

EXCHANGE LIST

STARCHES

One Exchange = 15 grams of carbohydrate, 0-3 grams of protein, 0-1 grams of fat, 80 calories

Examples	Serving Size
Breads	
Bagel, large	¼ (1 oz)
Bread, reduced-calorie	2 slices, (1 1/2 oz)
Bread-white, wheat, rye	1 slice (1 oz)
Bread stick, small	1
English muffin	1/2
Frankfurter or hamburger bun	1/2 (1 oz)
Pita, 6 inches across	1/2
Plain roll, small	1 (1 oz)
Raisin, unfrosted	1 slice
Tortilla, 6 inches across, corn	1
Biscuit, small	1 (2 ½ in)
Chapatti, small, 6 inches	1
Cornbread, ¾ inch cube	1 (1 ½ oz)
Hotdog bun	½ (1 oz)
Hamburger bun	½ (1 oz)
Pancake, 4 in across, ¼ in thick	1
Bread stuffing	1/3 cup
Taco shells, 5 in across	2
Flour tortilla, 6 in across	1
Flour tortilla, 10 in across	1/3
Muffin, small	1
Waffle, 4 in. square	1
Naan, 8 x 2 inches	¼
Starchy Vegetables	
Corn	1/2 cup
Corn on the cob, large	½ (5 oz)
Peas, green	1/2 cup
Potato, boiled, small	1 (3 oz)
Potato, mashed with milk and fat	1/2 cup
Potato, baked with skin, large	¼ (3 oz)
Squash, winter (acorn or butternut)	1 cup
Yam, sweet potato, plain	1/2 cup
Cassava	1/3 cup
Canned Hominy	¾ cup
Mixed vegetables (corn, peas, or pasta)	1 cup
Parsnips	½ cup
Ripe plantain	1/3 cup
French fries, oven baked	1 cup (2 oz)
Canned pumpkin, no sugar added	1 cup

Spaghetti/ pasta sauce	1/2 cup
Succotash	1/2 cup
Cereals/Grains/Pasta	
Bran cereals	1/2 cup
Bulgur, cooked	1/2 cup
Oats, cooked	1/2 cup
Cooked cereals	1/2 cup
Cornmeal, dry	3 tbsp.
Grape-Nuts	1/4 cup
Grits, cooked	1/2 cup
Cereals, ready-to-eat unsweetened	3/4 cup
Cereals, sugar-frosted	1/2 cup
Pasta, cooked	1/3 cup
Puffed cereal	1 1/2 cup
Rice, white or brown (cooked)	1/3 cup
Wild rice, cooked	1/2 cup
Shredded wheat	1/2 cup
Wheat germ, dry	3 tbsp.
Quinoa, cooked	1/3 cup
Polenta, cooked	1/3 cup
Millet, cooked	1/3 cup
Kasha	1/2 cup
Couscous	1/3 cup
Granola	1/4 cup
Barley, cooked	1/3 cup
Oat bran, cooked	1/4 cup
Muesli	1/4 cup
Tabbouleh, prepared	1/2 cup
Dried Beans/Peas/Lentils	
Beans and peas, cooked (garbanzo, kidney, white, split, lima, navy, pinto, black-eyed, re-fried)	1/2 cup
Lentils, cooked	1/2 cup
Beans, baked	1/3 cup
Crackers/Snacks	
Animal crackers	8
Graham crackers, 2 1/2 inches	3
Matzoth	3/4 oz
Melba toast 2 x 4 inch piece	4 slices
Oyster crackers	20 crackers
Popcorn, popped, with or without fat added	3 cups
Pretzels	3/4 oz
Rice Cakes, 4 inches across	2
Saltine-type crackers	6

Whole wheat crackers, no fat added	2-5 (3/4 oz)
Fat free or baked chips, tortilla, potato, pita	15-20 chips (3/4 oz)
Regular chips, potato, tortilla	9-13 chips (3/4 oz)

