

## The Healing Handbook *for* Persons with Diabetes

[ [Table of contents](#) | [Previous chapter](#) | [Next chapter](#) ]

# Chapter 6 Diet

- [The Diabetic Diet](#)
- [Cookbooks](#)
- [Basic Nutrition for People with Diabetes](#)
- [Guidelines for Healthier Eating](#)
- Exchange Lists: [General Principles](#) and Specifics

<a href="#">Starch/Bread</a>	<a href="#">Meat</a>	<a href="#">Vegetables</a>
<a href="#">Fruits</a>	<a href="#">Milk</a>	<a href="#">Combination Foods</a>
<a href="#">Free Foods</a>	<a href="#">Fat</a>	<a href="#">Occasional Use Foods</a>

- [Special Management Tips:](#)

<a href="#">Alcohol</a>	<a href="#">Eating Out</a>	<a href="#">Fast Food</a>
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- [Exercise and Exchanges](#)
- [A Sample Diet](#)

Diet is a vital component in your overall diabetes control program. Your diabetes educator, dietitian, and doctor will develop a personal [meal plan](#) to help you attain appropriate blood sugar (glucose) and blood fat (cholesterol and triglyceride) levels.

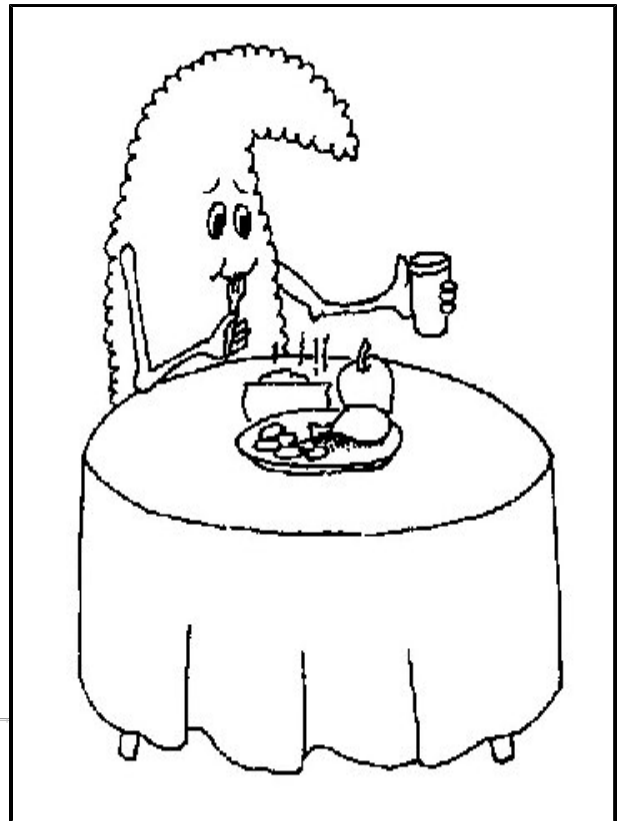
If you have non-insulin dependent diabetes, sticking to your meal plan helps you achieve and maintain your correct weight, and balances the foods you eat with the insulin your body produces.

If you have insulin dependent diabetes, you must stick to your meal plan to insure a balance between injected insulin and the foods you eat.

## The Diabetic Diet

Your diabetic diet is a well-balanced meal plan tailored to your individual needs, tastes, activity level and life style. Meal times and types and amounts of foods are planned and adjusted just for you. You may need to learn more about foods, and you may have to make some changes in your eating habits. The better you understand your diet, the more flexibility you can enjoy.

Your dietitian is there to get you started on your way to good nutrition and better health. He or she can help



you tailor favorite recipes to fit your prescribed meal plan. Your dietary needs are not like anyone else's. That's why your dietitian's help is so important. Once you understand your dietary needs, you'll be able to design your own menus and make safe judgments about your diet.

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## Cookbooks

These cookbooks can help you plan healthy, varied meals that fit perfectly into your personal diabetes diet. Most are available at your local bookstore.

*ADA Family Cookbook, Vol. III*

*ADA Family Cookbook, Vol. IV (The American Tradition)*

*The UCSD Healthy Diet for Diabetes*

*The Art of Cooking for the Diabetic*

*The Calculating Cook*

*Exchanges for All Occasions*

*The International Menu Diabetic Cookbook*

*Oriental Cooking for the Diabetic*

*Sugar Free Kid's Cookery*

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## Attention Vegetarians!

Ask your dietitian about vegetarian options, and check your book store for *Vegetarian Cooking for Diabetics* by Patricia Mozzar (published by The Book Publishing Company).

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## Basic Nutrition for People with Diabetes

Although foods contain many nutrients, it is easiest to categorize them in three groups: carbohydrates, proteins, and fats.

- **Carbohydrate** foods include bread, potatoes, rice, crackers, cookies, sugar, fruit, vegetables, and pasta. When digested, carbohydrates provide fuel for energy.
- **Protein** foods include meat, poultry, fish, eggs, cheese, dried beans, and legumes. When digested, protein is used to build and repair your body. Some protein may also be used as fuel for energy.
- **Fat** foods include butter, margarine, cooking oil, cream, bacon, and nuts. When digested, fats are stored as fat cells or later used as fuel for energy.

Your meal plan will include carbohydrates, proteins and fats in amounts that will promote good diabetes control while providing adequate fuel for energy and building and repairing your body.

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## Calories

A calorie is a unit of heat used to express the energy-producing content of foods. Your dietitian will determine how many calories you need every day, and how they should be divided among types of food, by considering your height, weight, age, activity level, growth needs, metabolism, and general life style. For example, an active young person of normal weight needs more calories than an inactive older person or an overweight person.

Remember, if you eat more calories than you need to produce energy, the excess calories are stored as body fat.

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## Obesity

If you are overweight, losing weight is your primary goal. You can lose weight by eating fewer calories than your body needs for your usual activity level and by increasing your exercise.

A pound of fat is equal to 3,500 calories. To lose a pound in a week, you'd have to cut your calorie intake by 500 calories a day (500 calories x 7 days = 3,500 calories, or one pound). If that sounds like a lot of dieting for very little weight loss, remember a pound a week is 52 pounds a year. But you have to stick with it.

