



Lab A11-1 MEDFACTS: Evaluating Your Diet for Cholesterol Control

This assessment looks at eight different categories of foods; each food category is divided into two groups. Group 1 foods are high in fat, saturated fat, and/or cholesterol; Group 2 foods are lower in fat. Think about the foods you eat each week. Look at each food category—are the foods you eat listed under Group 1 or Group 2? Once you know the group, follow the line over to the circles under “Weekly Consumption.” Check the circle that best describes the number of servings of those foods you usually eat in one week. Then check the circle for the portion size you usually eat. Do the same thing for each of the food groups.

FOOD CATEGORY	WEEKLY CONSUMPTION	SERVING SIZE	SCORE
MEATS			
<ul style="list-style-type: none"> Recommended amount per day: ≤ 6 oz (equal in size to 2 decks of playing cards). Base your estimate on the foods you consume most often. Beef and lamb selections are trimmed to 1/8 inch fat. 			
GROUP 1: 10 g or more total fat in 3 oz cooked portion			
Beef Ground beef Ribs Steak (T-bone, flank, porterhouse, tenderloin) Chuck blade Brisket Meatloaf (w/ ground beef) Corned beef	Processed Meats 1/4 lb burger or large sandwich Bacon Lunch meat Sausage/knock-wurst Hot dogs Ham (bone-end) Ground turkey	Other Meat, Poultry, Seafood Pork chops (center loin) Pork roast (blade Boston sirloin) Pork spareribs Ground pork Lamb chops or ribs Organ meats ^c Chicken w/ skin Eel, mackerel, pompano	
GROUP 2: Less than 10 g total fat in 3 oz cooked portion			
Lean Beef Round steak (eye of round, top round) Sirloin ^d Tip & bottom round ^d Chuck arm pot roast ^d Top loin ^d	Low-fat Processed Meats Low-fat lunch meat Canadian bacon “Lean” fast-food sandwich Boneless ham	Other Meat, Poultry, Seafood Chicken, turkey (w/o skin) ^b Most seafood ^c Lamb (leg-shank) Pork tenderloin Pork sirloin, top loin Veal cutlets, sirloin, shoulder Ground veal, venison Veal chops and ribs ^d Lamb (whole leg, loin, foreshank, sirloin) ^d	

^a Score 6 points if this circle is checked.

^b All parts not listed in Group 1 have < 10 grams total fat.

^c Organ meats, shrimp, abalone, and squid are low in fat but high in cholesterol

^d Only lean cuts with all visible fat trimmed. If not trimmed of all visible fat, score as if in Group 1.

(over)

LAB A11-1 (continued)

FOOD CATEGORY	WEEKLY CONSUMPTION	SERVING SIZE	SCORE				
EGGS							
<ul style="list-style-type: none"> Weekly consumption is the number of times you eat eggs each week. For serving size, check the number of eggs eaten each time. 							
	Rarely/ never	3 or less	4 or more	Small ≤1	Average 2	Large ≥3	=
GROUP 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Whole eggs, egg yolks		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Egg whites, egg substitutes (1/2 cup = 2 eggs)							
DAIRY							
MILK: Average serving: 1 cup							
GROUP 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Whole milk, 2% milk, 2% buttermilk, yogurt (whole milk)		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Skim milk, 1% milk, skim milk buttermilk, yogurt (nonfat or low-fat)							
CHEESE: Average serving: 1 oz.							
GROUP 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Cream cheese, cheddar, Monterey jack, colby, Swiss, American processed, blue cheese, regular cottage cheese (1/2 cup) and ricotta (1/4 cup)		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Low-fat and fat-free cheeses, skim milk mozzarella, string cheese; low-fat, skim, and fat-free cottage cheese (1/2 cup) and ricotta (1/4 cup)							
FROZEN DESSERTS: Average serving: 1/2 cup							
GROUP 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Regular ice cream, frozen yogurt, milkshakes		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Ice milk, sherbet, sorbet, low-fat and nonfat ice cream and frozen yogurt							
FRYING FOODS							
<ul style="list-style-type: none"> Average serving: see below. This section refers to method of preparation for vegetables and meat. 							
GROUP 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
French fries, fried vegetables (1/2 cup) Fried chicken, fish, and meat (3 oz)		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Vegetables, not deep fried (1/2 cup) Meat, poultry, or fish prepared by baking, broiling, grilling, poaching, roasting, stewing (3 oz)							
BAKED GOODS							
Average serving: 1 serving							
GROUP 1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Doughnuts, biscuits, butter rolls, muffins, croissants, sweet rolls, Danish, cakes, pies, coffee cakes, cookies		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	_____
Fruit bars, low-fat cookies/cakes/pastries, angel food cake, homemade baked goods with vegetable oils, breads, bagels							