VEGETABLES

One Exchange = 5 grams carbohydrate, 2 grams protein, 0 grams fat, 25 calories. Unless stated otherwise, one vegetable exchange is as follows:

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

Amaranth or Chinese spinach	Okra
Artichoke and Artichoke hearts	Onions, all varieties, scallions
Asparagus	Carrot
Turnips	Pea pods (snow peas)
Coleslaw, packaged, no dressing	Peppers (all varieties)
Beans (green, wax, Italian)	Radishes
Bean sprouts	Zucchini
Beets	Cauliflower
Eggplant	Cucumber
Borscht	Spinach
Broccoli	Summer squash
Brussels sprouts	Sugar snap peas
Celery	Yard-long Beans
Daikon	Rutabaga
Sauerkraut	Swiss Chard
Tomato	Chayote
Greens (collard, kale, mustard, turnip)	Gourds (bitter, bottle, luffa, bitter melon)
Mushroom	Heart of Palm
Jicama	Kohlrabi
Leeks	Mixed vegetables without corn, peas, pasta
Mung bean sprouts	Turnips
Water Chestnuts	Cabbage (green, purple, bok choy, Chinese)

FRUITS

One Exchange = 15 grams carbohydrate, 0 grams protein, 0 grams fat, 60 calories. Unless stated otherwise, the serving size for one fruit exchange is as follows:

Fruits	Serving size
Apple, small	1
Applesauce, unsweetened	½ cup
Apricots, medium, raw	4 apricots (5 ½ oz)
Apricots, canned	½ cup
Banana, extra small	1 (4 oz)

Blackberries, raw	¾ cup
Blueberries , raw	¾ cup
Cantaloupe, 5 inches across	1/3 melon cubes or 1 cup
Cherries large, raw	12 cherries (3 oz)
Cherries, canned	½ cups
Figs, raw	1 ½ large or 2 medium (3 ½ oz)
Grapefruit, large	½ fruit (11oz)
Grapefruit, segments	¾ cup
Grapes, small	17 grapes (3 oz)
Honeydew, medium	1 slice cubes or 1 cup
Kiwi, large	1
Mandarin oranges, canned	¾ cup
Mango, small	½ mango or ½ cup
Nectarine, small	1 (5 oz)
Orange, small	1 (6 ½ oz)
Peach, fresh, medium	1 (6 oz)
Peaches, canned	2 halves or ½ cup
Pear, large	½ (4 oz)
Pears, canned	½ cup or 2 halves
Pineapple, raw	¾ cup
Pineapple, canned	½ cup
Plums, small	2 (5 oz)
Plums, canned	½ cup
Raspberries, raw	1 cup
Strawberries, raw, whole	1 ¼ cup
Tangerine, small	2 (8 oz)
Watermelon, cubes	1 ¼ cup or 1 slice
Papaya	½ (8 oz) or 1 cup cubes
Fruit cocktail	½ cup
Fruit Juices	
Apple juice/cider	½ cup
Cranberry juice cocktail	½ cup
Grapefruit juice	½ cup
Grape juice	1/3 cup
Orange juice	½ cup
Pineapple juice	½ cup
Prune juice	1/3 cup
Fruit juice blends, 100% juice	1/3 cup
Dried Fruits	
Apples	4 rings
Apricots	8 halves
Dates	3 medium
Figs	1 ½
Prunes	3 medium
Raisins	2 Tbsp.

Fruits (blueberries, cherries, cranberries, mixed fruits, raisins)	2 Tbsp.
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MILK

Fat-Free & Low-Fat Milk

One Exchange = 12 grams of carbohydrate, 8 grams of protein, 0-3 grams of fat, 100 calories

Skim milk	1 cup (8 oz)
1% milk	1 cup (8 oz)
Nonfat or low-fat buttermilk	1 cup (8 oz)
Evaporated skim milk	½ cup (4 oz)
Dry nonfat milk	½ cup (4 oz)
Plain nonfat yogurt	2/3 cup (6 oz)
Nonfat or low-fat fruit-flavored yogurt with aspartame or non-nutritive sweetener	2/3 cup (6 oz)
Chocolate milk, fat-free, low-fat	1 cup (8 oz)

