

# Lowering Your Cholesterol

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# Lowering Your Cholesterol

## Fats in Your Blood

### Fats in Your Blood

Look out there are fats in your blood! Yes can you believe it?! Contrary to some ideas floating around the airwaves fats in your blood are necessary for life. Fats in your blood are also known as blood lipids or cholesterol. Your body uses cholesterol to produce vitamin D and hormones. Cholesterol is also used to build cell walls. Our bodies produce cholesterol, but additionally there are extra fats in the foods we eat. An extra abundance of lipids, fats or cholesterol (however you wish to call them) is not good because these extra fats can accumulate inside the arteries which can result in detrimental health consequences. These built up fats are known as bad fats. There are three types of fats in our blood.

1. LDL cholesterol which is known as bad cholesterol. Stands for Low Density Lipids or Low Density Lipo-Proteins.
2. HDL cholesterol which is known as good cholesterol. High Density Lipids or High Density Lipo-Proteins.
3. Triglycerides which is considered good but too much of it is bad.



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## Cholesterol and Your Heart

### Cholesterol and Your Heart

Don't get caught up ingesting too many bad blood fats. These bad blood fats known as LDL cholesterol and triglycerides when given a chance can damage your blood vessels and your heart. This damage may be responsible for you developing a stroke or heart disease. Heart disease is a big problem, it's the leading cause of death in the United States. People who have large amounts of the LDL cholesterol or Triglycerides increase their chances of getting heart disease as compared to people with small amounts of bad blood fats.

When there is too many blood fats (cholesterol) and triglycerides in your blood your blood becomes over saturated and your body can't keep up with its own natural elimination process. This over abundance of cholesterol and triglycerides then ends up sticking to the inner walls of your arteries. This build up of sticky fats in your arteries can become dangerous because the arteries are the avenues that carry blood from your heart to the rest of your body. The fat build up on the inner walls of your arteries is known as plaque. This plaque creates a disruption to the smooth flow of blood because now where you once had a clear artery the plaque is now restricting blood flow. Think of a tunnel where traffic is moving smoothly. The tunnel is your arteries and the traffic is the blood. Now take away one of the lanes and the traffic becomes constricted. Plaque is just like taking away lanes in your tunnels restricting the flow of blood. This happens over time not suddenly so you are not going to be affected over one high fat meal but the build up of plaque happens to one out of six people in the United States. As time goes by the plaque in the arteries start to harden. This hardening and restricting of the arteries is referred to as atherosclerosis. In the tunnel example blocking lanes of traffic causes a traffic jam

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## Cholesterol and Your Heart

but if blockage happens in the heart you can have a heart attack or if it happens in the brain you can have a stroke.

Have no fear HDL is here. HDL is known as good fats. High density lipids are like tow trucks.

Using our tunnel example, HDL is like tow trucks removing automobiles that are blocking the roadway. The automobiles blocking the roadway are the LDL and triglycerides, the tow trucks are the HDL removing the LDL out of the blood preventing the blood vessels from blockage and continuing the smooth flow of traffic. HDL cholesterol (tow trucks) will keep your arteries from clogging and reduces the risk of heart attack and stroke.

Think of HDL as the tow trucks and the LDL as broken down automobiles blocking the lanes in the tunnel. The HDL keeps blood flowing and the LDL restricts blood from flowing. The best thing to do is to hire more tow trucks to remove the broken down automobiles in the tunnel.



HDLs are the good guys LDL and triglycerides are the bad guys. You need more good guys than bad guys to win the battle.

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## Cholesterol Levels

### Cholesterol Levels

In a lab your blood is collected, tested and measured for fat levels. These results are documented and gathered to separate how much of each type of blood fat is in your blood.

The table shows safe and optimal levels your blood fats should be at. These numbers are just a rule of thumb and used as a comparison to the population at a whole. Your situation may be different according to other variables such as your weight, health of your parents, your age, if you smoke and other issues like diabetes or too much sugar in the blood. Your doctor will give you a more precise depiction of what your blood fat levels are as compared to the national average of the numbers in the chart.