(over)

LAB A11-1 (continued)

FOOD CATEGORY	WEEKLY CONSUMPTION			SERVING SIZE			SCORE
	Rarely/ never	3 or less	4 or more	Small	Average	Large	
CONVENIENCE FOODS • Average serving: see below GROUP 1 _____ Canned, packaged, or frozen dinners; e.g., pizza (1 slice), macaroni and cheese (about 1 cup), pot pie (1), cream soups (1 cup); potato, rice, and pasta dishes with cream/cheese sauces (1/2 cup)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	= _____
		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2 _____ Diet/reduced-calorie or reduced-fat dinners (1 dinner); potato, rice, and pasta dishes without cream/cheese sauces (1/2 cup)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<hr/>							
TABLE FATS • Average serving: 1 tablespoon GROUP 1 _____ Butter or stick margarine; regular salad dressing, mayonnaise, sour cream (2 tbsp)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	= _____
		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2 _____ Diet and tub margarine; low-fat and fat-free salad dressings; low-fat and fat-free mayonnaise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
<hr/>							
SNACKS GROUP 1 _____ Chips (potato, corn, taco), cheese puffs, snack mix, nuts (1 oz) Regular crackers (1-1/2 oz) Candy (milk chocolate, caramel, coconut) (about 1-1/2 oz) Regular popcorn (3 cups)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	= _____
		3 pts	7 pts	1 pt	2 pts	3 pts	
GROUP 2 _____ Pretzels, fat-free chips (1 oz) Low-fat crackers (1/2 oz) Fruit, fruit rolls, licorice, hard candy (1 medium piece) Bread sticks (1-2), air-popped or low-fat popcorn (3 cups)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Total Score _____

Scoring

For each group, multiply your weekly consumption points (3 or 7) by your serving-size points (1, 2, or 3). For example, if you eat an average serving size of fried foods 4 or more times per week, your score for fried foods would be 7×2 , or 14. Note that not all responses carry a point value; with the exception for a large serving for Group 2 meats, no points are scored for Group 2 foods. Your final score is the total of all points for all food categories.

Score	Recommendation
70 or above	Need to make some dietary changes
40-69	Step I diet
Below 40	Step II diet

LAB 11-1 (continued)

Heart-Healthy Eating: The Step I and Step II Diets

All Americans should follow the general rules to lower blood cholesterol:

- Choose foods low in total fat, saturated fat, trans fat, and cholesterol.
- Choose foods high in starch and fiber.
- Be more physically active.
- Lose weight, if you are overweight.

In fact, this is a way that the whole family can eat (except infants under 2 years, who need more calories from fat), because these guidelines are similar to those recommended for the general population. And if the whole family eats in this way, it will help you make your blood cholesterol-lowering diet your everyday way of eating.

If you have high blood cholesterol, you will have to pay attention to what you eat by following either the Step I diet or the Step II diet, as advised by your physician.

On the Step I diet, you should eat

- 8–10% of the day's total calories from saturated fat.
- 30% or less of the day's total calories from fat.
- less than 300 milligrams of dietary cholesterol a day.
- just enough calories to achieve and maintain a healthy weight. (You may want to ask your physician or registered dietitian what is a reasonable calorie level for you.)

If you do not lower your blood cholesterol enough on the Step I diet or if you are at high risk for heart disease, your physician may ask you to follow the Step II diet. If you already have heart disease, you should start on the Step II diet right away. The Step II diet helps you cut down on saturated fat and cholesterol even more than the Step I diet. This helps lower your blood cholesterol even more.

On the Step II diet, you should eat

- less than 7% of the day's total calories from saturated fat.
- 30% or less of the day's total calories from fat.
- less than 200 milligrams of dietary cholesterol a day.
- just enough calories to achieve and maintain a healthy weight. (You may want to ask your physician or registered dietitian what is a reasonable calorie level for you.)

