

LOW FAT/LOW CHOLESTEROL GUIDELINES

A diet with less total fat, saturated fat, and cholesterol is recommended as the first step to lowering serum (blood) cholesterol and/or triglyceride levels. A reduction in serum cholesterol, especially high levels of low-density lipoprotein (LDL) “bad” cholesterol, reduces the risk of cardiovascular (heart) disease. Three major dietary factors that contribute to high levels of serum cholesterol, including LDL cholesterol are: (1) high intake of saturated fat; (2) high intake of dietary cholesterol; and (3) an imbalance between calorie intake and activity level leading to obesity. Individuals with high triglycerides may also need to reduce foods high in sugar or refined carbohydrates, and avoid alcohol. A high level of high-density lipoprotein (HDL) “good” cholesterol is associated with a decreased risk of heart disease.

General Guidelines

- **Total fat.** Reduction of total fat to no more than 30% of total calories (about 50 to 65 grams fat for a 1500-1600 calorie diet) helps to control both caloric and saturated fat intake. Bake, broil, or grill foods instead of frying to reduce total fat intake.
- **Saturated fatty acids** increase serum cholesterol and triglycerides. Foods rich in saturated fatty acids include meat fat and poultry fat, high fat dairy products (butter, whole milk, cheese, ice cream), palm oil, coconut oil, palm kernel oil, and cocoa butter. These should be avoided.
- **Dietary cholesterol** also increases serum cholesterol. Cholesterol is found only in animal foods; examples include high fat dairy products, meat, fish, and poultry; egg yolks and organ meats are particularly rich sources. Limit these foods.
- **Polyunsaturated fatty acids** have a cholesterol lowering effect when they are substituted for saturated fat. However, too much polyunsaturated fat, that is, intakes greater than 10% of total calories, may be associated with decreases in HDL cholesterol. Common foods rich in polyunsaturated fatty acids include corn oil, sunflower oil, safflower oil, soybean oil, walnuts and sunflower seeds.
- **Monounsaturated fatty acids** can lower LDL cholesterol. Monounsaturated fatty acids should be eaten as the majority of your total fat intake. Choose more plant sources of monounsaturated fatty acids, such as olive, canola or peanut oils.
- **Trans-fatty acids** are formed by the partial hydrogenation (hardening) of vegetable oils, and, in some studies have been shown to raise LDL cholesterol levels almost as much as saturated fats. Sources of trans-fatty acids are margarine, shortenings, and partially hydrogenated oils used in cakes, cookies, crackers and fried foods. “Partially hydrogenated vegetable oils” on the food label is an indication that trans-fatty acids may be present. Limit these foods.

- **Dietary fiber** intake should be increased to 20 to 35 gm daily for adults, about 25% of which should be soluble fiber. Soluble fiber sources include oats, legumes, apples, grapefruits and oranges. An additional decrease in serum cholesterol may result when soluble fiber is added to a diet reduced in fat and cholesterol. Consumption of the recommended amount of dietary fiber can be met daily by eating the suggested five or more servings of fruits and vegetables, and six or more servings of whole grain products.
- Obesity is a risk factor for coronary artery disease. **Weight control** is associated with increased HDL cholesterol and decreased LDL cholesterol and triglyceride levels. Limit intake of desserts to decrease calories. Regular exercise is beneficial for weight control. Consult your physician regarding a weight reduction or exercise program.
- **Omega-3 fatty acids.** Fish is the best source of omega-3 fatty acids. Have one to two servings of fish per week to lower risk of coronary artery disease. Fish oil supplements are not recommended.
- **Antioxidant vitamins C, E, beta carotene and folic acid** are being investigated for their role in preventing atherosclerosis (blocked arteries). The recommended allowance of all the major vitamins should be consumed as part of a well-balanced diet. In addition to being part of a low fat diet, dark green and dark yellow vegetables and fruits are rich sources of antioxidant vitamins. Eat five to nine servings of fruits and vegetables per day. Discuss your need to take vitamin/mineral supplements with your physician. Typically a multivitamin without iron plus supplemental Vitamin E (200-400 IU/day) may be recommended.
- **Alcohol.** The *Dietary Guidelines for Americans* recommends that for those who do consume alcohol, limit intake to no more than 1 to 2 drinks per day. Alcohol should be avoided for individuals with high triglycerides.
- **Sodium** or salt in excess may cause fluid retention and hypertension (high blood pressure) in sodium-sensitive individuals. Numerous national agencies recommend that daily sodium intake should be limited to less than 3,000 mg per day. If you need to restrict salt, eliminate or eat sparingly high sodium processed foods, fast foods, hot dogs, luncheon meat, canned soups and canned vegetables. The salt shaker Δ symbol next to a food on the allowed list indicates that it is higher in sodium. Often a reduced salt version is available.
- **Caffeine** in moderation (two 6 oz. cups of coffee or about 250 mg caffeine per day) is considered safe. However, your physician may advise that you avoid caffeine if you have an abnormal heart rhythm (arrhythmia).