If your total cholesterol or bad cholesterol (broken down automobiles LDLs) are too high, your doctor can help you figure out a regimen to help you lower them. This may include changing the food you eat and altering your life style a bit. A low HDL (tow trucks Good Fats) in your blood will call for you to increase your HDL levels. Increasing your good fats (HDLs) can be done with diet and exercise.

TEST NAME	LAB RANGE	DESIRABLE	OPTIMAL
Total Cholesterol	130-200 mg/dL	< 200	145-165
Triglycerides	30-150 mg/dL	< 100	< 50
HDL	35-150 mg/dL	> 60	> 65
LDL	0-129 mg/dL	< 100	< 70
CHOL/HDL ratio	3.9-5.7	< 3.5	< 2.5
TG/HDL ratio	None	< 2.0	< 2.0
LDL/HDL ratio	0.5-3.0	< 2.0	< 2.0

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## Testing Your Blood

### Testing Your Blood

There is no way to know whether or not your cholesterol is too high by just the way you feel. If you do feel something by that time it is too late and what you are feeling is a heart attack or stroke. Before it gets to that point you need to know where your blood fat levels are. This way you can formulate a plan of action to keep your arteries from clogging and damaging your health.

The only way to know your blood fat levels is to get a blood test done in a lab by qualified personnel using the correct equipment. Your doctor will order this test for you.

The blood test is called a **fasting lipoprotein profile**. The fasting is only for 8 hours which is easy to do. Basically have the blood test appointment setup in the morning. That morning you wake up DO NOT eat breakfast and go get it done. It's a very simple procedure the blood is withdrawn from your arm in about 15 seconds.

If you are on medications your doctor will let you know the proper protocol to follow before the blood test regarding which medications to take or not take and how to take them.



A general rule of thumb is everyone over the age of 20 should have the fasting lipoprotein profile test done to determine their correct blood fat levels. Then test should be redone at a minimum of every 5 years or more frequently if necessary. This is a good way to catch any problems such as high LDLs and correct them.

# Lowering Your Cholesterol

## Are You At Risk?

Are You at Risk?

There are a few reasons why we get high LDL cholesterol and triglycerides and low levels of HDL. Just to clarify, having high bad cholesterol and low good cholesterol is a double whammy. You may have low LDL and low HDL or high HDL and high LDL or high HDL and low LDL. See the chart below for clarification.

HDL Good		LDL Bad	
High	Low		Good
High	High		Neutral
Low	Low		Neutral
Low	High		Bad

**There are certain factors you have control of:**

- Control the consumption of foods containing bad fat. Foods that contain high levels of saturated fats, and trans fats are not foods you should be eating. Packaging will usually supply enough info for you to get a good understanding of the fat content in a particular food. Eating too much of the bad foods will increase bad fats LDLs.
- Make sure you get enough exercise. It helps to increase your good fats HDLs and from what we

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## Are You at Risk?

learned HDLs help lower Bad LDLs.

- If you are over weight it could mean you have a build up of bad fats LDLs. Exercise and proper diet will help to not only lose weight but lower cholesterol.
- Smoking or chewing tobacco is awful for your health. Besides many other ailments tobacco may cause it also helps produce atherosclerosis. Atherosclerosis is the hardening of your arteries which is bad so quit using tobacco immediately. If you are using tobacco products you should make stopping the use of all tobacco products your top priority.
- Drinking alcohol increases triglycerides and blood pressure. Drinking in excess was and never will be a good idea. Stop drinking in excess and you better your chances of not having high amounts of bad fats in your blood.

### **There are certain factors you do not have control of:**

- A family history of high levels of bad fats in their blood. It seems that high levels of bad fats in the blood can be hereditary.
- Your age and gender are uncontrollable. As we get older the bad fats seem to accumulate more. There's a tendency for women to get higher LDLs after menopause.
- Other ailments such as diabetes and high blood pressure can increase the amount of bad fats (LDLs) in your blood.
- Race is another uncontrollable variable. Hispanic and African Americans are more likely to have higher levels of bad cholesterol.

# Lowering Your Cholesterol

## Diet and Exercise

### Diet and Exercise

You can naturally lower your bad blood fats or bad cholesterol and raise the good fats. To achieve this goal you will need to make some adjustments to your life such as eating a healthy diet, losing extra weight, and increasing physical activity.