To achieve your ideal weight you have to develop good eating habits, and to maintain that weight you must continue those habits.

Be realistic. Making a big change in your life takes time. It might help to keep a record of your weight each week, so you know when you're making progress, and when you're not. And don't worry about occasional relapses. Don't be harsh with yourself if you overeat once or twice, or regain a pound or two you thought you'd lost forever. But do try to identify the causes of your relapses, so that you can avoid them in the future.

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## Guidelines for Healthier Eating

There are some very simple things you can do every day to make sticking to your diet easier:

- **Plan** your meals so that you eat healthy food, not just whatever is easiest
- **Think** before you eat instead of raiding the refrigerator every time you feel hungry.
- Use a **smaller plate**, so that you can't heap on much more than you really want or need
- **Chew** slowly and completely, savoring every mouthful, instead of packing in as much as you can as quickly as you can.

The following guidelines are a little more complicated, but well worth the effort:

### EAT LESS FAT

- Cut down on meat. Eat more fish and poultry instead. When you do eat red meat, choose the leanest cuts.
- Roast, bake, or broil instead of frying. Trim the fat off meat and the skin off poultry, and avoid adding

fat in cooking. Beware of sauces and gravies. They often contain lots of fat.

- Eliminate or cut down on high-fat foods like cold cuts, bacon, sausage, hot dogs, butter, margarine, nuts, salad dressings, lard, and shortening.
- Eat less ice cream, cheese, sour cream, cream, and other high-fat dairy products. Check for low-fat versions; they're increasingly available in grocery stores. And drink skim or low-fat milk instead of whole milk.

## Know Your Fats

**Cholesterol** is a fatty substance found in animal foods (meat, poultry, egg yolks, whole milk, cheese, ice cream, butter). Have your cholesterol level tested; your goal is a level under 200 mg/dl.

**High-density lipoprotein (HDL)** is a type of cholesterol that may protect against heart disease (good cholesterol).

**Low-density lipoprotein (LDL)** is a harmful type of cholesterol that deposits on artery walls and increases the risk of heart disease (bad cholesterol).

**Monounsaturated fat** is a type of unsaturated fat that lowers blood cholesterol. It is found in olive oil and peanut oil

**Polyunsaturated fat** is a vegetable fat that lowers total blood cholesterol. It is found in cottonseed, soybean, sunflower, and safflower oils.

**Saturated fat** is an animal fat that raises total blood cholesterol. It is found in hydrogenated vegetable fats, coconut and palm oils, cocoa butter, meat fat, whole milk, butter cream, and fatty cheeses.

**Triglycerides** are fats in the blood that may increase the risk of heart disease.

## INCREASE FIBER

- Switch to whole-grain breads, cereals and crackers.
- Eat more vegetables -- raw and cooked. Instead of fruit juice, eat fresh, whole fruit.
- Sample high-fiber foods that may be new to you, like bran, barley, bulgur, brown and wild rice, and dried beans, peas, and lentils.

## What is Fiber?

Also known as roughage, fiber is the part of plant food your body cannot digest.

Fiber relieves constipation, lowers blood cholesterol levels, and apparently slows down the rate of carbohydrate digestion, reducing carbohydrate-induced elevations of blood sugar.

Fiber also causes gas if you eat too much too quickly.

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## REDUCE SODIUM

- Don't add salt in cooking, and try not to put salt on your food at the table.
- Cut down on high-salt foods like canned soups, ham, sauerkraut, hot dogs, and pickles. Food that tastes salty probably is salty.
- Eat fewer convenience foods and try to avoid fast-food restaurants. Even when they don't taste salty, these foods are often loaded with sodium.

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## REDUCE SUGAR

- Don't eat table sugar. If you're used to adding sugar to food beverage, substitute an artificial sweetener that has no calories, like saccharin or aspartame (Nutrasweet).
- Avoid honey, syrup, jam, jelly, candy, sweet rolls, regular gelatin, cake with icing, and pie. Instead of fruit canned in syrup, choose fresh fruit, or fruit canned in natural juice or water.
- Drink diet soft drinks. One twelve-ounce can of regular cola contains nine teaspoons of sugar!

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## Exchange Lists

Your dietitian may use **exchange lists** to help you plan meals and snacks. Exchange lists are groups of foods that contain roughly the same mix of carbohydrates, protein, fat, and calories. There are six exchange lists:

1. Starches and Breads
2. Meats and Meat Substitutes
3. Vegetables
4. Fruits
5. Milk
6. Fats

You need foods from all six lists for complete nutrition. Foods on the exchange lists are familiar, everyday items you can buy at the supermarket. For more information on cooking and eating with exchange lists. See *Exchanges for All Occasions*.

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. © 1989 by the American Diabetes Association, Inc. and by the American Dietetic Association.

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## Exchange Lists and Nutrition

This chart shows the amounts of carbohydrate, protein, fat, and calories in one serving from each exchange

list.

		<b>Carbohydrate (grams)</b>	<b>Protein (grams)</b>	<b>Fat (grams)</b>	<b>Calories</b>
<b>Starch/Bread</b>		15	3	trace	80
<b>Meat</b>	Lean	--	7	3	55
	Medium fat	--	7	5	75
	High fat	--	7	8	100
<b>Vegetable</b>		5	2	--	25
<b>Fruit</b>		15	--	--	60
<b>Milk</b>	Skim	12	8	trace	90
	Low fat	12	8	5	120
	Whole	12	8	8	150
<b>Fat</b>		--	--	5	45

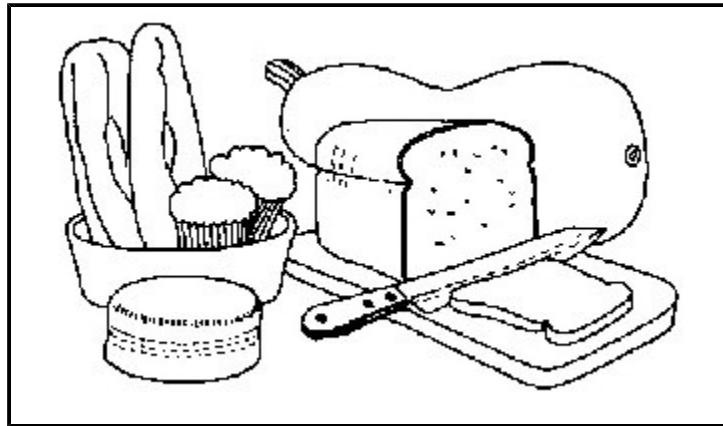
As you read the exchange lists, you will notice that serving sizes vary for different choices on each list. Because foods are so different, portions are adjusted so that each choice on a list contains the same amount of carbohydrate, protein, fat, and calories.