Food Group	Foods Allowed	Foods to Avoid
Breads and Cereals	<p>Breads-whole grain bread, Pita, English muffins, bagels, sandwich buns, corn or flour tortilla</p> <p>Cereal-oat, wheat, rice, corn Multigrain</p> <p>Crackers-wheat, graham, low-fat animal; bread sticks; melba toast; rice cakes; \triangle saltines</p> <p>Homemade baked goods using unsaturated oil, skim or 1/2% milk, and egg substitute</p> <p>Low fat or fat free quick Breads, biscuits, whole grain Muffins, pancakes or waffles</p>	<p>Breads in which eggs, fat and/or butter are a major ingredient; croissants.</p> <p>High fat granolas</p> <p>High fat crackers</p> <p>Commercially baked pastries, muffins, biscuits, croissants, pancakes or waffles</p>
Potato and Potato Substitutes	<p>Any potato, pasta or rice Without added fat</p>	<p>Fried or prepared with butter, cheese or cream sauce</p>
Soups	<p>\triangleLow fat soups and broth; reduced fat soups made with skim milk</p>	<p>Soups containing whole milk, cream, meat fat or poultry fat</p>
Fruits	<p>Fresh, frozen, canned or dried fruit; fruit juice Limit avocado to $\frac{1}{4}$ cup/day</p>	<p>Fried fruit or fruit served with butter or cream sauce</p>
Vegetables	<p>Fresh or frozen vegetables without added fat or sauce;</p> <p>\trianglecanned vegetables, tomato juice, vegetable juice</p>	<p>Vegetables fried or prepared with butter, cheese, or cream sauce</p>

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Meats and Meat Substitutes	<p><i>Limit meat, fish and poultry to 4-6 oz./day</i></p> <p>Beef, pork, lamb, veal, venison, buffalo-lean cuts well-trimmed before cooking. Limit red meat to 3 x/week</p> <p>Poultry without skin</p> <p>Fish, shellfish</p> <p>△Reduced fat or fat-free ham, luncheon meats or hot dogs</p> <p>Low fat tofu, tempeh; low fat or nonfat meat substitutes made with textured vegetable protein</p> <p>Eggs-limit egg yolks to 2-4/week; egg whites, cholesterol-free egg substitutes</p> <p>Legumes-dried or canned beans, split peas and lentils</p>	<p>Regular ground beef, fatty cuts of meat, spare ribs, organ meats</p> <p>Poultry with skin, fried Chicken</p> <p>Fried fish, fried shellfish</p> <p>Regular luncheon meats such as bologna, salami, sausage, hot dogs</p> <p>Egg yolks (more than 4/week); Includes eggs used in cooking and baking</p> <p>Refried beans made with lard</p>