Eat a healthy diet with bigger portions of fruits and vegetables and fewer foods with bad fats in them.

Losing weight can help you lower bad cholesterol and make you happier in general. Physical activity for  $\frac{1}{2}$  hour per day would be excellent. If time is a concern try every other day or twice a week. Even once a week is still better than nothing. Work physical activities into your schedule. Do an activity you enjoy like a team sport or just walking.



When choosing your food make sure you think about what you are putting into your body. To have any chance at lowering your bad cholesterol you first need to learn which fats are good and which are bad.

Saturated fat is bad and is found in some meats, dairy products, chocolate, baked goods, deep fried and processed foods. There is another bad fat known as trans fats. These trans fats are found in baked goods, fried foods, some processed foods and margarine.

Foods you should limit because of their bad fats are liver or other organ meats , egg yolks, and whole fat dairy items. There are leaner fat options of these foods you can eat instead of the full fat options like fat free dairy items, lean meats, and remove skin from turkey and chicken. So deep fried chicken has got to be one of the highest cholesterol foods because its deep fried and the skin is left on usually.

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## Diet and Exercise

Friendly foods to eat are those low in saturated fats like fruits and vegetables, whole grains, and fish. Not shell fish. The more fruits and vegetables you eat per day the better off you will be. Remember the saying an apple a day helps keep the doctor away? Recommended servings of fruits and veggies per day varies but if you are having a minimum of 6 servings a day you are on the road to lower cholesterol.

The food labels you read (we hope you are reading food labels and ingredients) sometimes have something called unsaturated fats. These unsaturated fats can help lower LDL bad fat. There are two forms of unsaturated (good) fats.



### **Monounsaturated and Polyunsaturated**

Ingredients with good monounsaturated fats are: avocados, almonds, hazelnuts, pecans, extra virgin olive oil, peanut oil, canola oil, sesame seeds and pumpkin seeds.

Ingredients with good polyunsaturated fats are: Walnuts, fish, flax seeds, soybean oil, sunflower oil, flaxseed oil, canola oil and corn oil.

A great substance to introduce into your diet which is not only good at lowering cholesterol but it helps you to detoxify your bowels at the same time. That is fiber! Eat more fiber! Fiber acts like a scrub brush in your gut and has a smooth scraping effect in your intestines grabbing with it toxins and sludgy fat.

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Some foods high in fiber are oat bran, oats, oranges, pears, prunes, Brussels sprouts, carrots, dried peas, lentils and beans.

Basically eat oatmeal for breakfast most days and a fresh raw salad everyday at dinner. Salads can be combined and mixed and never have to get boring. There are a plethora of fresh salad ingredients that you can combine different ingredients and never have the same salad twice. Unless of course you make one you really like and make it for next time.



So lowering cholesterol naturally is a viable option just be aware of your diet and your activity. If you are not reading food labels you are taking a risk at getting high cholesterol.

Get into the habit of reading food labels. It should be second nature to you. If the writing is too small bring a magnifying glass with you to the supermarket. Think about this if the food label you read does not have good ingredients and has saturated fat you know next time you don't need it. That's one less item you need to read. You will get to the point where you won't have to read any labels because you know which foods are good and which are bad. The only time you will need to read a label is when you find something new that you like and don't know what it's made of yet.

A quick way to cancel out a whole slew of foods is to read the ingredients. If you see "Partially" in the ingredients stop reading save your time and put it back on the shelf. You never have to touch it again. Partially hydrogenated oils are one of the worst ingredients to put in your body. You will be surprised how many packaged foods have this in it.

Labels can also show the amount of saturated and unsaturated fats in them. If you really

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## Diet and Exercise

got to have it choose the one with less saturated fat. Also don't fall for the tricks some of these companies throw at you. One product might say 4g of saturated fat while another says 2g of saturated fats. So you get the lower 2g product. Only to realize after you get home the 2g product is based on a 6 ounce serving and the 4g is based on a 14 ounce serving. Making the 4g product a little less saturated than the 2g product. Be alert for the servings per container.



