Place meat on a rack so the fat will drain off during cooking**
3. **Use a nonstick spray and a nonstick pan to brown or fry foods**
4. **Trim off visible fat before or after cooking**
5. **If flour, bread crumbs, coating mixes, fat, or marinades are added when cooking, these may need to be counted in the meal plan.**

Exchange List for Meal Planning*(continued)

Very Lean Meat and Substitutes List

One exchange equals 0 g carbohydrate, 7 g protein, 0-1 g fat, and 35 calories

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

Poultry: Chicken or turkey (white meat, no skin)	
Cornish hen (no skin)	1 oz
Fish: Fresh or frozen cod, flounder, haddock, halibut, trout; tuna fresh or canned in water	1 oz
Shellfish: Clams, crab, lobster, scallops, shrimp, imitation shellfish	1 oz
Game: Duck or pheasant (no skin), venison, buffalo, ostrich	1 oz
Cheese: with 1 g or less fat per ounce;	
Nonfat or low-fat cottage cheese	¼ cup
Fat-free cheese	1 oz
Other: Processed sandwich meats with 1 g or less fat per ounce, such a deli thin, shaved meats	
chipped beef*, turkey ham	1 oz
Egg whites	2
Egg substitutes, plain	¼ cup
Hot dogs with 1 g or less fat per ounce*	1 oz
Kidney (high in cholesterol)	1 oz.
Sausage with 1 g or less fat per ounce	1 oz

Count as one very lean meat and one starch exchange.

Beans, peas, lentils (cooked)	½ cup
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Lean Meat and Substitutes List

One exchange equals 0 g carbohydrate, 7 g protein, 3 g fat, and 55 calories.

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

Beef: 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
Pork: Lean pork such as fresh ham; canned, cured, or boiled ham; Canadian bacon*; tenderloin, center loin chop	1 oz
Lamb: Roast, chop, leg	1 oz
Veal: Lean chop, roast	1 oz
Poultry: Chicken, turkey (dark meat, no skin), chicken (white meat, with skin), domestic duck or goose (well drained of fat, no skin)	1 oz

*= 400 mg or more sodium per exchange.

Exchange List for Meal Planning*(continued)

Lean Meat and Substitutes List (continued)

One exchange equals 0 g carbohydrate, 7 g protein, 3 g fat, and 55 calories.

Fish:

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
Game: Goose (no skin), rabbit	1 oz
Cheese:	
4.5%-fat cottage cheese	¼ cup
Grated Parmesan	2 tbs
Cheeses with 3 g or less fat per ounce	1 oz

Other:

Hot dogs with 3 g or less fat per ounce*	1½ oz
Processed sandwich meat with 3 g or less fat per ounce such as turkey pastrami or kielbasa	
Liver, heart (high in cholesterol)	1 oz.
Liver, heart (high in cholesterol)	1 oz.

Medium-Fat Meat and Substitutes List

One exchange equals 0 g carbohydrate, 7 g protein, 5 g fat, and 75 calories

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

Beef: Most beef products fall into this category (ground beef, meat loaf, corned beef, short ribs, Prime grades of meat trimmed of fat, such as prime rib)	1 oz.
Pork: Top loin, chop, Boston butt, cutlet	1 oz
Lamb: Rib roast, ground	1 oz
Veal: Cutlet (ground or cubed, unbreaded)	1 oz
Poultry: Chicken (dark meat with skin), ground turkey or ground chicken, fried chicken (with skin)	1 oz
Fish: Any fried fish product	1 oz
Cheese: With 5 g or less fat per ounce	
Feta	1 oz
Mozzarella	1 oz
Ricotta	1 oz
Other:	
Egg (high in cholesterol, limit to 3 per week)	1
Sausage with 5 g or less fat per ounce	1 oz
Soy milk	1 cup
Tempeh	¼ cup
Tofu	4 oz. or ½ cup

*= 400 mg or more sodium per exchange

Exchange List for Meal Planning*(continued)

High-Fat Meat and Substitute List

One exchange equals 0 g carbohydrate, 7 g protein, 8 g fat, and 100 calories.

