

Fit Facts™

FROM THE AMERICAN COUNCIL ON EXERCISE®

1,500 calorie exercise regimen for a 165-lb. person of an average fitness level:

Monday: Walk 50 to 60 minutes over variable terrain (250 kcal*)

Tuesday: Swim 20 to 30 minutes (150-200 kcal)

Wednesday: 50 minutes of a group fitness class at your health club (300 kcal)

Thursday: Rest

Friday: Walk 50 to 60 minutes over variable terrain (250 kcal)

Saturday: 120 minutes of moderate but sustained yardwork (300+ kcal)

Sunday: Two-hour bike tour (250 kcal)

* These caloric values are approximate net energy expenditures

Managing Cholesterol with Exercise

by Ralph La Forge, M.S.

APPROXIMATELY 38 PERCENT OF Americans have excessively high blood cholesterol levels. The National Cholesterol Education Program (NCEP) states that a sound diet, weight loss and physical activity are the cornerstones of therapy for many individuals with cholesterol disorders. Cholesterol-lowering drug therapy is reserved for those who have the very highest lipid levels or for those who have diabetes or coronary disease.

Atherosclerosis is a costly and fatal disease. Although there is no known cure, new evidence suggests that intensive lowering of serum total cholesterol or LDL cholesterol may retard the progression of coronary artery disease. The box at left contains the NCEP cholesterol guidelines authored in 1993 by a panel of physicians and lipid experts.

Reducing cholesterol through exercise, particularly LDL cholesterol, can be quite labor intensive. When individuals accumulate a sufficient weekly volume of exercise they can lower both total cholesterol and LDL-cholesterol and increase HDL-cholesterol (the "good" cholesterol). Exercise itself does not "burn off" cholesterol like it can with fat tissue. However, when exercise is of sufficient volume, for example, an adequate weekly frequency and duration, it can significantly reduce triglycerides and stimulate several metabolic enzyme systems in the muscles and liver to convert some of the cholesterol to a more favorable form, such as HDL-cholesterol.

For many people with cholesterol disorders the first choice of therapy is dietary modification. If LDL cholesterol (the "bad" cholesterol) is high enough, dietary therapy is often supplemented with cholesterol-lowering drug therapy. Exercise is of tremendous benefit when used in combination with either of these two forms of therapy. For those who maintain a frequent and sufficient level of exercise, it is possible that their physician will reduce their cholesterol-lowering medication and in some cases stop it altogether.

Here are guidelines that outline a systematic approach for favorably altering cholesterol levels with regular exercise:

- If you do have a less-than-desirable cholesterol level, or your doctor has told you have a cholesterol disorder, have your physician establish your cardiovascular health status before engaging in a vigorous exercise program. This may mean that your physician will elect to perform a graded exercise test with an ECG (treadmill stress test) on you first.
- Choose dynamic forms of exercise such as aerobics, recreational, and/or utilitarian activities that tend to last at least 20 to 30 minutes and are performed at moderate intensities. Moderate exercise intensities would be an approximate effort of four to seven, on a scale of one to ten with ten being near maximal exercise.
- In general, for exercise to significantly lower cholesterol levels, a relatively high volume of exercise is recommended (e.g. 1,200 to 1,500 kcal or more per week). In 12 to 16 weeks this volume of exercise can reduce total cholesterol by 10–20 percent. Fifteen hundred calories expended during exercise is equivalent to about six hours per week for the average unfit person performing moderate intensity walking, swimming, walk-jogging or cycling. This volume of weekly exercise is approximately the same volume of physical activity required to lose weight. As a result, fat weight loss tends to be associated with reductions in cholesterol levels, especially fat lost around the waist and abdomen.

A sample program would be to start with walking 20 minutes per day, four days a week. Over six to eight weeks graduate this program to one hour, six to seven days a week of walking over hilly (variable) terrain or walk-jogging over relatively flat ground. An alternative would be to walk 50 to 60 minutes three days a week and take an aerobics class three days a week and perhaps two to three sets of singles tennis on the seventh day. It is important to know that lower volumes of weekly exercise can still glean many other benefits, such as improved fitness and overall health, reduced blood pressure, and increased psychological well being. An ACE-certified Clinical Exercise Specialist can help you make the connection safely and effectively.

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	DESIRABLE LEVEL	BORDERLINE-HIGH RISK	HIGH RISK
Total Cholesterol	≤200	200-239	≥240
LDL Cholesterol	≤130	130-159	≥160 *
CHD	≤100		
HDL Cholesterol	≥36**	25-35	≤25
Triglycerides	≤200	200-500	≥500
LDL/HDL Ratio	≤2.7		

All values are expressed in milligrams per deciliter

* Those with CHD coronary heart disease or diabetes should have LDL-C < 100 mg/dl

** HDL ≥45mg/dl ideal

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