Reduced-Fat (2%) Milk

One Exchange = 12 grams of carbohydrates, 8 grams of protein, 5 grams of fat, 120 calories

2% milk	1 cup (8 oz)
Plain low-fat yogurt	1 cup (8 oz)

Whole Milk

One Exchange = 12 grams of carbohydrates, 8 grams of protein, 8 grams of fat, 160 calories

Whole milk	1 cup (8 oz)
Evaporated whole milk	½ cup
Goat's milk	1 cup (8 oz)
Whole buttermilk	1 cup (8 oz)
Chocolate milk	1 cup (8 oz)
Eggnog	½ cup

Plant Source Milk

Almond milk, no flavor	1 cup	8g of carbohydrate, 1g of protein, 3g of fat, 30 calories
Rice milk, flavored, low-fat, plain	1 cup	23g of carbohydrate, 1g of protein, 2g of fat, 118 calories
Coconut milk	1 cup	7g of carbohydrate, 0-1g of protein, 5g of fat, 80 calories
Soy milk, light, regular plain	1 cup	15g of carbohydrate, 8g of protein, 4g of fat, 130 calories

Frozen Bars, Frozen Desserts, Frozen Yogurt, and Ice Cream

Frozen yogurt, flavored			
Fat-free	1/3 cup	20g of carbohydrate, 2g of protein, 0g of fat, 83 calories	1 carbohydrate exchange
Regular	1/2 cup	17g of carbohydrate, 3g of protein, 4g of fat, 114 calories	1 carbohydrate + 0-1 fat
Ice cream			
Fat-free	1/2 cup	21g of carbohydrate, 3g of protein, 0g of fat, 95 calories	1 1/2 carbohydrates
Light	1/2 cup	19g of carbohydrate, 3g of protein, 3g of fat, 118 calories	1 carbohydrate + 1 fat
No sugar added	1/2 cup	14g of carbohydrate, 2g of protein, 8g of fat, 136 calories	1 carbohydrate + 1 fat
Regular	1/2 cup	16g of carbohydrate, 2g of protein, 7g of fat, 137 calories	1 carbohydrate + 2 fats
Sherbet, sorbet	1/2 cup		2 carbohydrates
Frozen Pops	1		1/2 carbohydrate
Fruit juice bars, 100% juice	1 bar (3 oz)		1 carbohydrate

MEATS AND MEAT SUBSTITUES

High Fat Meats: One Exchange = 0 grams of carbohydrate, 7 grams of protein, 8 or more grams of fat, 100 calories

Pork: Spareribs, ground pork, sausage	1 oz
Cheese (all regular cheeses, such as American, Cheddar, Swiss, Monterey Jack, Brie, Bleu, Hard Goat, Queso)	1 oz
Lunch Meats with 8g of fat or more per ounce (Bologna, pimento loaf, salami)	1 oz
Sausage with 8g or fat or more per ounce (such as Polish, Italian, Smoked, Summer)	1 oz
Hot Dog (turkey or chicken)	1
Bacon	2 slices

Turkey Bacon	3 slices
Hot Dog (beef or pork)	1

Medium-Fat Meats: One Exchange = 0 grams of carbohydrate, 7 grams of protein, 4-7 grams of fat, 75 calories

Beef (ground beef, meatloaf, corned beef short ribs, prime grades of meat trimmed of fat such as prime rib, tongue)	1 oz
Pork (Chops, shoulder roast)	1 oz
Lamb (Rib, roast, ground)	1 oz
Veal, cutlet, no breading	1 oz
Poultry, chicken with skin, dove, pheasant, duck, goose, ground turkey, fried chicken	1 oz
Fried Fish, all varieties	1 oz
Ricotta Cheese	2 oz (1/4 cup)
Cheese with 4-7g of fat per ounce (Mozzarella, Feta, Cheese Spread, Reduced fat cheese, string)	1 oz
Egg	1 whole egg
Sausage with 4-7g of fat per ounce	1 oz

