

# Exercising with Blood Lipid Disorders



A blood lipid disorder is caused by high levels of various lipids. Lipids come in many forms. The most common are triglycerides and total cholesterol. Many other types of cholesterol also are measured. Ideally, the levels of triglycerides, total cholesterol, and LDL (“bad”) cholesterol in your blood should be low. High levels of HDL cholesterol are good. Otherwise, you are at a greater risk of developing many forms of cardiovascular disease.



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A good diet and/or medications can alter your lipid levels. They are especially effective when combined with exercise. Together, they also can help you lose body fat and body weight. These also reduce your risk of high bad lipids and low good lipids. Each time you lower your LDL cholesterol by one percent, you reduce your risk of heart disease by two to three percent.

Since improving your lipid levels is related to reducing body weight and fat, choose exercises that will help you lose weight. Regular physical activity plus a healthy diet is the best way to lose weight and keep it off. Exercise helps burn calories and reduce body fat. It also reduces your risk of heart disease, type 2 diabetes, high blood pressure, and stroke. No matter your weight or weight loss, regular exercise will improve your health.

Just starting out? Begin with aerobic exercise to burn calories. Research doesn't link resistance exercise with controlling blood lipids, so concentrate more on aerobic exercise. Later, you should add strength training, though. Both types of exercise together will help you lose weight. They also will improve your overall health and fitness.

## Getting Started

- Talk with your doctor before you start an exercise program. Ask about any changes to your medications or any concerns in becoming more active.
- Take all medicines prescribed by your doctor.
- Exercise is not a major part of your program to change your blood lipids. Changes in diet and medication also are required for success.
- Start by exercising on your own. Begin walking or another form of activity that you can integrate into your daily routine.
- Invite others to join you. Exercising together is more fun and increases the chance you will continue. Dogs also make great walking partners!
- Look for programs available in your community. Consider contacting an appropriately credentialed exercise professional\* to help you. All you really need, though, is a good pair of shoes to get started walking.
- Use a pedometer or other activity tracker to monitor your progress. Slowly work toward a goal, like maybe 10,000 steps per day.

## Aerobic Exercise Programs

The American College of Sports Medicine and the Centers for Disease Control and Prevention recommend at least 150 minutes per week of moderate-intensity aerobic activity, 75 minutes of vigorous aerobic activity, or a combination of both for adults. They also suggest twice-a-week muscle strengthening. Follow the FITT principle to design and implement a safe, effective, and enjoyable program. F = frequency, I = intensity, T = time, and T = type (Pescatello et al., 2013).

- Frequency – Be active on most days of the week but at least three to four days. Work up to five days a week.
- Intensity – Exercise at a moderate level. Use the “talk test” to help you monitor. For example, even though you may notice a slight rise in your heart rate and breathing, you should be able to carry on a conversation while walking at a moderate pace. As you walk faster, you will begin to breathe faster and have difficulty talking. At that point, you've achieved moderate

intensity or “somewhat hard.” Vigorous exercise causes a large rise in heart rate and breathing. At this intensity it would become difficult to talk. Most people would rate this as “hard to very hard.”

- Time – Exercise 30-60 minutes per day. You can do it all at once or break it up into a few sessions of at least 10 minutes each.
- Type – Do rhythmic exercises using the large muscle groups. Try brisk walking, cycling, and swimming. Choose activities you enjoy and will do regularly in your new, more active lifestyle. Add variety depending on the day or the season to keep your program more enjoyable.

Because there are different types of lipids, the exercise programs for each can be different. Here are some specific guidelines for each disorder.

- Total and LDL cholesterol. LDL cholesterol is the largest part of total cholesterol. So changes in one often are reflected in changes in the other. Reducing high LDL levels is your most important goal. It plays a big role in developing heart disease. To reduce your LDL levels, aim for 250 to 300 minutes of exercise each week. Try to burn at least 2,000 calories. With this amount of activity, most adults will lose weight and body fat. Also, expect to reduce your LDL cholesterol by five to eight percent in 12 to 16 weeks.
- HDL cholesterol. High volumes of activity also help raise HDL cholesterol levels in the blood. Research shows that exercising often and longer at a moderate intensity is best. You don't need to exercise vigorously to make a difference.
- Triglycerides. Unlike cholesterol, triglycerides are used for fuel, especially during aerobic exercise. Exercise is most effective to reduce triglycerides if you have high levels and your exercise is moderate or vigorous. Unlike the change in other lipids, lower triglycerides are usually present right after exercise. They return to initial levels within 48 hours. For this reason, regular exercise (at least every other day) is key in keeping triglycerides low. Did you just eat a meal rich in fat? This is the best time to work out. A moderate-intensity workout for 30 to 45 minutes before or after that meal will help clear the triglycerides out of the blood stream faster. Just another reason to make regular exercise a part of your life.

## Aerobic Exercise Cautions

- If you have been inactive for a long time, start with short sessions (10 to 15 minutes). Add five minutes to each session, increasing every two to four weeks. Gradually build up to being active 30 minutes a day for most days of the week.
- If you exercise at a high intensity, you will not be able to exercise for a long time. That means you will use less total energy. Also, you have a higher risk of injury.

## Resistance Exercise Programs

There is conflicting evidence about the effects of resistance training on cholesterol or triglycerides. In general, the volume of exercise is too low to burn many calories. Even so, resistance training is good for you. It improves your ability to function and promotes good health.

If you lose weight, you may lose muscle as well as fat. Evidence suggests that moderate-intensity resistance training helps increase or maintain muscle mass. Follow the FITT principal when creating a resistance exercise program, too.

- Frequency – Do resistance training at least two days per week. Plan a day of rest between sessions.
- Intensity – Exercise at a moderate level. If you can lift a weight 10 to 15 times, you've achieved moderate intensity. You get to high intensity when you can lift a weight only eight to ten times. Remember, you aren't training to be a weight lifter. Your goal is to improve your strength and muscle endurance so your daily activities will be less stressful.
- Time – This will depend on the number of exercises you do.
- Type – Exercise all major muscle groups using either free weights or a machine. There is no difference between the two methods. Don't belong to a gym or health club? No problem. You can do the same exercises at home using lighter weights, resistance bands, or your body weight as the resistance, like push-ups or sit-ups.

## Resistance Exercise Cautions

- Do not continue to lift a weight when you feel exhausted. The intensity of the last few repetitions will be close to your maximum. Also, the rise in your blood pressure may be too great.
- Avoid holding your breath when lifting. This can cause large changes in blood pressure. That change may increase the risk of passing out or developing abnormal heart rhythms.

Design your exercise program for maximum benefit and minimum risk to your health and physical condition. Consider reaching out to an appropriately credentialed exercise professional\* to work with you and your doctor. Together, you can establish realistic goals and design a safe, effective, and enjoyable program.

For more information, visit [www.exerciseismedicine.org](http://www.exerciseismedicine.org) or e-mail [eim@acsm.org](mailto:eim@acsm.org).

\*A listing of exercise professionals can be found at [www.usreps.org](http://www.usreps.org) and EIM Credentialed professionals can be found through the ACSM ProFinder (<http://bit.ly/1Mq6ldN>).

## Referral Instructions