To get the full benefits of the Step II diet, you should have help from a registered dietitian or other qualified nutritionist.

TABLE 15.13

Rapid Eating Assessment for Patients (REAP)

Client is asked to respond to each of the following questions with "usually/often," "sometimes," "rarely/never," or "does not apply to me."

Topic	In an average week, how often do you:
Meals	<ol style="list-style-type: none"> 1. Skip breakfast? 2. Eat 4 or more meals from sit-down or take out restaurants?
Grains	<ol style="list-style-type: none"> 3. Eat <u>less than 3 servings</u> of whole-grain products a day? <i>Note:</i> Serving = 1 slice of 100% whole-grain bread; 1 cup whole-grain cereal like Shredded Wheat, Wheaties, Grape Nuts, high-fiber cereals, oatmeal, 3–4 whole-grain crackers, ½ cup brown rice or whole-wheat pasta
Fruits and Vegetables	<ol style="list-style-type: none"> 4. Eat <u>less than 2–3 servings</u> of fruit a day? <i>Note:</i> Serving = ½ cup or 1 med. fruit or 4 oz. 100% fruit juice 5. Eat <u>less than 3–4 servings</u> of vegetables/potatoes a day? <i>Note:</i> Serving = ½ cup vegetables/potatoes, or 1 cup leafy raw vegetables
Dairy	<ol style="list-style-type: none"> 6. Eat or drink <u>less than 2–3 servings</u> of milk, yogurt, or cheese a day? <i>Note:</i> Serving = 1 cup milk or yogurt; 1 ½–2 ounces cheese 7. Use <u>2% (reduced fat)</u> or <u>whole milk</u> instead of skim (non-fat) or 1% (low-fat) milk? 8. Use <u>regular cheese</u> (like American, cheddar, Swiss, Monterey jack) instead of low-fat or part-skim cheeses as a snack, on sandwiches, pizza, etc.?
Meats/Chicken/Turkey	<ol style="list-style-type: none"> 9. Eat beef, pork, or dark meat chicken <u>more than 2 times a week</u>? 10. Eat <u>more than 6 ounces</u> (see sizes below) of meat, chicken, turkey, or fish <u>per day</u>? <i>Note:</i> 3 ounces of meat or chicken is the size of a deck of cards or ONE of the following: 1 regular hamburger, 1 chicken breast or leg (thigh & drumstick), or 1 pork chop. 11. Choose <u>higher fat red meats</u> like prime rib, T-bone steak, hamburger, ribs, etc. instead of lean red meats? 12. Eat the <u>skin</u> on chicken and turkey or the <u>fat</u> on meat? 13. Use <u>regular processed meats</u> (like bologna, salami, corned beef, hot dogs, sausage, or bacon) instead of low-fat processed meats (like roast beef, turkey, lean ham; low-fat cold cuts/hot dogs)?
Fried Foods	<ol style="list-style-type: none"> 14. Eat <u>fried foods</u> such as fried chicken, fried fish, or french fries?
Snacks	<ol style="list-style-type: none"> 15. Eat <u>regular potato chips, nacho chips, corn chips, crackers, regular popcorn, nuts</u> instead of pretzels, low-fat chips or low-fat cracker air-popped popcorn?
Fats and Oils	<ol style="list-style-type: none"> 16. Use <u>regular salad dressing and mayonnaise</u> instead of low-fat or fat-free salad dressing and mayonnaise? 17. <u>Add butter, margarine, or oil</u> to bread, potatoes, rice or vegetables at the table? 18. <u>Cook with oil, butter, or margarine</u> instead of using non-stick sprays like Pam or cooking without fat?
Sweets	<ol style="list-style-type: none"> 19. Eat <u>regular sweets</u> like cake, cookies, pastries, donuts, muffins, and chocolate instead of <u>low-fat or fat-free sweets</u>? 20. Eat <u>regular ice cream</u> instead of sherbet, sorbet, low-fat or fat-free ice cream, frozen yogurt, etc.? 21. Eat <u>sweets</u> like cake, cookies, pastries, donuts, muffins, chocolate, and candies more than 2 times per day?
Soft Drinks	<ol style="list-style-type: none"> 22. <u>Drink 16 ounces or more</u> of non-diet soda, fruit drink/punch or Kool-Aid a day? <i>Note:</i> 1 can of soda = 12 ounces
Sodium	<ol style="list-style-type: none"> 23. Eat high-sodium <u>processed foods</u> like canned soup or pasta, frozen/packaged meals (TV dinners, etc.), chips? 24. <u>Add salt</u> to foods during cooking or at the table?