Also be aware of the sodium in foods. Too much sodium (salt) in your diet can cause high blood pressure and other health problems. Canned soups are notorious for having astronomical amounts of salt in them. Get low sodium varieties or make your own soup with less sodium.

Your best bet is to shop fresh produce where the ingredients for your fresh salads will be. When shopping for meats make sure you get the lean cuts and if it's dairy go for low-fat or fat-free varieties. You can also go for full fat dairy products because they might taste better to you but just don't consume as much.

Fresh produce might be too expensive for your tight budget. The next best thing is frozen fruits and vegetables. Frozen produce tends to be less expensive than fresh produce.

To make it more understandable you should divide your plate in one half and two quarters. The half is for the salad and or vegetables. One quarter for lean protein and one quarter for starch or grains.

If you want alcohol with your meal basically you should not have more than two drinks, or two beers or two glasses of wine or two shots of liquor. That's a rule of thumb. Some will

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## Diet and Exercise

say don't have any at all and some say a little more. Some wines are very low in alcohol they are almost like grape juice. Those are more beneficial if you can get them.

If you are on the go and always traveling, you probably don't have time to make healthy meals yourself. Here are some good tips when eating out.

Look for restaurants that promote healthy food. For example a restaurant that promotes organically grown fresh ingredients or NO MSG, Something that indicates healthy cooking.

Search the menu for the low fat meals or lower fat versions of that meal. For example choose the broiled fish over deep fried fish and chips. Choose a baked potato over French fries.

You can't go wrong with a salad. Order the dressing on the side and make sure the dressing you choose is of the light variety. For example choose the vinaigrette over the creamy Russian dressing.

Some restaurant types are healthier than others. For example Indian, Greek, Thai and Japanese tend to be a bit healthier than Chinese or Italian because they tend to grill meats and offer non-fried options. That's just a generalization but if you do go into any restaurant look for the foods that are grilled, baked or steamed. Those preparations are healthier than deep fried, dipped, glazed etc.



### Physical Activity

Physical activity is one of the most beneficial things you can do for your body. If you have bad cholesterol it is of most importance to exercise. Like in our chart on page 6 if you have

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## Diet and Exercise

low HDL and high LDL you need to be exercising. Exercise helps to lower the bad LDL and triglycerides.

It is best to exercise most days of the week but any exercise is better than no exercise at all. Strive for four days a week at ½ hour sessions. That is a total of two hours per week. Fitting two hours per week into your schedule should not be a problem. If you want to cut that in half you can do 15 minute sessions but increase the intensity of the session. Just make sure you are capable of pushing yourself.

You do not need to be an athlete or go to a high priced gym to get the exercise you need. A fast walk, dancing, sports are all great ways to exercise. The more days per week the better off you will be.

There are also little things you can do throughout your day to burn extra calories. Here are some examples:

Walk or ride your bike instead of driving. If it's a short trip and the weather is nice why not. Take the stairs instead of the elevator. Get out a few floors early and take the stairs the rest of the way up or down. Same goes if you ride the bus, get out a few stops earlier and walk the rest of the way.



House cleaning has a double value. Your health and your home will appreciate it.

Play with your kids, play with your friends.

Instead of meeting with friends at the pub meet them at the track or the volleyball court.

Create a league amongst your friends and keep track of who is winning. It doesn't have to be a

super athletic activity. It could be Bocce or shuffle board or power walking or whatever you all know and like.

Join an already existing league and make more friends with the same athletic interests.

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## Make a Plan

### Making a Plan

Now that you are armed with the proper info regarding cholesterol you can form a plan of attack to combat any bad LDL and triglycerides that have built up in your blood.

Knowing is half the battle, if you have not got your fasting lipoprotein profile yet that is a great starting point.

Once you get your test you will see how far above or below your score is as compared to the national average. Armed with this information you can gauge how you have been living and what you have been eating that got you to the point you are in.

If you need to lower your cholesterol you can start by writing a food journal. Keep track of what you are eating and how much saturated fats you consume. It will give you a number to target and reduce.

Next start an exercise program. Even if it's just walking mark down every time you walk or play or run. Go back to see the accomplishments of your works it's a great motivator.

Good Luck in your pursuit to lower cholesterol and live a healthier life style.