Lean Meats: One Exchange = 0 grams of carbohydrate, 7 grams of protein, 0-3 grams of fat, 45 calories

Beef (USDA Select or Choice grades of trimmed lean round, sirloin, and flank steak; tenderloin; and roast (rib, chuck, rump); steak (t-bone, porter house, cubed); ground round)	1 oz
Pork (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, no skin	1 oz
Oysters	6 medium
Tuna (canned in oil, drained)	1 oz
Herring	1 oz
Salmon (fresh or canned)	1 oz
Catfish	1 oz
Sardines (canned)	2 small
Wild Game: Goose (without skin), rabbit	1 oz
Cheese: Cottage cheese (4.5% fat)	1/4 cup
Grated parmesan	2 tbsp.
Low-fat cheeses (3 grams fat or less)	1 oz
Hotdogs with 3 grams or less fat/ounce	1 oz
Luncheon meat with 3 grams or less fat/ounce	1 oz
Nuts (almonds, cashews)	6 nuts
Mixed (50% peanuts)	6 nuts
Egg whites	2 whites
Egg substitutes, plain	1/4 cup

Organ meats	1 oz
Sausage with 3g of fat or less per ounce	1 oz
Shellfish	1 oz

Plant Based Proteins

“Bacon” strips, soy based	3 strips	1 medium fat meat
Baked beans	1/3 cup	1 starch + 1 lean meat
Beans, cooked	½ cup	1 starch + 1 lean meat
Soy based “meat” crumbles	2 oz	½ starch + 1 medium fat meat
Soy based “chicken” nuggets	2 nuggets (1.5 oz)	½ starch + 1 medium fat meat
Edamame	½ cup	½ starch + 1 lean meat
Falafel	3 patties (2 inches each)	1 starch + 1 high fat meat
Soy based hot dog	1 (1.5 oz)	½ starch + 1 lean meat
Hummus	1/3 cup	1 starch + 1 high fat meat
Lentils	½ cup	1 starch + 1 lean meat
Soy based “burger”	3 oz	½ starch + 2 lean meats
Veggie burger, starch and vegetable based	1 patty (2.5 oz)	1 starch + 2 lean meats
Nut butters (peanut, almond, soy)	1 Tbsp	1 high fat meat
Peas, cooked (black eye, split)	½ cup	½ starch + 1 lean meat
Refried beans, canned	½ cup	1 starch + 1 lean meat
Soy based “Sausage” patties	1 (1.5 oz)	1 medium fat meat
Unsalted soy nuts	¾ oz	½ starch + 1 medium fat meat
Tempeh	¾ cup	1 medium fat meat
Tofu	4 oz (1/2 cup)	1 medium fat meat
Tofu, light	4 oz (1/2 cup)	1 lean meat

FATS

One Fat Exchange = 0 grams of carbohydrate, 0 grams of protein, 5 grams of fat, 45 gram of calories

Monounsaturated Fats

Avocado, medium	1/8 (1 oz) or 2 Tbsp
Oil (canola, olive, peanut)	1 tsp.
Olives(ripe (black)	8 large
Olives (green, stuffed)	10 large
Nuts (almonds, cashews)	6 nuts
Mixed (50% peanuts	6 nuts
Peanuts	10 nuts
Pecans	4 halves
Brazil Nuts	2 nuts
Hazelnuts	5 nuts
Macadamia nuts	3 nuts
Pistachios	16 nuts
Nut butters	2 Tbsp

Polyunsaturated Fats

Margarine, (stick, tub, squeeze)	1 tsp.
Margarine, reduced-fat (30-50% vegetable oil)	1 tbsp.
Mayonnaise, regular	1 tsp.
Mayonnaise, reduced-fat	1 tbsp.
Miracle Whip, regular	2 tsp.
Miracle Whip, light	1 tbsp.
Oil (corn, safflower, soybean, flax, grapeseed, canola)	1 tsp.
Salad dressings, regular	1 tbsp.
Salad dressings, reduced-fat	2 tbsp.
Seeds, pumpkin or sunflower	1 tbsp.
Mayo style salad dressing	
Regular	1 Tbsp
Reduced fat	2 Tbsp
Nuts	
Pine	1 Tbsp
Walnuts	4 halves
Sesame seeds	1 Tbsp
Tahini	2 tsp