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Dairy	<p>Milk-skim, 1/2% fat, or 1% fat (fluid, powdered, evaporated), buttermilk, low fat eggnog</p> <p>Yogurt-nonfat or low fat yogurt or yogurt beverages; 1% or nonfat soy or rice beverages</p> <p>△ Cheese-low fat natural or processed cheese; other low fat or nonfat varieties such as cottage cheese or cream cheese with no more than 3 grams fat per ounce; soy cheese</p> <p>Frozen dairy dessert-low fat or nonfat ice cream or frozen yogurt</p> <p>Low fat coffee creamer; low fat or nonfat sour cream; fat-free whipped topping</p>	<p>Whole milk (fluid, evaporated, condensed), 2% fat milk, chocolate milk, imitation milk, eggnog</p> <p>Whole-milk yogurt, whole-milk yogurt beverages</p> <p>Regular cheeses (American, blue, Brie, cheddar, Colby, Edam, Monterey Jack, whole-milk mozzarella, Parmesan, Swiss), cream cheese, Neufchatel cheese, 4% fat cottage cheese</p> <p>Regular ice cream</p> <p>Cream, half & half, whipping cream, nondairy creamer, whipped topping, sour cream, cream sauce</p>
Desserts and Sweets	<p>Sweets-sugar, syrup, honey, jam, preserves; candy made without fat (candy corn, jelly beans, gumdrops, hard candy); fruit-flavored gelatin</p> <p>Frozen desserts-sherbet sorbet, fruit ice, popsicles</p> <p>Reduced fat cookies, cake, pie, pudding-prepared with egg whites, egg substitute, skim milk, and unsaturated oil or margarine; ginger snaps; fig or other fruit bar cookies; fat-free cookies or cakes; angel food cake</p>	<p>Candy made with milk chocolate, coconut oil, palm kernel oil, or palm oil; fudge sauce</p> <p>Frozen treats made with regular ice cream</p> <p>Commercially baked pies, cakes, doughnuts, high-fat cookies, cream pies</p>

Food Group	Foods Allowed	Foods to Avoid
Fats	<p><i>Limit to less than 4-6 tsp/day</i></p> <p>Unsaturated oils-safflower, sunflower, corn, soybean, cottonseed, canola, olive, peanut</p> <p>Margarine-made from unsaturated oils listed above, light or diet margarine, especially soft or liquid forms</p> <p>Salad dressings-made with unsaturated oils listed above, low-fat or fat-free varieties</p> <p>△ Seeds and nuts-peanut butter, other nut butters</p>	<p>Coconut oil, kernel oil or palm oil</p> <p>Butter, lard, shortening, bacon fat, stick margarine</p> <p>Dressings made with egg yolk, cheese, sour cream, or whole milk; mayonnaise</p> <p>Coconut</p>
Beverages	Any except those listed to avoid	Beverages made with foods listed to avoid
Miscellaneous	<p>△ Mustard, ketchup, barbeque sauce, tomato sauce, pickles, relish, salsa, olives (limit to 5-10/day)</p> <p>Cocoa powder</p> <p>Herbs and Spices △ Salt, salt blends</p> <p>△ Low fat and fat-free snack chips, pretzels, popcorn</p> <p>Fat-free chip or vegetable dip</p>	<p>Hollandaise sauce</p> <p>Regular potato chips or snack chips</p> <p>Dips made with sour cream</p>

SAMPLE MENU

Breakfast

Orange juice
Whole-grain cereal
Banana
Whole-wheat toast
Margarine (1 tsp.)
Jelly
Skim milk
Coffee/tea

Lunch

Vegetable Soup
Unsalted crackers
Sliced turkey
Whole-wheat bread
Fat-free mayonnaise
Sliced tomato and lettuce
Fresh fruit salad
Skim milk
Decaf coffee/tea

Dinner

Green salad
Fat-free dressing
Broiled skinless chicken breast
Herbed brown rice
Steamed broccoli
Whole-grain roll
Margarine (1 tsp.)
Low-fat frozen yogurt
Fresh apple
Decaf coffee/tea

Mid-morning Snack

Fresh fruit
Graham crackers

Mid-Afternoon Snack

Raw vegetables
Low fat cheese

Bedtime Snack

Fat-free popcorn
Fruit juice