



Name _____ Date _____
Instructor _____ Section _____

Finding Your Cholesterol Plan

The following two-step program will guide you through the National Cholesterol Education Program's treatment guidelines. The first step helps you establish your overall coronary risk; the second uses that information to determine your LDL treatment goals and how to reach them. You'll need to know your blood pressure, your total LDL and HDL cholesterol levels, and your triglyceride and fasting glucose levels. If you're not sure of those numbers, ask your doctor and, if necessary, schedule an exam to get them. (Everyone should have a complete lipid profile every 5 years, starting at age 20.)

STEP 1: TAKE THE HEART-ATTACK RISK TEST

This test will identify your chance of having a heart attack or dying of coronary disease in the next 10 years. (People with previously diagnosed coronary disease, diabetes, aortic aneurysm, or symptomatic carotid artery disease or peripheral artery disease already face more than a 20% risk; they can skip the test and go straight to step 2.) The test uses data from the Framingham Heart Study, the world's longest-running study of cardiovascular risk factors. The test is limited to established, major factors that are easily measured. Find the point value for each of the risk factors shown.

AGE

Years	Women	Men
20–34	–7	–9
35–39	–3	–4
40–44	0	0
45–49	3	3
50–54	6	6
55–59	8	8
60–64	10	10
65–69	12	11
70–74	14	12
75–79	16	13

TOTAL CHOLESTEROL

mg/dL	Age 20–39		Age 40–49		Age 50–59		Age 60–69		Age 70–79	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
<160	0	0	0	0	0	0	0	0	0	0
160–199	4	4	3	3	2	2	1	1	1	0
200–239	8	7	6	5	4	3	2	1	1	0
240–279	11	9	8	6	5	4	3	2	2	1
280+	13	11	10	8	7	5	4	3	2	1

LABORATORY 10.1 (continued)

HIGH-DENSITY LIPOPROTEIN (HDL) CHOLESTEROL

mg/dL	Women and Men
60+	-1
50-59	0
40-49	1
>40	2

SYSTOLIC BLOOD PRESSURE (THE HIGHER NUMBER)

Mm/Hg	Treated		Untreated	
	Women	Men	Women	Men
<120	0	0	0	0
120-129	1	0	3	1
130-139	2	1	4	2
140-159	3	1	5	2
>159	4	2	6	3

Smoking

Age 20-39		Age 40-49		Age 50-59		Age 60-69		Age 70-79	
Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
9	8	7	5	4	3	2	1	1	1

Total Your Points _____

Now find your total point score in the men's or women's column to locate your 10-year risk (the far-right column).

TEN-YEAR RISK FOR HEART DISEASE

Women's Score	Men's Score	Your 10-Year Risk
<20	<12	<10%
20-22	12-15	10-20%
>22	>15	>20%

STEP 2: FIND YOUR LOW-DENSITY LIPOPROTEIN (LDL) TREATMENT PLAN

Consult the table to learn whether your overall CHD risk indicates that you need to lower your LDL cholesterol level and, if you do, by how much. First, locate your CHD risk in the left column. (That's based on the 10-year heart attack risk that you just calculated, as well as your CHD risk factors and any heart-threatening diseases you may have.) Then look across that row to see whether you should make lifestyle changes and take cholesterol-lowering medication, based on your current LDL level.

LDL TREATMENT PLAN

CHD Risk Group	Start lifestyle changes if your LDL level is ...*	Add drugs if your LDL level is ...
Very High 1. Ten-year heart attack risk of 20% or more <i>or</i> 2. History of coronary heart disease, diabetes, peripheral artery disease, carotid artery disease, or aortic aneurysm.	100 mg/dl or higher. (Aim for an LDL under 100.) Get retested after 3 months.	130 or higher. (Drugs are optional if your LDL is between 100 and 130.)
High 1. Ten-year heart attack risk of 10% to 20% <i>and</i> 2. Two or more major coronary risk factors. [†]	130 or higher. (Aim for an LDL under 130.) Get retested after 3 months.	130 or higher and lifestyle changes don't achieve your LDL goal in 3 months.
Moderately High 1. Ten-year heart attack risk under 10% <i>and</i> 2. Two or more major coronary risk factors. [†]	Same as above.	160 or higher, and lifestyle changes don't achieve your LDL goal in 3 months. [‡]
Low to Moderate 1. One or no major coronary risk factors. ^{†§}	160 or higher. (Aim for an LDL under 160.) Get retested after 3 months.	190 or higher, and lifestyle changes don't achieve your LDL goal in 3 months. (Drugs are optional if your LDL is between 160 and 189.)

*People who have the metabolic syndrome should make lifestyle changes even if their LDL level alone doesn't warrant it. You have the metabolic syndrome if you have three or more of these risk factors: HDL under 40 in men, 50 in women; systolic blood pressure of 130 or more or diastolic pressure of 85 or more; fasting glucose level of 110 to 125; triglycerides level of 150 or more; and waist circumference over 40 inches in men, 35 inches in women. People with the syndrome should limit their carbohydrate intake, get up to 30 to 35 percent of their calories from total fat (more than usually recommended), and make the other lifestyle changes, including restriction of saturated fat.

[†]The major coronary risk factors are cigarette smoking; coronary disease in a father or brother before age 55 or a mother or sister before age 65; systolic blood pressure of 140 or more, a diastolic pressure of 90 or more, or being on drugs for hypertension; and an HDL level under 40. If your HDL is 60 or more, subtract one risk factor. (High LDL is a major factor, of course, but it's already figured into the table.)

[‡]Although the goal is to get LDL under 130, the use of drugs in these people usually isn't worthwhile, even if lifestyle steps fail to achieve that goal.

[§]People in this group usually have a 10-year risk of less than 10%. Those who have higher risk should ask their doctor whether they need more aggressive treatment than shown here.

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To submit the completed lab, save the form to your computer and email it to your instructor or upload it to their digital dropbox as directed.