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 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 oz
Bacon	3 slices (20 slices/lb)

Count as one high-fat meat plus one fat exchange.

Hot dog (beef, pork, or combination)	1 (10/lb)
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Count as one high-fat meat plus two fat exchanges.

Peanut butter (contains unsaturated fat)	2 tbsp
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Fat List

Fats are divided into three groups, based on the main type of fat they contain: monounsaturated, polyunsaturated, and saturated. Saturated fats are linked with heart disease and cancer. In general, one fat exchange is equivalent to:

- 1 tsp regular margarine or vegetable oil
- 1 tbsp regular salad dressings

Selection Notes

1. One fat exchange is based on a serving size containing 5 g fat.
2. Fat-free salad dressings are on the Other Carbohydrates list and the Free Foods list.
3. See the Free Foods list for nondairy coffee creamers, whipped toppings, and fat-free products, such as margarine, salad dressings, mayonnaise, sour cream, cream cheese and non-stick cooking spray.

Exchange List for Meal Planning*(continued)

Monounsaturated Fats List

One fat exchange equals 5 g fat and 45 calories

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

*=400 mg or more sodium per exchange

Polyunsaturated Fats List

One fat exchange equals 5 g fat and 45 calories

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

Saturated Fat List⁺

One fat exchange equals 5 g 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 (½ oz)
Coconut, sweetened, shredded	2 tbsp
Cream, half and half	2 tbsp

Exchange List for Meal Planning*(continued)

Saturated Fat List⁺(continued)

One fat exchange equals 5 g fat and 45 calories

Cream cheese: regular	1 tbsp (½ oz)
reduced fat	2 tbsp (1 oz)
Fatback or salt pork [‡]	
Shortening or lard	1 tsp
Sour cream: regular	2 tbsp
reduced fat	3 tbsp

*=400 mg or more sodium per exchange.

⁺Saturated fat can raise blood cholesterol levels.

[‡]Use a piece 1 in x 1 in x ¼ in. when eating the fatback cooked with vegetables. Use a piece 2 in. x 1 in. x ½ when eating only the vegetable with the fatback removed.

Free Foods List

A free food is any food or drink that contains less than 20 calories or less than 5 grams carbohydrates per serving. Foods with a serving size listed should be limited to three servings per day, spread throughout the day. Foods listed without a serving size can be eaten as often as desired.

Fat-free or Reduced-fat Foods

Cream cheese, fat-free	1 tbsp
Creamers, nondairy, liquid	1 tbsp
Creamers, nondairy, powdered	2 tsp
Mayonnaise, fat-free	1 tbsp
Mayonnaise, reduced-fat	1 tsp
Margarine, fat-free	4 tbsp
Margarine, reduced-fat	1 tsp
Miracle Whip®, nonfat	1 tbsp
Miracle Whip®, reduced fat	1 tsp
Nonstick cooking spray	
Salad dressing, fat-free	1 tbsp
Salad dressing, fat-free, Italian	2 tbsp
Salsa	¼ cup
Sour cream, fat-free, reduced-fat	1 tbsp
Whipped topping, regular or light	2 tbsp

Exchange List for Meal Planning*(continued)

Free Foods List (continued) Sugar-free or Low-sugar Foods

Candy, hard, sugar-free	1 candy
Gelatin dessert, sugar-free	
Gelatin, unflavored	
Gum, sugar-free	
Jam or jelly, low-sugar or light	2 tsp
Sugar substitutes*	
Syrup, sugar-free	2 tbsp

*Sugar substitutes, alternatives or replacements that are approved by the Food and Drug Administration (FDA) are safe to use. Common brands include:

Equal (aspartame)
Sprinkle Sweet® (saccharin)
Sweet One (acesulfame K)
Sweet-10® (saccharin)
Sugar Twin (saccharin)
Sweet'n Low® (saccharin)

Drinks

Bouillon, broth, consommé*	
Bouillon, 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	

Condiments

Catsup	1 tbsp
Horseradish	
Lemon juice	
Lime juice	
Mustard	
Pickles, dill*	1½ large
Soy sauce, regular or light*	
Taco sauce	1 tbsp
Vinegar	

*= 400 mg or more of sodium per exchange.

