

MANAGING CHOLESTEROL WITH EXERCISE

High cholesterol, known as hypercholesterolemia, is a major risk factor for cardiovascular disease. In the United States, more than 105 million people (that's almost 50% of adults over age 20) suffer from elevated cholesterol. Individuals who are sedentary, overweight or obese, consume a diet high in saturated fat, have a family history of high cholesterol and/or are middle-aged or older are at particularly high risk of hypercholesterolemia and subsequent cardiovascular complications. The good news is that cholesterol levels can be improved with a little TLC; that is, therapeutic lifestyle changes.

Lifestyle Changes Are the First Step to Decreasing Cholesterol Levels

In fact, the National Cholesterol Education Program (NCEP) recommends that all individuals with an LDL cholesterol (low-density lipoprotein—this is the “bad” cholesterol) >100 mg/dL implement TLC to reduce cholesterol levels. Some of these individuals also will begin cholesterol-lowering medications if target LDL is not met after six weeks of the lifestyle changes. Refer to the accompanying table for NCEP cholesterol guidelines.

TLC consists of heart-healthy nutritional choices, weight reduction and increased physical activity. Specifically, the TLC diet is low in saturated fat (<7% of total calories) and cholesterol (<200 mg). It contains up to 10% of total calories from polyunsaturated fats and up to 20% from monounsaturated fats. Together, the fat comprises 25 to 35% of total calories. Carbohydrates comprise 50 to 60% of total calories, and protein is 15% of total calories. Fiber recommendation is 20 to 30 grams per day. And importantly, the TLC diet emphasizes weight management or weight reduction when necessary through caloric balance such that calories in (from food) equals (or is less than) calories out (from exercise plus basic functions of living, such as energy required to digest food, etc.). This nutritional plan leads to decreased LDL cholesterol and increased HDL (high-density lipoprotein—the “good” cholesterol). Regular physical activity helps to increase HDL cholesterol, reduce VLDL (very-low density lipoproteins—a form of “bad” cholesterol), and in some cases decrease LDL cholesterol. Furthermore, physical activity reduces blood pressure, improves insulin sensitivity, and favorably influences cardiovascular function.

Improve Cholesterol With Exercise

When beginning an exercise program to improve your cholesterol levels:

- Make an appointment with your physician to establish your overall cardiovascular health status. Your physician may want to perform more blood tests and/or a graded exercise

test with an ECG (treadmill stress test) to determine your risk for cardiovascular disease.

- Aim to be physically active for at least 30 minutes on most, if not all, days of the week. Better yet, once you have integrated physical activity into your daily life, try to increase activity to at least one hour per day. Many research studies have shown that it is the duration of exercise—and not the intensity of exercise or the amount of improvement in fitness level—that is important for the improvement of cholesterol levels.
- Choose moderate-intensity exercises such as walking, swimming, walk-jogging or cycling. When exercising at a “moderate” intensity, you should break a sweat and feel slightly winded but still be able to talk. High-intensity exercise does not offer any increased benefit in improving cholesterol levels. Engage in weight-lifting or resistance-training exercises at least two days per week to maintain muscle mass. Adults ages 50+ who do not

National Cholesterol Education Program Adult Treatment Panel III Guidelines*

TOTAL CHOLESTEROL

<200 Desirable
200–239 Borderline high
>240 High

LDL CHOLESTEROL

<100 Optimal†
100–129 Near Optimal
130–159 Borderline High
160–189 High
>190 Very High

HDL CHOLESTEROL

<40 Low (major heart disease risk factor)
>60 High (gives some protection against heart disease)

TRIGLYCERIDES

<150 Normal
150–199 Borderline High
200–499 High
≥500 Very High

*All values are expressed in milligrams per deciliter (mg/dL).

†<70 mg/dL is a therapeutic option for very high-risk patients (i.e., those with established CHD plus diabetes or multiple risk factors such as the metabolic syndrome)

perform regular resistance-training exercises lose about 1/4 pound of muscle mass per year. Less muscle mass means decreased metabolism. And decreased metabolism leads to weight gain.

Remember that a regular physical-activity program, healthful nutritional choices and weight reduction for those who are overweight or obese all are critical for achieving optimal cholesterol levels. When these lifestyle changes are adopted, the risk of life-long dependence on cholesterol-lowering medications decreases dramatically. The risk of cardiovascular disease also decreases dramatically. And the opportunity for improved fitness and overall health, increased psychological well-being and a high quality of life rises exponentially. If you would like help getting your cholesterol levels in check, seek out the nearest ACE-certified Fitness Professional.

Additional Resources

American Heart Association:
www.americanheart.org

Medline Plus—Cholesterol: www.nlm.nih.gov/medlineplus/cholesterol.html

NHLBI NCEP ATP III Cholesterol Counts for Everyone Page: www.nhlbi.nih.gov/chd/

WebMD Cholesterol Health Center: www.webmd.com/cholesterol-management/

National Health and Nutrition Examination Survey (NHANES), 1999–04, Centers for Disease Control/ National Center for Health Statistics: www.americanheart.org/presenter.jhtml?identifier=536

If you are interested in information on other health and fitness topics, contact: American Council on Exercise, 4851 Paramount Drive, San Diego, CA 92123, 800-825-3636; or, go online at www.acefitness.org and access the complete list of ACE Fit Facts™



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