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# Introduction

Ith new FDA Statin warnings, I would strongly urge to change to natural ways to manage cholesterol. The U.S. Food and Drug Administration (FDA) has approved important safety label changes for the class of cholesterol-lowering drugs known as Statins. But there are many other reasons why should read this book at this particular point in time. Perhaps your doctor has just told you that you have high cholesterol or maybe you are just concerned.

Perhaps you are already taking high cholesterol prescription medication for a while, but not getting the results you believe you should. Or perhaps you may be worried about the prescription cholesterol medication: adverse side effects. You're anxious to reduce your dependence on drugs through more natural and safer means.

Now you're looking for other answers.

Whatever the reason you're searching for natural answers to your elevated cholesterol count, rest assured you're not alone. In the United States 102.2 million adults have total blood cholesterol values of 200 mg/dL or higher -- which places them squarely at risk for cardiovascular disease.

But more than that, more than 35 million of these people have levels that are greater than 240 mg/dL. Numbers this high mean these people are considered at high risk for heart disease. Are you or a loved one among this group?

# 1 Out Of Every 6 Of Us Have High Cholesterol

Let's dig just a little deeper into these statistics. They may mean a little more to you if we view them from another perspective. Those numbers I just cited mean that about one in every six adults is burdened with high total cholesterol. In other words, more than 16 percent of the total population experiences this health condition.

This may surprise you, but more women than men suffer from high cholesterol levels in the U.S.

And it's not just a condition that affects one ethnic group. The prevalence is spread almost evenly across all nationalities. High cholesterol affects about 16 percent of white men and nearly 18 percent of white women.

Among Mexican-Americans, the numbers are roughly the same. More than 17 percent of Mexican-American men are saddled with high cholesterol levels, while nearly 14 percent of Mexican American females are diagnosed with it.

Among African-Americans, the numbers are slightly lower. About 11 percent of African-American women are burdened with this.

### **Numbers Increase with Age**

Not only that, but the older you get -- regardless of nationality -- the greater your risk of developing high total cholesterol levels. Check out the chart below to see.

Age	Percent of Men	Percentage of Women
20-34	9.5	10.3
35-44	20.5	12.7
45-54	20.8	19.7
55-64	16.0	30.5
65-75	10.9	24.2
75 and older	9.6	18.6
All	15.6	16.9

As ubiquitous as these numbers may seem, these statistics actually represent good news. Compared to previous decades, fewer adults are experiencing total high cholesterol. In fact, the proportion of the population from ages 20 to 74 (that covers just about everyone, now doesn't it?) with this problem has actually dropped by half.

From 1960 to 1962, about 33 percent experienced it. This compares to only 16.3 percent in the years from 2003 to 2006.

And while part of the solution to this problem can be found in the development of prescription medications, very often these same drugs carry serious -- even fatal -- adverse side effects.

All too often your doctor hands you a prescription even before you've explored all the natural options available to you. For those of us who would like the opportunity to reduce our cholesterol through natural means, this course of action discourages us.

# A Society Searching For Quick, Easy Answers

The problem doesn't lie entirely with the medical community, however much we'd like to lay the blame squarely at their doorstep. We're a society that has become accustomed to "fixing" problems -- including health problems, -- rapidly. Since the advent of penicillin, we as a society believe that every ailment can be cured quickly and easily with a visit to the doctor.

And when we visit the doctor, he'll pull something out of his black medical bag of tricks -- a shot, a prescription, something -- that will put us back on the road to health with a minimum amount of work on our part.

Surprisingly, nine times out of ten, it works. And for the longest time this approach seemed to be working quite well. But then after some long-term use of these medications, we also realized that they came with some hefty adverse side effects.

# You Are In Control Of Your Health

It seems we've forgotten that we, above all other individuals, have the most control over our health. And that's what this book is about. It was written with the intention of reminding you that you create your health, you're in control of the future of your health, and that you can change the course of your health whenever you desire. You just have to want to improve your wellbeing and be determined to do it.

Of course, another important factor is knowing how to improve your wellbeing. Many of us, not used to thinking much about our habits, may be at a loss of exactly what steps -- at least initially -- to take to start knocking down those high cholesterol numbers.

In the coming chapters, I'll show you exactly how to begin. You can take any number of roads to start. The best, of course, is through lifestyle change. Changing your eating habits (notice I didn't say a diet) is undoubtedly the wisest first step you can take.

Changing your eating habits may sound boring or rather extreme. But you'll find as you read on that it's neither. You can still enjoy a wide variety

of food. In fact, when you begin eating for your health, you may discover that you're enjoying your new menu far better than your old fast-food, processed and packaged food fare!

But that's not the only way you can watch those numbers fall. There are plenty of herbal answers to high cholesterol, if you feel the desire to go this route. And I've devoted an entire chapter to helping you discover which natural herbs may work best for you.

# Knowledge Is Still Power

The most powerful step you can take in improving your health is to gain a better understanding of the role cholesterol plays in your life -- and then learn how to manage it.

You, indeed, have the ability to create a vibrant and health life not only for yourself, but for your family as well. Think about it. By managing your cholesterol level wisely, you are effectively reducing your risk of disease, increasing your life span and improving the quality of your daily experiences.