Exchange List for Meal Planning* (continued)

Free Foods List (continued)

Seasonings

Some seasonings contain sodium or are salts, including garlic or celery salt and lemon pepper.

Flavoring extracts

Garlic

Herbs, fresh or dried

Pimento

Spices

Tabasco® or hot pepper sauce

Wine, used in cooking

Worcestershire sauce

Combination Foods List

Combination foods do not fit into any one exchange list. This is a list of exchanges for some typical combination foods.

Food	Serving Size	Exchanges Per Serving
Entree:		
Tuna noodle casserole, lasagna, spaghetti with meatballs, chili with beans, macaroni and cheese*	1 cup (8 oz)	2 carbohydrate, 2 medium-fat meats
Chow Mein (without noodles or rice)*	2 cups (16 oz)	1 carbohydrate, 2 lean meats
Pizza, cheese, thin crust*	¼ of 10 in (5 oz)	2 carbohydrates, 2 medium fat meats, 1 fat
Pizza, meat topping, thin crust	¼ of 10 in (5 oz)	2 carbohydrates, 2 medium fat meats, 2 fats
Pot pie*	1 (7 oz.)	2 carbohydrates, 1 medium-fat meat, 4 fats
Frozen Entrees:		
Salisbury steak with gravy, mashed potatoes*	1 (11 oz)	2 carbohydrates, 3 medium-fat meats, 3-4 fats
Turkey with gravy, mashed potatoes, dressing*	1(11 oz)	2 carbohydrates, 2 medium-fat meats, 2 fats
Entree with less than 300 calories*	1(8 oz)	2 carbohydrates, 3 lean meats

*=400 mg or more sodium per exchange

Exchange List for Meal Planning*(continued)
Combination Foods List (continued)

Soups

Bean*	1 cup	1 carbohydrate, 1 very lean meat
Cream (made with water)*	1 cup (8 oz)	1 carbohydrate, 1 fat
Split pea (made with water)*	½ cup (4 oz)	1 carbohydrate
Tomato (made with water)*	1 cup (8 oz)	1 carbohydrate
Vegetable beef, chicken noodle or other broth-type	1 cup (8 oz.)	1 carbohydrate

FAST FOODS

Food	Serving Size	Exchanges Per Serving
Burritos with beef*	2	4 carbohydrates, 2 medium-fat meats, 2 fats
Chicken nuggets*	6	1 carbohydrate, 2 medium-fat meats, 1 fat
Chicken breast and wing, breaded and fried*	1 each	1 carbohydrate, 4 medium-fat meats, 2 fats
Fish sandwich/tartar sauce*	1	3 carbohydrates, 1 medium fat meat, 3 fats
French fries, thin*	20-25	2 carbohydrates, 2 fats
Hamburger, regular	1	2 carbohydrates, 2 medium-fat meats
Hamburger, large*	1	2 carbohydrates, 3 medium-fat meats, 1 fat
Hot dog with bun*	1	1 carbohydrate, 1 high-fat meat, 1 fat
Individual pan pizza*	1	5 carbohydrates, 3 medium-fat meats, 3 fats
Soft-serve cone	1 medium	2 carbohydrates, 1 fat
Submarine sandwich*	1 sub (6 in.)	3 carbohydrates, 1 vegetable, 2 medium-fat meats, 1 fat
Taco, hard shell*	1 (6 oz)	2 carbohydrates, 2 medium-fat meats, 2 fats
Taco, soft shell*	1(3 oz)	1 carbohydrate, 1 medium-fat meat, 1 fat