If one of your favorite foods is not included on any exchange list, ask your dietician about it. You can probably work that food into your meal plan, at least now and then.

## My Meal Plan in Exchanges

It's often helpful to use a little chart like this one to help you make a meal plan that's nutritious, that's good for taking care of your diabetes, and that has foods in it that you like.

<b>My Meal Plan</b>						
<b>Carbohydrate _____ grams</b>	<b>Protein _____ grams</b>		<b>Fat _____ grams</b>		<b>Calories _____</b>	
	<b>1 Starch/Bread</b>	<b>2 Meat</b>	<b>3 Vegetable</b>	<b>4 Fruit</b>	<b>5 Milk</b>	<b>6 Fat</b>
<b>Breakfast</b>						
<b>Snack Time</b>						
<b>Lunch</b>						
<b>Snack Time</b>						
<b>Dinner</b>						

**Snack Time****STARCH / BREAD LIST**

- Choose your starch exchanges from this list. Each item is 1 exchange and contains about 80 calories. If you want to eat a starch food that is not on this list, the general rule is:
- 1/2 Cup of cereal, grain, or pasta is one serving
- 1 ounce of a bread product is one serving

Your dietitian can help you be more exact.

**CEREALS / GRAINS / PASTA**

Bran cereals, concentrated	1/3 Cup
Bran cereals, flaked (Bran Buds <sup>®</sup> , All Bran <sup>®</sup> )	1/2 Cup
Bulgur, cooked	1/2 Cup
Cooked cereals	1/2 Cup
Cornmeal, dry	1 1/2 tsp
Grapenuts	3 tbsp
Grits, cooked	1/2 Cup
Pasta, cooked	1/2 Cup
Rice (white or brown), cooked	1/2 Cup
Shredded Wheat	1/2 Cup
Unsweetened cereals	3/4 Cup
Wheat germ	3 tsp

**DRIED BEANS/PEAS/LENTILS**

Lentils, cooked	1/3 Cup
Baked beans	1/4 Cup

Beans and peas, cooked (kidney, white, split, blackeye)

1/3 Cup

**STARCHY VEGETABLES**

Corn 1/2 Cup

1/2 Cup

Corn on cob, 6" 1

1

Lima beans 1/2 Cup

1/2 Cup

Peas, green (canned or frozen) 1/2 Cup

1/2 Cup

Plantain 1/2 Cup

1/2 Cup

Potato, baked 1 small (3 oz)

1 small (3 oz)

Potato, mashed 1/2 Cup

1/2 Cup

Squash, winter (acorn, butternut) 3/4 Cup

3/4 Cup

Yam, sweet potato, plain 1/3 Cup

1/3 Cup

**BREAD**

Bagel 1/2 (1 oz.)

1/2 (1 oz.)

Bread sticks, crisp, 4" x 1/2"

2 (2/3 oz.)

Croutons, low fat

1 Cup

English muffin

1/2

Frankfurter or hamburger bun 1/2

1/2 (1 oz)

Pita, 6"

1/2

Plain roll, small

1 (1 oz.)

Raisin bread, unfrosted

1 Slice (1 oz.)

Rye, pumpernickel

1 Slice (1 oz.)

Tortilla, 6" 1

1

White bread (including French or Italian)

1 Slice (1 oz.)

Whole wheat bread

1 Slice (1 oz.)

**CRACKERS/SNACKS**

Animal crackers

8

Graham crackers, 1.5" square

3

Matzo

3/4 oz.

Melba toast

5 slices

Oyster crackers

24

Popcorn (popped, no fat added)

3 Cups

Pretzels

3/4 oz.

Rye crisp 2" x 3.5"

4

Saltine-type crackers

6



Whole wheat crackers, no fat added (crisp breads, such as Finn<sup>®</sup>, Kavli<sup>®</sup>, Wasa<sup>®</sup>)

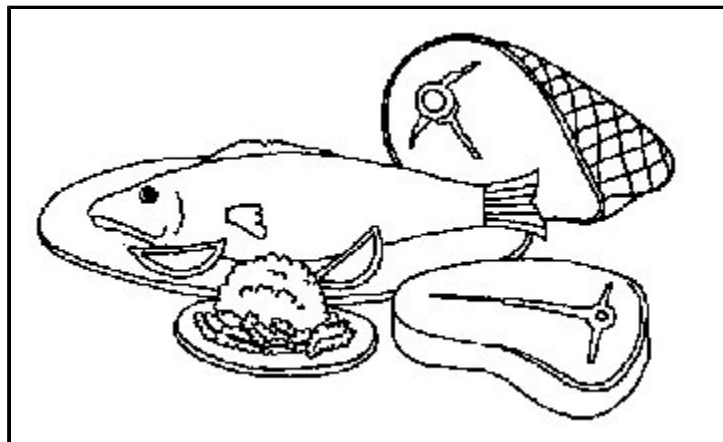
2-4 slices (1/4 oz.)

## STARCH FOODS PREPARED WITH FAT

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

Biscuit, 2.5 in. across	1
Chow mein noodles	1/2 Cup
Corn Bread, 2 inch cube	1 (2 oz.)
Cracker, round butter type	6
French fried potatoes, 2 to 3.5 inch	10 (1.5 oz)
Muffin, plain, small	1
Pancake, 4 inch	2
Stuffing, bread, (prepared)	1/4 Cup
Taco shell, 6 inch	2
Waffle, 4.5 inch square	1
Whole wheat crackers, fat added (Triscuits)	4-6 (1 oz.)

