

FAT- & CHOLESTEROL-RESTRICTED DIET

(Sheet 1 of 3)

PURPOSE:

The low-fat/low-cholesterol diets are designed to improve serum lipid profiles for the treatment and prevention of coronary heart disease (CHD).

DESCRIPTION:

Foods high in total fat, saturated fat, and cholesterol are controlled. Total cholesterol intake is restricted. Limited amounts of monounsaturated and polyunsaturated fats are used as replacements for saturated fats. Calories need to be adjusted to achieve or maintain desired body weight. Lean meat, fish, skinless poultry, and non- or low-fat dairy products are included as well as plant sources of protein, such as legumes, dried beans, and dried peas. High-fat meats and poultry, organ meats, egg yolks, and cheese are limited. Foods high in complex carbohydrates and fiber such as fruits, vegetables, whole-grain products, and legumes are emphasized.

BASIC INFORMATION:

The National Cholesterol Education Program (NCEP) guidelines indicate that a serum total cholesterol should be measured in all adults over the age of 20 at least once every 5 years. Total cholesterol levels below 200 mg/dL are classified as "desirable blood cholesterol," those 200-239 mg/dL as "borderline high cholesterol" and those 240 mg/dL and over as "high blood cholesterol." Serum (blood-level) high density lipoprotein cholesterol (HDL-C) of at least 35 mg/dL is desirable. Elevated total serum cholesterol should be confirmed by repeat testing per your health care provider's recommendation.

Dietary treatment is the primary treatment for elevated serum cholesterol. The goals of therapy are to reduce serum cholesterol to less than 200 mg/dL and Low Density Lipoprotein (LDL) to less than 130 mg/dL for people with other heart disease risk factors and to 160 mg/dL for clients with no other risk factors. Another goal of therapy is to maintain a nutritionally adequate eating pattern.

Step I Diet Therapy of Blood Cholesterol

Nutrient	Recommended Intake
Total Fat	Less than 30% of Total Calories
Saturated Fat	8 to 10% of Total Calories
Polyunsaturated Fat	Up to 10 % of Total Calories
Monounsaturated Fat	10 to 15 % of Total Calories
Carbohydrates	At least 55% of Total Calories
Protein	Approximately 15% of Total Calories
Cholesterol	Less than 300 mg
Total Calories	To achieve and maintain desirable weight

Note: Step II Diet therapy reduces saturated fat to less than 7% of calories and cholesterol to less than 200 mg.

After starting the diet plan, patients should be checked at 4 to 6 weeks and then 3 months for cholesterol levels and diet adherence. It usually takes 6 months for results. Drug therapy may be recommended if cholesterol levels are still high.

Cholesterol is found only in animal products. Saturated fats are often solid at room temperature and are usually found in animal products such as meats, poultry, butter, cheese, and ice cream. Plant sources of saturated fats include palm oil, palm kernel oil, and coconut oil. Monounsaturated fats are found in products, such as olive oil, peanuts, flaxseed oil, and canola (rapeseed) oil. Polyunsaturated fats are usually liquid at room temperature and are found in safflower, sunflower, corn, soybean and cottonseed oils, seeds, and certain nuts.

Along with cholesterol testing, all adults should be evaluated for other CHD risk factors such as hypertension, smoking, diabetes, and obesity.

FAT- & CHOLESTEROL-RESTRICTED DIET**(Sheet 2 of 3)****FOOD LISTS - STEP I DIET****Milk/Dairy** (Limit to 2 to 3 servings a day)

- **Allowed:** Skim (nonfat) or 1% fat milk (liquid, powdered, or evaporated), nonfat or low-fat yogurt, nonfat or low-fat cottage cheese, nonfat or low-fat cheese, nonfat sour cream; and nonfat cream cheese.
- **Avoid:** Whole milk (over 3% fat) (liquid, evaporated, or condensed); 2% milk, cream; half-and-half; imitation milk products; most nondairy creamers; whipped toppings; whole milk yogurt; regular cottage cheese (4% fat); natural cheeses made from whole milk (cheddar, Swiss, blue, Camembert, etc.); low-fat or regular cream cheese; low-fat or regular sour cream; low-fat sour cream. NOTE: If 2% milk is used, decrease added fat by 1 teaspoon for each cup of milk.

Meat/Meat Substitute (Limit to 6 oz a day from animal products; limit 4 egg yolks a week)

- **Allowed:** Cooked dried beans; split peas; lentils; pinto beans; poultry without the skin; fish; tuna packed in water; lean beef (extra lean ground beef, eye of round, sirloin, round tip, round, top round, tenderloin, top loin); lean pork (tenderloin, leg, shoulder); lamb (arm, leg, loin, rib); luncheon meats (1 gram of fat or less per ounce); egg whites (2 egg whites will equal 1 whole egg); low-cholesterol egg substitutes.
- **Avoid:** Fried meats or meat substitutes; fatty cuts of beef, pork or lamb; goose; duck; liver; kidney; brains; or other organ meats; sausages; bacon; regular luncheon meats; peanut butter (except as allowed under Miscellaneous); or egg yolks beyond allotment.