Saturated Fats

Butter, stick	1 tsp.
Butter, whipped	2 tsp.
Butter, reduced fat	1 tbsp.
Bacon, regular or turkey	1 slice
Chitterlings, boiled	2 Tbsp.
Coconut, shredded	2 tbsp.

Cream, half and half, whipped	2 tbsp.
Cream, sour, regular	2 tbsp.
Cream, sour, reduced fat	3 tbsp.
Cream, heavy	1 tbsp.
Cream cheese, regular	1 tbsp.
Cream cheese, reduced fat	1.5 tbsp
Salt pork	1/4 oz
Shortening or lard	1 tsp.
Butter blends with oil	
Reduced fat	1 tbsp
Regular	1.5 tsp
Coconut milk	
Light	1/3 cup
Regular	1/5 tbsp
Cream, light	1.5 tbsp
Cream, whipped, pressurized	¼ cup
Oil, coconut, palm, palm kernel	1 tsp.

MISCELLANEOUS

Below is an estimation; read the nutrition label for the most accurate nutrition information

Candy, Spreads, Sweets, Sweeteners, Syrups, and Toppings

Candy, hard	3 pieces	95 calories	1 starch exchange
Chocolate “kisses”	5 pieces	112 calories	1 starch + 1 fat
Coffee creamer			
Dry, flavored	4 tsp	40 calories	½ starch + ½ fat
Liquid, flavored	2 Tbsp	50 calories	1 starch
Fruit snacks, chewy	1 pouch	90 calories	1 starch
Honey	1 Tbsp	64 calories	1 starch
Jam or jelly, regular	1 Tbsp	50 calories	1 starch
Sugar	1 Tbsp	50 calories	1 starch
Syrup			
Regular (pancake type)	1 Tbsp	58 calories	1 starch
Maple syrup	1 Tbsp	52 calories	1 starch
Chocolate syrup	2 Tbsp	105 calories	2 starch
100% fruit spread	1 ½ Tbsp	53 calories	1 starch

Beverages, Soda, Energy and Sports Drinks: Calories 100 or under

Cranberry juice cocktail	1/2 cup	60 calories	1 starch
Monster Energy drink	1 can (8.3 oz)	100 calories	2 starch
Fruit drink or lemonade	7 oz)	100 calories	2 starch
Hot chocolate			
Regular	1 envelope	80 calories	1 starch + 1 fat

Sugar-free or light	(added to 8 oz water) 1 envelope (added to 8 oz water)	60 calories	1 starch
Soft drink (soda), regular	12 oz	140 calories	2 ½ starches
Sports drink	1 cup (8 oz)	50 calories	1 starch