## MEAT LISTS



Choose meat and meat substitute exchanges from the lean, medium-fat, and high-fat lists. Each item is 1 exchange (usually 1 ounce of meat) and contains from 3 to 8 grams of fat and from 55 to 100 calories.

Include mostly lean and medium-fat meats, poultry, fish, and meat substitutes in your meal plan. By decreasing your fat intake, you can decrease your risk for heart disease. Items from the high-fat list are high in saturated fat, cholesterol, and calories, so limit your high-fat choices to 3 times per week.

Remember that meat and meat substitutes contribute no fiber to your meal plan.

### TIPS FOR CUTTING DOWN FAT:

1. Bake, roast, broil, grill, or boil meats and substitutes rather than frying with added fat. When pan-frying, use a pan spray or non-stick pan.
2. Do not add flour, bread crumbs, or coating mixes when preparing meats and substitutes.
3. Trim off visible fat before and after cooking.
4. Weigh meat after removing bones and fat, and after cooking. Three ounces of cooked meat is equal to about 4 ounces of raw meat. Sample meat portions are:
  - 2 ounces meat (2 meat exchanges)
    - = 1 small chicken leg or thigh
    - = 1/2 Cup cottage cheese or tuna
  - 3 ounces meat (3 meat exchanges)
    - = 1 medium pork chop
    - = 1 small hamburger
    - = 1/2 of a whole chicken breast
    - = 1 unbreaded fish fillet
    - = any cooked meat about the size of a deck of cards

## LEAN MEAT AND MEAT SUBSTITUTES

<b>Beef</b>	USDA Good or Choice grades of lean beef: steaks (round, sirloin, or flank), tenderloin, chipped beef	1 oz.
<b>Pork</b>	Lean pork: ham (fresh, canned, cured, or boiled), Canadian bacon, tenderloin	1 oz.
<b>Veal</b>	All cuts are lean, except for veal cutlets (ground or cubed). Examples of lean veal include chops and roasts	1 oz.
<b>Poultry</b>	Chicken, turkey, Cornish hen (without skin)	1 oz.
<b>Fish</b>	All fresh and frozen fish Crab, lobster, scallops, shrimp, clams (fresh or canned in water) Oysters Tuna (canned in water) Herring (uncreamed or smoked) Sardines (canned)	1 oz. 2 oz. 6 medium 1/4 Cup 1 oz. 2 medium
<b>Game</b>	Venison, rabbit, squirrel, pheasant, duck goose (without skin)	1 oz.
<b>Cheese</b>	Any cottage cheese Grated parmesan Diet cheeses (less than 55 calories per oz.)	1/2 Cup 2 tbsp 1 oz
<b>Other</b>	95% fat-free luncheon meat Egg whites Egg substitutes (less than 55 calories per 1/4 Cup)	1 oz. 3 whites 1/4 Cup

## MEDIUM-FAT MEAT AND MEAT SUBSTITUTES

<b>Beef</b>	Most beef products: ground beef (all types), roast (rib, chuck, rump), steaks (cubed, Porterhouse, T-bone), meat loaf	1 oz.
<b>Pork</b>	Pork Most pork products: chops, loin roast, 1 oz. Boston butt, cutlets	1 oz.
<b>Lamb</b>	Lamb: Most lamb products: chops, leg, roast	1 oz.
<b>Veal</b>	Veal: Cutlets (ground or cubed, unbreaded)	1 oz.
<b>Poultry</b>	Poultry: Chicken (with skin), domestic duck or goose (well-drained of fat), ground turkey	1 oz.
<b>Fish</b>	Tuna (canned in oil and drained), 1/4 Cup salmon (canned)	1/4 Cup
<b>Cheese</b>	<i>Skim or part-skim milk cheeses:</i> Ricotta Mozzarella Diet cheeses (56-80 calories per oz.).	1/4 Cup 1 oz. 1 oz
<b>Other</b>	86% fat-free luncheon meat Eggs (high in cholesterol; limit to 3 per 1 week) Egg substitutes (56-80 calories per 1/4 Cup) Tofu (2.5" x 2.75" x 1") Liver, heart, kidney, sweetbreads (all high in cholesterol)	1 oz. 1 1/4 Cup 4 oz. 1 oz.

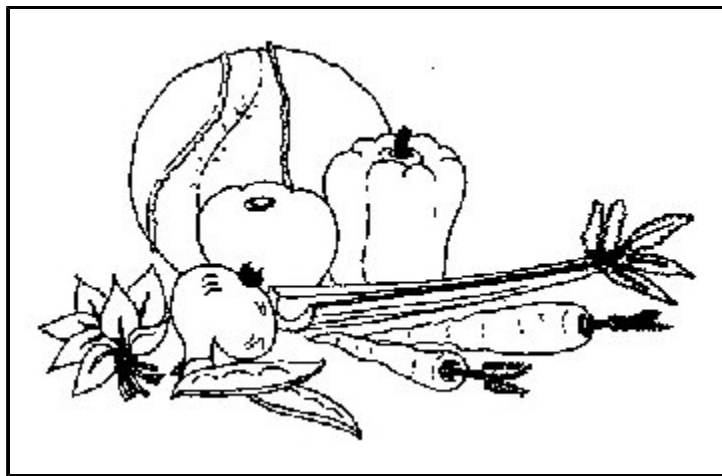
## HIGH-FAT MEAT AND MEAT SUBSTITUTES

(Use only 3 times per week)

<b>Beef</b>	Beef Most USDA Prime cuts: ribs, corned beef	1 oz.
<b>Pork</b>	Spareribs, ground pork, pork sausage (patty or link)	1 oz.
<b>Lamb</b>	Lamb Patties (ground)	1 oz.
<b>Fish</b>	Fried fish (any kind)	1 oz.
<b>Cheese</b>	Cheese All regular cheeses: American, blue, cheddar, Monterey jack, Swiss	1 oz.
<b>Other</b>	Luncheon meats: bologna, salami, pimento loaf Sausage (Polish, Italian) 1 oz.	1 oz. 1oz.