Breads & Grains (6 to 11 servings a day)

- **Allowed:** Whole-grain breads (oatmeal, whole wheat, rye, bran, multigrain, etc.); English muffins; bagels; pita bread; rice; pasta; homemade baked goods low in fat; low-fat crackers (rice cakes, popcorn cakes, Rye Krisp, Melba toast, pretzels, breadsticks); or hot or cold cereals (with 1 to 2 grams of fat or less per serving).
- **Avoid:** High-fat baked goods (pies, cakes, doughnuts, croissants, pastries, muffins, biscuits); fry bread; high-fat crackers; egg noodles; granola type cereals; cereals with more than 2 grams of fat per serving; pasta and rice prepared with cream; butter; and cheese sauces.

Vegetables (3 to 5 servings per day or more)

- **Allowed:** Any fresh, frozen, canned, or dried.
- **Avoid:** Vegetables prepared in butter, cream, and other sauces; fried vegetables.

Fruits (2 to 4 servings per day or more)

- **Allowed:** Any fresh, frozen, canned, or dried.
- **Avoid:** Coconuts, avocados, and olives except as allowed under Miscellaneous.

Desserts & Sweets (Limit to control calories)

- **Allowed:** Sugar; jelly; jam; honey; molasses; low-fat or fat-free frozen desserts (such as sherbet, sorbet, ices, nonfat frozen yogurt, and Popsicles); angel food cake; low-fat or fat-free cakes and cookies (such as vanilla wafers, graham crackers, ginger snaps [and others with less than 2 grams of fat per serving]); baking cocoa; low-fat or fat-free candy (such as jelly beans or hard candy); low-fat or fat-free puddings; gelatin desserts.
- **Avoid:** Ice cream; high-fat cakes, pies, and cookies (most commercially made); chocolate; puddings made with whole milk; and nut candies.

Beverages

- **Allowed:** Juices, tea, coffee, decaffeinated coffee, carbonated drinks, and most alcoholic beverages.
- **Avoid:** Milkshakes; ice cream floats; eggnog; and alcoholic beverages containing milk, cream, and coconut.

Miscellaneous

- **Allowed:** Limit fat based on total number of calories consumed. Generally no more than 6 to 8 servings/day of added fat such as margarine and salad dressing should be eaten; overweight, sedentary, or elderly individuals may need less. Limit: (1 tsp per serving) Unsaturated vegetable oils (corn, olive, canola, flaxseed, safflower, sesame, soybean, or sunflower); margarine or shortening made from unsaturated vegetable oils; mayonnaise and salad dressings made from unsaturated oils (1 Tbsp); diet margarine (2 tsp); olives (10 small or 5 large); avocado (1/8 medium or 2 Tbsp); seeds and nuts (1 Tbsp seeds, 6 almonds, 20 small peanuts); peanut butter (2 tsp).

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No Limit: Vegetable oil sprays; fat-free mayonnaise and salad dressings, fat-free sour cream; herbs, spices, pepper, and salt substitute (with health care provider's approval); mustard; catsup; vinegar; lemon and lime juice; fat-free sauces; cream sauces made with allowed ingredients.

- **Avoid:** Butter; coconut oil; palm oil; palm kernel oil; lard; bacon fat; salad dressings made with egg yolk; fried snack foods (potato chips, cheese curls, tortilla chips); regular cream sauces.

SAMPLE MENU STEP I DIET

Suggested Meal Plan	Suggested Foods and Beverages
BREAKFAST Citrus Fruit or Juice Cereal Meat/Meat Substitute Bread/Margarine Milk Beverage	Grapefruit Half Bran Flakes (1/2 cup) Low Cholesterol Egg Substitute (1/4 cup) 2 Slices Whole Wheat Toast, Jelly (1 tsp) 1% Milk (1 cup) Coffee
DINNER - NOON OR EVENING MEAL Meat/Meat Substitute Potato/Potato Substitute Vegetable and/or Salad Bread/Margarine Dessert Beverage	Baked Chicken Breast (3 oz) Sweet Potato (1/2 cup) Fat-Free Green Beans (1/2 cup) Garden Salad (1 cup), Low-Fat Dressing (2 Tbsp) Whole Wheat Rolls (2), Honey (2 tsp) Strawberries (1 cup) Iced Tea
SUPPER - EVENING OR NOON MEAL Soup or Juice Meat/Meat Substitute Potato/Substitute Vegetable and/or Salad Bread/Margarine Dessert Milk Beverage	Vegetable Juice (1/2 cup) Fat-Free Meatballs (3 oz) in Spaghetti Sauce (1/2 cup) Spaghetti (1/2 cup) Fat-Free Broccoli (1/2 cup) Spinach Salad (1 cup), Low-Fat Dressing (2 Tbsp) Slice Italian Bread, Margarine (1 tsp) Fruit Sorbet (1/2 cup) 1% Milk (1 cup) Coffee or Tea

Nutrient Analysis

Calories	1864 Kcal	Riboflavin	3.1 mg
Protein	99 gm	Thiamin	2.0 mg
Carbohydrate	285 gm	Folate	546 mcg
Fat	46 gm	Vitamin B6	2.7 mg
Saturated Fat	13 gm	Vitamin B12	5.7 mcg
Monounsaturated Fat	15 gm	Calcium	1227 mg
Polyunsaturated Fat	12 gm	Phosphorus	1879 mg
Cholesterol	226 mg	Zinc	16 mg
Dietary Fiber	45 gm	Iron	22 mg
Vitamin A	3781 IU	Sodium	3675 mg
Vitamin C	341 mg	Potassium	4494 mg
Niacin Equivalents	14 mg		

Adapted from the Southwest Diet Manual 1999