Granola Bars, Trail Mix, Cookies and Pudding

Granola or Snack bar, regular or low-fat	1 bar (1 oz)	100 calories	1 ½ starch
Trail mix			
Candy/nut based	1oz	152 calories	1 starch + 2 fats
Dried fruit based	1 oz	150 calories	1 starch + 2 fats
Meal Replacement Bar	1 bar (1 1/3 oz) 1 bar (2 oz)	Varies Varies	1 ½ starch + 0-1 fat 2 starch + 1 fat
Meal Replacement Shake, reduced calorie	1 can (10-11 oz)	Varies	1 ½ starch + 0-1 fat
Cookie			
Chocolate chip	2 cookies (2 ¼ in.)	160 calories	1 starch + 1 fat
Gingersnap	3 cookies	90 calories	1 starch
Cream filled cookie	2 small (2/3 oz)	100 calories	1 starch + 1 fat
Sugar-free	2 small or 1 large	85 calories	1 starch + 1-2 fats
Vanilla wafer	5 cookies	88 calories	1 starch + 1 fat
Pudding			
Regular with reduced fat	½ cup	100 calories	2 starch
Sugar free, fat free	½ cup	70 calories	1 starch
Brownie, small, unfrosted	1 ¼ inch square	100 calories	1 starch + 1 fat
Cake			
Angel food, unfrosted	1/12 of cake	75 calories	2 starch
Frosted	2 inch square	Varies	2 starch + 1 fat
Unfrosted	2 inch square	Varies	1 starch + 1 fat
Cupcake, frosted	1 small (1 ¾ oz)	Varies	2 starch + 1-1 ½ fats
Fruit cobbler	½ cup (3 ½ oz)	Varies	3 starch + 1 fat
Gelatin, regular	½ cup	Varies	1 starch
Pie			
Commercially prepared fruit, 2 crusts	1/6 of 8 inch pie	Varies	3 starch + 2 fats
Pumpkin or custard	1/8 of 8 inch pie	Varies	1 ½ starch + 1 ½ fats

COMBINATION FOODS

Food	Serving Size	Exchanges
Casseroles, homemade	1 cup (8 oz)	2 starches + 2 medium-fat meats

Cheese pizza, thin crust	1/4 of 10"	2 starches + 2 high-fat meats + 1 fat
Pizza, meat topping, thin crust	1/4 of 10"	2 starches + 2 high-fat meats + 2 fat
Macaroni and cheese, beans	1 cup (8 oz)	2 starches + 2 medium-fat meats
Soups :		
Bean	1 cup (8 oz)	1 starches + 1 lean meat
Cream, made with water	1 cup (8 oz)	1 starches + 1 fat
Split pea made with water	1/2 cup (4 oz)	1 starches
Vegetable, beef, or chicken noodle	1 cup (8 oz)	1 starches
Pizza with cheese, regular	1 slice	2 starches + 1 high-fat meat + 2 fats
Pizza, pepperoni, regular	1 slice	2 starches + 2 high-fat meat + 2 fats
Lasagna, with meat	1 piece (4.5"x 3.25"x 2")	2 starches + 2 medium-fat meats + 4 fats
Vegetable lasagna, no meat	1 entree	2 starches + 1 non-starchy vegetable + 1 lean meat + 2 fats
Macaroni and cheese (made from dry packaged mix)	1 cup	3 starches + 1 high-fat meats + 2 fats
Tuna noodle casserole with cream or white sauce, no vegetables	1 cup	2 starches + 2 medium-fat meats + 3 fats
Chicken pot pie	8 ounce	3 starches + 2 medium-fat meats + 5 fats
Beef tacos with cheese, lettuce, tomato, and salsa	2 tacos	1 starch + 3 medium-fat meats + 3 fats
Burrito with beef, beans, rice, and cheese	1 large	5 starches + 3 medium-fat meats + 4 fats
Chicken fried rice	1 cup	3 starches + 1 high-fat meats + 2 fats
Cream of tomato soup	1 cup	2 non-starchy vegetables + 1 fat
Stuffed peppers with rice and meat	1 half pepper	½ starch + 1 non-starchy vegetables + 1 medium-fat meat + 1 fat

Alcohol One Exchange = 100 calories

Beer		
Light	12 oz	1 alcohol + ½ starch
Regular	12 oz	1 alcohol + 1 starch
Distilled Spirits	1.5 oz	1 alcohol
Liquor, coffee	1 oz	½ alcohol + 1 starch
Sake	1 oz	½ alcohol
Wine		
Sherry	3.5 oz	1 alcohol + 1 starch
Red or White	5 oz	1 alcohol

References

The Exchange List System for Diabetic Meal Planning. University of Arkansas, Division of Agriculture.
<https://www.uaex.edu/publications/pdf/FSHED-86.pdf>

Food Exchange Lists. <http://drc.ucsf.edu/pdfs/FoodLists.pdf>