	Knockwurst (smoked) Bratwurst Frankfurter (turkey or chicken, 10 per pound) Peanut butter (contains unsaturated fat)	1 oz. 1 oz. 1 frank 1 tbsp.
Counts as 1 high fat meat plus 1 fat exchange:	Frankfurter (beef, pork, or combination, 10 per pound)	1 frank

## VEGETABLE LIST



Choose vegetable exchanges from this list. Unless otherwise noted, serving size is  $\frac{1}{2}$  Cup for cooked vegetables and vegetable juices or 1 Cup for raw vegetables. A serving of any item is one exchange and contains about 25 calories and 2-3 grams of dietary fiber. See the Starch/Bread list for starchy vegetables (corn, peas, and potatoes). See the Free Food list for free vegetables.

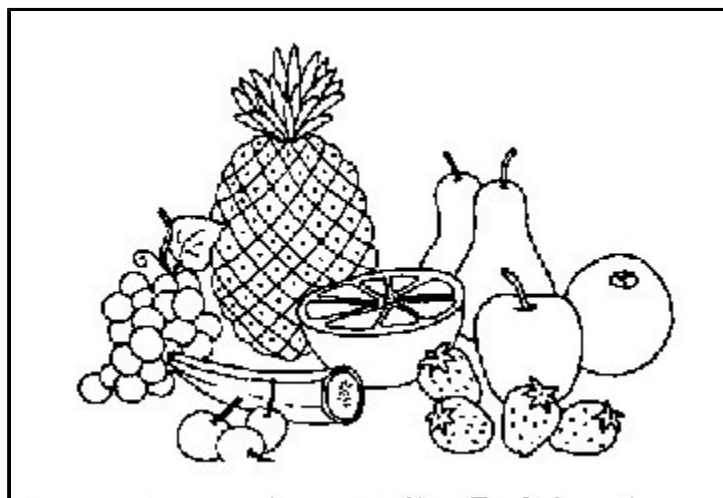
Vegetables are a good source of vitamins and minerals. Fresh and frozen vegetables contain more vitamins than canned, and have less salt. Rinsing canned vegetables removes much of the added salt.

Artichoke (1/2 medium)	Okra
Asparagus	Onions
Beans (green, wax, Italian)	Pea pods
Bean sprouts	Peppers (green)
Beets	Rutabaga
Broccoli	Sauerkraut
Brussels sprouts	Spinach (cooked)
Cabbage (cooked)	Summer squash (crookneck)
Cauliflower	Tomato (one large)
Eggplant	Tomato/vegetable juice
Greens (collard, mustard, turnip)	Turnips

Kohlrabi  
Leeks  
Mushrooms (cooked)

Water chestnuts  
Zucchini (cooked)

## FRUIT LIST



Choose fruit exchanges from this list. Each item is one exchange and contains about 60 calories. Fresh, frozen, and dried fruits contain about 2 grams of [fiber](#) per serving; fruit juices add very little dietary fiber. Whole fruit is more filling than fruit juice, so it may be a better choice for those who are trying to lose weight. Use fresh fruits or fruits frozen without added sugar.

## FRESH, FROZEN, AND UNSWEETENED CANNED FRUIT

Apple (raw, 2" diameter)	1 apple
Applesauce (unsweetened)	1/2 Cup
Apricot (medium, raw)	4 apricots
Apricot (canned)	halves
Banana (9" long)	1/2 banana
Blackberries (raw) 3/4 Cup	3/4 Cup
Blueberries (raw) 3/4 Cup	3/4 Cup
Cantaloupe (5" diameter)	1/3 melon
Cantaloupe (cubes)	1 Cup
Cherries (large, raw)	12 cherries
Cherries (canned)	1/2 Cup
Figs (2", raw)	2 figs
Fruit cocktail (canned)	1/2 Cup
Grapefruit (medium)	1/2 grapefruit
Grapefruit (segments)	3/4 Cup
Grapes (small)	15 grapes
Honeydew (medium)	1/8 melon

Honeydew (cubes)	1 Cup
Kiwi (large)	1 kiwi
Mandarin oranges	3/4 Cup
Mango (small)	1/2 mango
Nectarine (1.5" diameter)	1 nectarine
Orange (2.5" diameter)	1 orange
Papaya	1 Cup
Peach (2.75" diameter)	1 peach or 3/4 Cup
Peaches (canned)	2 halves or 1/2 Cup
Pear	1/2 large or 1 small
Pears (canned)	2 halves or 1/2 Cup
Persimmon (medium, native)	2 persimmons
Pineapple (raw)	3/4 Cup
Pineapple (canned)	1/3 Cup
Plum (raw, 2" diameter)	2 plums
Pomegranate	1/2 pomegranate
Raspberries (raw)	1 Cup
Strawberries (raw, whole)	1 1/4 Cup
Tangerine (2.5" diameter)	2 tangerines
Watermelon (cubes)	1 1/4 Cup

## DRIED FRUIT

Apples	4 rings
Apricots	7 halves
Dates	2 1/2 medium
Figs	1 1/2
Prunes	3 medium
Raisins	2 tbsp

## FRUIT JUICE

Apple juice/cider	1/2 Cup
Cranberry juice cocktail	1/3 Cup
Grapefruit juice	1/2 Cup
Grape juice	1/3 Cup
Orange juice	1/2 Cup
Pineapple juice	1/2 Cup
Prune juice	1/3 Cup

## MILK LIST



Choose milk exchanges from the skim and very low-fat, low-fat, and whole-milk lists. Each item is one exchange and contains trace amounts to 8 grams of fat and from 90 to 150 calories. The amount of fat in milk is measured as the percent of butterfat.

Items on the whole-milk list contain much more fat than those on the skim and low-fat lists. Limit your choices from the whole-milk list as much as possible.

Milk is the body's main source of calcium, needed for growth and the repair of bones. Yogurt is also a good calcium source. Yogurt and dry or powdered milk products have different amounts of fat. Check labels for fat and calorie content.

Milk is good to drink and can be added to cereal and other foods. You can make tasty dishes like sugar-free pudding from milk (see the Combination Foods list). Add flavor to plain yogurt by mixing in one of your fruit exchanges.