(continued on the following page)

TABLE 15.13 (continued)

Alcohol	25. Drink <u>more than</u> 1–2 alcoholic drinks a day? Note: One drink = 12 oz. beer, 5 oz. wine, one shot of hard liquor or mixed drink with 1 shot.
Activity	26. Do <u>less than</u> 30 total minutes of physical activity 3 days a week or more? Examples: Walking briskly, gardening, golf, jogging, swimming, biking, dancing, etc. 27. Watch <u>more than</u> 2 hours of television or videos a day?

Client is asked to respond to each of the following questions with "yes" or "no."

Do you...

28. Usually shop and prepare your own food?
29. Ever have trouble being able to shop or cook?
30. Follow a special diet, eat or limit certain foods for health or other reasons?

Client is asked to circle the number that best describes how he/she feels on a scale of 5 to 1, with 5 = "Very willing" and 1 = "Not at all willing."

31. How willing are you to make changes in what, how or how much you eat in order to eat healthier?

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weight maintenance energy requirements and/or energy requirements to facilitate weight loss. Optimally, the modifications that are priorities for the TLC (reducing fat, increasing physical activity, and increasing fruits, vegetables, and fiber) result in subsequent kcal reduction and weight loss.

Next, using the assessment of the patient's dietary history, nutrition problems are prioritized in order to determine nutrition diagnoses. For example, suppose the dietary assessment indicates that the patient's overall fat intake is >45% of total kcal and that most of the dietary fat comes from large servings of animal protein several times a day as well as high-fat dairy products. The first nutrition problem could be the intake of excessive fat and perhaps kcal, which would be labeled as nutrition diagnosis NI-51.1: Excessive fat intake or NI 1.5: Excessive energy intake. Identifying ways to assist the patient to reduce serving sizes and choose substitutions for each of the high-fat foods is the first step toward accomplishing several of the target TLC goals (see Box 15.7) and is incorporated into the third step of the nutrition care process—nutrition intervention. For many individuals, it is overwhelming to make these dietary changes all at one time. Dietary intake and physical activity plans should be used for a minimum of six weeks, and if results are not achieved, it is recommended that pharmaceutical intervention be considered by the primary physician as a means to assist with reducing LDL and total cholesterol levels (U. S. Department of Health and Human Services 2001).

The American Dietetic Association has made the following recommendations: "Referral to a registered dietitian for Medical Nutrition Therapy (MNT) is recommended whenever an individual has an abnormal lipid profile, based on ATP III Risk category and LDL-C goals, or has CHD. A planned initial visit lasting from 45–90 minutes and at least two to six planned follow-up visits (30–60 minutes each,

with an RD) can lead to improved dietary pattern; improved lipid profile; reduced plasma total cholesterol, LDL-C, and triglycerides; and improved weight status. The number and duration of visits in the course of Medical Nutrition Therapy will need to be greater if the client is in a higher risk category, if there is a large number of Therapeutic Lifestyle Changes (TLC) that need to be made, and if the individual is not motivated to make TLC changes. Increasing the number of visits and length of time spent with a dietitian can improve serum lipid levels and CVD risk" (American Dietetic Association, Disorders of Lipid Metabolism, Evidence Analysis Library 2006).

Ischemic Heart Disease

Definition

A sedentary individual may develop an atherosclerotic plaque that occludes up to 50% of the lumen of a coronary artery, and remain completely asymptomatic. However, if the individual becomes active they may experience a symptom, called **angina**, which is directly associated with reduced blood flow to parts of the heart. When the coronary arteries are occluded to the point that the blood flow to portions distal to the blockage is compromised, the individual is said to have myocardial ischemia. The term **ischemic heart disease (IHD)** is often used interchangeably with the term CAD.

angina—chest pain caused by oxygen deficit to the heart
ischemic heart disease (IHD)—heart disease characterized by inadequate blood supply to the heart