*=400 mg or more sodium per exchange

FREE FOODS

FREE FOODS: A free food is any food or drink that contains less than 20 calories per servings. You can eat as much as you want of those 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 1tbsp)
Coffee/Tea
Drink Mixes, sugar-free
Tonic water, sugar-free

NONSTICK PAN SPRAY

Fruits

Cranberries, unsweetened ½ cup
Rhubarb, unsweetened ½ cup

Vegetables

(Raw 1 cup)
Cabbage
Celery
Chinese Cabbage
Cucumber
Green Onions
Hot Peppers
Mushrooms
Radishes
Zucchini+

Salad Greens

Endive
Escarole
Lettuce
Romaine
Spinach

Condiments

Catsup (1 Tbsp.)
Horseradish
Mustard
Pickles*, dill
unsweetened
Salad dressing,
(low calorie 2
Tbsp.)
Taco sauce (1 Tbsp)
Vinegar

*Denotes foods that are high in sodium (more than 400 milligrams of sodium per normal serving)

+Denotes foods that are high in Fiber (3 grams or more per normal serving)

Understanding Nutrition Labels

(1) Serving Size – Nutrition information is based on serving size. If you change the portion size the amounts will change. For example: This serving size is ½ cup. If you eat 1 cup (2 servings), the calories and other nutrients will be doubled.

(2) Servings Per Container – Every container is different in size. A small container does not always mean one serving.

(3) Calories* – are based on serving size. If you eat more than one serving the calories and other nutrients increase.

(4) Calories From Fat* – Total number of calories from fat in a serving.

(5) %Daily Value – Based on a 2000 calorie diet. A 5% DV or less is low, 20% DV or more is high.

(6) Total Fat* – Watch your total fat intake. For a 2000 calorie diet keep total fat intake to less than 65 grams each day.

(7) Saturated Fat – Limit your intake to less than 20 grams each day (based on a 2000 diet).

Nutrition Facts

Serving Size ½ cup (114 g) **(1)**
 Servings Per Container 4 **(2)**

Amount per Serving

Calories 90 **(3)** **(4)** Calories from Fat

(5) %Daily Value*

Total Fat 3 g **(6)** **5%**

Saturated Fat 0 g **(7)** **0%**

Cholesterol 0 mg **(8)** **0%**

Sodium 300 mg **(9)** **13%**

Total Carbohydrate 13 g **(10)** **4%**

Dietary Fiber 3 g **(11)** **12%**

Sugars 3 g **(12)**

Protein 3 g **(13)**

Vitamin A 80% **(14)** Vitamin C 60% **(14)**

Calcium 4% **(14)** Iron 4% **(14)**

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65 g	80 g
Sat. Fat	Less than	20 g	25 g
Cholesterol	Less than	2,400 mg	2,400 mg
Total Carbohydrate		300 mg	375 mg
Fiber		25 mg	30 mg

Calories per gram:

Fat 9 Carbohydrate 4 Protein 4

(8) Cholesterol* - Keep intake to less than 300 mg each day.

(9) Sodium* – Keep sodium intake to less than 2400 mg each day.

(10) Total Carbohydrate – Number includes the total amount of carbohydrates, sugars, and fiber.

(11) Dietary Fiber – Amount of fiber in one serving. 25-30 grams of fiber a day is recommended.

(12) Sugars – Includes both the added and natural sugars found in the food.

(13) Protein – Total amount of protein in one serving.

(14) Vitamins A and C, Calcium and Iron % daily value of these vitamins and minerals in one serving

*Speak with your health care provider for your specific



Speak with your physician **before** starting any diet regime. Once your caloric needs have been prescribed by your physician an individual meal plan can be developed for you by a Registered Dietitian.



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