## SKIM AND VERY LOW-FAT MILK

Skim milk, 1/2% milk, 1% milk, or low-fat buttermilk	1 Cup
Evaporated skim milk	1/2 Cup
Dry non-fat milk 1/3 Cup	1/3 Cup
Plain non-fat yogurt 8 oz.	8 oz.

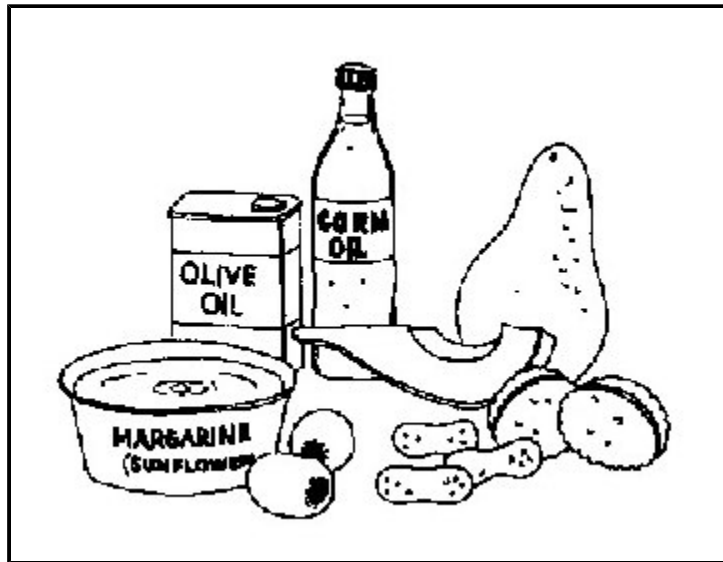
## LOW-FAT MILK

2% Milk	1 Cup
Plain low-fat yogurt (with added non-fat milk solids)	8 oz.

## WHOLE MILK

Whole milk Evaporated whole milk Whole plain yogurt	1 Cup 1/2 Cup 8 oz.
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## FAT LIST



Choose fat exchanges from these lists. Each item is 1 exchange and contains about 45 calories. These foods are mostly fat, although some contain a small amount of protein.

All fats are high in calories, so measure them carefully, and modify your fat intake by eating unsaturated fats instead of saturated fats. Sodium content of these foods varies widely; check labels for sodium information.

## UNSATURATED FATS

Avocado Margarine Margarine, diet Mayonnaise Mayonnaise, reduced calorie	1/8 medium 1 tsp. 1 tbsp. 1 tsp. 1 tbsp.
<i>Nuts and seeds:</i> Almonds (dry roasted) Cashews (dry roasted) Pecans Peanuts Walnuts Other nuts	6 whole 1 tbsp. 2 whole 20 small or 10 large 2 whole 1 tbsp.



Seeds, pine nuts, sunflower (no shells) Pumpkin seeds	2 tbsp. 1 tsp.
<i>Oil</i> (corn, cottonseed, safflower, soybean, sunflower, olive, peanut) Olives Salad dressing, mayonnaise-type Salad dressing, mayonnaise-type, reduced-calorie Salad dressing (all varieties) Salad dressing, reduced-calorie	1 tsp 10 small or 5 large 2 tsp. 1 tbsp. 1 tbsp. 2 tbsp.

(Two tablespoons of low-calorie salad dressing is a free food.)

## SATURATED FATS

Butter	1 tsp.
Bacon	1 slice
Chitterlings	1/2 oz.
Coconut (shredded)	2 tbsp
Coffee whitener, liquid	2 tbsp.
Coffee whitener, powder	4 tsp.
Cream (light, coffee, table)	2 tbsp.
Cream, sour	2 tbsp.
Cream (heavy, whipping)	1 tbsp.
Cream cheese	1 tbsp.
Salt pork	1/4 oz.

## FREE FOODS

Free foods are foods and drinks that have less than 20 calories per serving. When no serving size is specified, you can eat as much of the item as you want. You can eat 2 or 3 servings of those items that have specific serving sizes each day; be sure to spread them out through the day.

<b>Drinks</b>	Bouillon or broth without fat Bouillon, low sodium Carbonated drinks, sugar-free Carbonated water Club soda Cocoa powder, unsweetened (1 tbsp) Coffee/Tea Drink mixes, sugar-free Tonic water, sugar-free
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<b>Non-stick Pan Spray</b>	All
<b>Fruit</b>	Cranberries, unsweetened (1/2 Cup) Rhubarb, unsweetened (1/2 Cup)
<b>Raw Vegetables (1 Cup)</b>	Cabbage Celery Chinese cabbage Cucumber Green onion Hot peppers Mushrooms Radishes Zucchini
<b>Salad Greens</b>	Endive Escarole Lettuce Romaine Spinach
<b>Sweet Substitutes</b>	Candy, hard, sugar-free Gelatin, sugar-free Gum, sugar-free Jam/Jelly sugar-free (1-2 tbsp.) Sugar substitutes: saccharin, aspartame Whipped topping (2 tbsp.)
<b>Condiments</b>	Catsup (1 tbsp.) Horseradish Mustard Pickles, dill, non-sweetened Salad dressing, low-calorie (2 tbsp.) Taco sauce (1 tbsp.) Vinegar

## SEASONINGS

Seasonings can be helpful in making food taste better. Check labels for sodium content, and choose seasonings that do not contain "sodium" or "salt."

Basil Celery seed Cinnamon Chili powder	Lemon juice Lime Lime juice Mint
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Chives	Onion powder
Curry	Oregano
Dill	Paprika
Flavoring extracts (vanilla, almond, walnut, peppermint, butter, lemon, <i>etc.</i> )	Pepper
Garlic	Pimento
Garlic powder	Soy sauce
Herbs	Soy sauce, low sodium ("lite")
Hot pepper sauce	Spices
Lemon	Wine, for cooking (1/4 Cup)
	Worcestershire sauce

## COMBINATION FOODS

Much of what we eat is mixed together in combination foods that do not fit into any one exchange list. Sometimes it's difficult to know the ingredients in a casserole or baked food item. This exchange list will help you fit combination foods into your meal plan. You can always check with your dietitian for information about any other foods you'd like to eat.

The American Diabetes Association/American Dietetic Association Family Cookbooks and the American Diabetes Association Holiday Cookbook contain many recipes and further information about many foods, including combination foods. Check your library or your local bookstore.

<b>Combination Food</b>	<b>Serving</b>	<b>Exchanges</b>
Casserole, homemade	1 Cup (8 oz.)	2 starch 2 medium fat meat 1 fat
Cheese pizza, thin crust	1/4 of 15 inch pie	2 starch 1 medium fat meat 1 fat
Chili with beans (commercial)	1 Cup (8 oz.)	2 starch 1 medium fat meat 1 fat
Chow mein (without noodles or rice)	2 Cups (16 oz.)	1 starch 2 vegetable 2 lean meat
Macaroni and cheese	1 Cup (8 oz.)	2 starch 1 medium fat meat 2 fat

Bean soup (cooked)	1 Cup (8 oz.)	1 starch 1 vegetable 1 lean meat
Chunky soup (all varieties)	10 3/4 oz. Can	1 starch 1 vegetable 1 medium fat meat
Cream soup	1 Cup (8 oz.)	1 starch 1 fat
Vegetable soup or broth	1 Cup (8 oz.)	1 starch
Spaghetti and meatballs	1 Cup (8 oz.)	1 starch 1 medium fat meat 1 fat
Sugar-free pudding (made with skim milk)	1/2 Cup	1 starch
Beans used as a meat substitute: Dried beans, peas, or lentils	1 Cup	2 starch 2 lean meat

## FOODS FOR OCCASIONAL USE

The foods on this list can be included in your meal plan, despite their sugar or fat content, provided you maintain blood-glucose control. Average exchange values are listed for each item; because these foods are concentrated sources of carbohydrates, the serving are small. Check with your dietitian for advice on how often and when you can enjoy these foods.

<b>Special Food</b>	<b>Serving</b>	<b>Exchanges</b>
Angel food cake	1/12 of cake	2 starch
Cake (no icing)	1/12 of cake or 3 inch square	2 starch 2 fat
Cookies	2 small (1 3/4 inches)	2 starch 2 fat
Frozen fruit yogurt	1/2 Cup	1 starch
Gingersnaps	3	1 starch

Granola	1/4 Cup	1 starch 1 fat
Granola bar	1 small	1 starch 1 fat
Ice cream (any flavor)	1/2 Cup	1 starch 2 fat
Ice milk (any flavor)	1/2 Cup	1 starch 1 fat
Sherbet	1/4 Cup	1 starch
Snack chips (all varieties)	1 oz.	2 starch 2 fat
Vanilla wafers	6 small	1 starch 1 fat

## MANAGEMENT TIPS

Here are some tips to help you manage the way you eat:

- **Make changes gradually.** Don't try to do everything at once. It may take longer to accomplish your goals, but the changes you make will be permanent.
- **Set realistic, short-term goals.** If weight loss is your goal, try to lose two pounds in two weeks, not 20 pounds in one. Walk two blocks at first, not two miles. Success will come more easily, and you'll feel good about yourself!
- **Reward yourself.** When you achieve a short-term goal, treat yourself to a movie, buy a new shirt, read a good book, or visit a friend.
- **Measure foods.** Be careful about serving sizes, and learn to estimate the amount of food you are served when dining out. Measuring all the food you eat for a week or so will help you do this. Measure liquids with a measuring Cup. Some solid foods (tuna cottage cheese, canned fruits) can be measured with a measuring Cup, too. Use measuring spoons for smaller amounts of foods like oil, salad dressing, or peanut butter. You can use a scale to measure almost anything --especially meat, poultry, and fish.
- **Measure all foods after cooking.** Some foods you buy uncooked will weigh less after you cook it. This is true of most meats. Starches often swell in cooking, so a small amount of uncooked starch can become a much larger amount of cooked food. The following table illustrates these changes:

	Uncooked	Cooked
<b>STARCH FOODS</b>		
Oatmeal	3 level tbsp.	1/2 Cup
Cream of Wheat	2 level tbsp.	1/2 Cup

Grits	3 level tbsp.	1/2 Cup
Rice	3 level tbsp.	1/3 Cup
Spagnetti	1/4 Cup	1/2 Cup
Noodles	1/3 Cup	1/2 Cup
Macaroni	1/4 Cup	1/2 Cup
Dried beans	3 tbsp.	1/3 Cup
Dried peas	3 tbsp.	1/3 Cup
Lentils	2 tbsp.	1/3 Cup
<b>MEATS</b>		
Hamburger	4 oz.	3 oz.
Chicken	Small drumstick	1 oz.
	Half breast	3oz.

- **Read food labels.** Remember dietetic does not mean diabetic! "Dietetic" on a food label means that something has been changed or replaced. There may be less salt, less fat, or less sugar, but dietetic food is not necessarily sugar-free or calorie-free. Some dietetic foods may be useful. You can eat dietetic foods that contain up to 20 calories per serving three times a day as free foods.
- **Know your sweeteners.** There are two types of sweeteners on the marker: those that contain calories and those that do not. Sweeteners with calories, such as fructose, sorbitol, and mannitol, can cause cramping and diarrhea when used in large amounts. And these sweeteners have calories, which do add up. Sweeteners without calories include saccharin and aspartame (Equal,<sup>®</sup> Nutrasweet<sup>®</sup>) and may be used in moderation.

## More Helpful Hints

**Dietetic candy** may satisfy your craving for sweets, but eat no more than 3 hard candies (usually 3 calories a piece) in a day. "Diet" chocolates contain many more calories in fat, Sorbitol, and milk solids. It is best to avoid these.

Here are a few more rules for keeping your insulin dependent diabetes in control:

- If a meal is unavoidably delayed, you may need to prevent an insulin reaction with fast-acting sugar (see [Chapter 9](#)). You may also have to eat a small snack, such as
- If you are planning a late-evening dinner, eat your usual bedtime snack at your regular dinner hour. Then enjoy your late dinner. Do not have another bedtime snack.
- If you eat extra food, you'll need to adjust your activity level or insulin to accommodate the added blood glucose.

## Alcohol

Alcohol can cause control problems for people with diabetes. It can lower blood sugar by blocking the release of glycogen (stored glucose), possibly leading to a severe insulin reaction. Never drink when insulin is at the peak of its action (see [Chapter 8](#)). If you have alcohol on your breath, people may think you're drunk when you're actually having a reaction.

## ▲ Use Alcohol Only With Meals and Snacks and Only in Moderation

Ask your diabetes educator or doctor for advice and avoid alcohol when your diabetes is not in good control. If you're on a weight reduction diet, remember that alcohol contributes 7 calories per gram, and actually stimulates the appetite.

Alcohol is a depressant. It has an anesthetic effect that impairs the self-control and judgment you need to keep in good control. Try to limit your drinking to special occasions. A non-alcoholic beverage (mineral water or club soda with lemon or lime, diet soft drink, tomato or vegetable juice) is always a safer choice.

### Alcohol Exchanges

- Your body digests alcohol as a fat.
- A highball with water or soda water contains about 135 calories.
- Remove one fat exchange for every 45 calories in an alcoholic beverage.

**▲ WARNING: DO NOT ELIMINATE YOUR REGULAR MEAL TO BALANCE ALCOHOL CALORIES.**

- You could have a severe insulin reaction.

### Food Exchanges for Alcoholic Beverages

Beverage	Exchanges	Approximate Calories
Gin, rum, scotch, vodka, whisky (1.5 oz.)	2-3 fat	80 proof: 96 100 proof: 120
Dry wine (unsweetened, 4 oz.)	2 fat	70
Low cal beer (12 oz.)	2 fat, 1/2 fruit	90
Beer, 4.5% alcohol (12 oz.)	1 bread, 2 fat	160
Manhattan (3.5 oz.)	1/2 bread, 3 fat	170
Martini (3.5 oz.)	3 fat	135
Old Fashioned (4 oz.)	1/2 bread, 3 1/2 fat	190
Sherry, dry(3 oz.)	1/2 bread, 2 fat	125

## Eating Out

Sticking to your meal plan doesn't mean you can't eat out in restaurants or accept friends' dinner invitations. But you do have to take precautions:

- Keep your meal plan with you until you know it well.
- Order plainly cooked, familiar foods. Avoid casseroles, fried foods, cream soups, gravies, sauces, stuffings, breaded meats, and desserts.
- Try ordering ala carte. Ask the server about any food you're not familiar with.
- Measure foods at home so you'll be able estimate portions when you go out. Restaurant portions tend to be generous, so plan to share your meal or bring part of it home.
- Call ahead for information about menu offerings so you can plan your meal. This applies to both restaurants and friends. Don't be afraid to explain your meal plan requirements. People will usually cooperate.
- Never eat unacceptable foods to please your hostess or the cook. Your health is more important.
- Try to eat within an hour of your regular meal time. If there is a delay, ask for some crackers or bread sticks.
- Always carry some form of fast-acting sugar (see [Chapter 8](#)).

## Fast Food Restaurants

It can be difficult to meet nutritional requirements and maintain good balance with fast food meals. Fast foods typically contain little fiber, and their vitamin and mineral contents vary.

- Vegetables, fruits, whole grain breads, and dairy products are often missing from fast food menus.
- Remember, a fruit drink is not fruit juice.
- And fast food is typically high in sodium, saturated fats, and cholesterol.

If you must eat fast food, choose the low-fat menu selections now available in many chain restaurants. Ask your diabetes educator or dietitian for a copy of Becton Dickinson's *Fast Food Guide*. This fold-out chart lists calories, nutritional content, and exchanges for many popular fast foods.

## Exercise and Exchanges

Food is an important consideration for persons with Type 1 diabetes who do exercise. These issues are discussed in [Chapter 7](#), Exercise which includes a useful chart on [Food Exchanges for Exercise](#).

## A Sample 1500 Calorie ADA Diet

This relatively low calorie diet (appropriate for a small adult or a child with diabetes) is only an example. Based on your calorie needs, your dietitian can help you develop a similar diet that is right for your height, weight, age, and level of activity.

### Breakfast

- 1 [Fruit](#)
- 2 [Starch/Bread](#)
- 1 [Fat](#)
- 1 [Milk](#)
- \* [Free Foods](#)



<b>Lunch</b>	<ul style="list-style-type: none"> <li>1 <a href="#">Meat</a></li> <li>2 <a href="#">Starch/Bread</a></li> <li>1 <a href="#">Vegetable</a></li> <li>1 <a href="#">Fruit</a></li> <li>1 <a href="#">Fat</a></li> <li>* <a href="#">Free Foods</a></li> </ul>
<b>Afternoon snack</b>	<ul style="list-style-type: none"> <li>1 <a href="#">Fruit</a></li> </ul>
<b>Dinner</b>	<ul style="list-style-type: none"> <li>2 <a href="#">Meat</a></li> <li>2 <a href="#">Starch/Bread</a></li> <li>1 <a href="#">Vegetable</a></li> <li>1 <a href="#">Fruit</a></li> <li>2 <a href="#">Fat</a></li> <li>* <a href="#">Free Foods</a></li> </ul>
<b>Evening snack</b>	<ul style="list-style-type: none"> <li>1 <a href="#">Starch/Bread</a></li> <li>1 <a href="#">Milk</a></li> <li>1 <a href="#">Fruit</a></li> </ul>

**⚠️ REMEMBER:** The care of diabetes is a team effort involving you, your physician, and the diabetes education staff where you receive your medical care. This handbook cannot-and was not meant to-replace this team effort.

This handbook embodies the approach of the diabetes care team at the University of Massachusetts Medical School. Different diabetes care teams may approach some aspects of diabetes care in ways that differ from those in this handbook. While most teams are in close agreement regarding the GENERAL PRINCIPLES of diabetes care, they may differ in the DETAILS. There can be more than one "right" way to approach a specific issue in diabetes management.

Always remain in touch with your diabetes care team, and bring any questions you may have about the materials in this handbook to their attention!

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Feedback: send e-mail to [Dr. Aldo Rossini](#)

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[ [Table of contents](#) | [Glossary](#) | [Previous chapter](#) | [Next chapter](#) ]