Aren't you awesome! Why wait another moment to enjoy all these advantages to healthy living? By taking just a little bit of time to immerse yourself in the information of this book, you'll discover that the road to wellness is right around the corner. And if you choose to round that bend, you're choosing years of healthy dynamic living!

Come with me through the pages of this book to learn not only the health condition you're up against, but also how you may be able to not only halt this disturbing trend, but also reverse it without resorting to prescription medications.

# Chapter 1

# What Is Cholesterol, Anyway?

# Demystifying this misunderstood natural substance.

"And your cholesterol levels," the doctor explained to Bill, "are just too high. We'll have to do something about that. These high levels put you at an elevated risk of heart disease and an early heart attack."

The doctor explained briefly the differences in the two types of cholesterol. He also explained to Bill, entering his early 40s, what he could do to help lower the numbers himself.

When Bill got home he told his wife, who asked, "Well what is cholesterol anyway?"

Sheepishly, her husband had to admit that his brain shut down once the doctor spoke the words "heart disease" and "early heart attack."

So the couple set out to discover the answers to all of their questions.

brain shutdown -- when he heard some very strong terms in relation to his own health, is quite common. It's difficult to listen to an explanation of cholesterol, its functions as well as the different types, while you're worrying or coming to grips with possible heart disease and heart attack.

Even though your physician may have explained cholesterol to you, it may not have taken hold. Or perhaps your physician just assumed you knew what this substance was and the many roles it plays in your body.

In either case, it's vitally important that before you try to lower your cholesterol, you learn as much about this it as possible. And that's what this chapter is all about.

# What Is Cholesterol, Anyway?

Cholesterol is a wax-like substance found in the lipids -- or fats -- of your blood. Your body needs a certain amount of this fat -- we talk about this a bit later -- but too much of this substance increases your risk of developing heart disease.

Believe it or not, your body actually manufactures some cholesterol. Your liver produces about 1,000 milligrams of it a day, in fact. And it's found throughout your entire body.

In addition to that, cholesterol — as you probably already know — is found in some foods. You ingest cholesterol when you eat foods that come from animals. That just doesn't mean meat; although that may be the first source you think of.

Cholesterol is also found in eggs and whole-fat dairy products, including milk, cheese and ice cream. Foods like fruits and vegetables as well as grains carry no cholesterol. The average person gets another 150 to 250 grams of this fatty substance through his diet on a daily basis.

# 2 Very Important Lipoproteins

For our purposes in this chapter, there are two important categories of lipoproteins: High-density lipoproteins (HDL) and low-density lipoproteins (LDL). These two are more commonly called good or bad cholesterol.

Many individuals are confused when it comes to the good and the bad of cholesterol classification. But over the years, I've developed a handy way of telling, well, the good from the bad. The LDL or low-density cholesterol is what we typically label as bad. I remember this because LDL starts with the letter "L" for lousy.

Similarly, the HDL is the good cholesterol. Your doctor encourages you to create more of this type. I remember that it's healthy for us because healthy starts with the letter "H", just like the HDL abbreviation.

Try remembering the classifications this way and you'll discover the entire issue of cholesterol suddenly demystifies.



So why is the LDL so lousy for your body? Quite simply, it's the type of fatty substance that is most likely to be the cause of your clogged blood vessels. This keeps your blood from flowing freely throughout your body to provide it with the necessary nourishment.

On the other hand, your doctor wants you to bring your HDL levels of cholesterol up. This type of fat helps to remove other cholesterol particles from your blood. It then carries them back to your liver, where they can be processed and sent out of the body.

# The Union of Cholesterol and Protein

Cholesterol has a problem though. It can't travel through your body without some type of help. To overcome this technical difficulty, it combines with specific proteins. These proteins "pick up" the cholesterol and then take them to the various parts of the body where they are needed.

This delivery system is provided by a third type of lipoprotein, the very low-density lipoprotein commonly referred to by its initials VLDL. The cell receptors act as drop-off stops where the actual cholesterol is then deposited. These fats are then available immediately for your body, which uses it as energy. In some cases it's also stored in fat cells for use at a later time.

If your system is healthy and functioning properly, then it'll work quite efficiently at maintaining a perfect balance. The cells pick up the LDLs that they require to perform the necessary functions. The HDLs then pick up the excess LDLs that the cells don't immediately need. They are then delivered back to the liver for "repackaging."

When this happens, the cholesterol and the protein form what's known as a lipoprotein (not a very creative designation, but it does describe the process well).

# Disruption in the Delivery System

Sometimes, though, the system that is so perfectly balanced is strained and overloaded. It seems to be a condition of living in the 21st century. Today we seem to eat too much, move too little and upset the balance of this finely timed delivery system.

The efficient system begins to teeter when more LDL packages are delivered into the bloodstream than your body's tissues can use. This

creates an excessive amount of LDL, which continues to move through your bloodstream, which in turn, only increases its fat levels. It is this excess of fat that creates congestion along your arteries.

The problem is compounded additionally if there is an excess of LDL and not enough HDL available to collect and deliver them back to the liver to be "repackaged" or recycled.

# The Sad Effects of Too Much LDL

What becomes of the LDLs? They oxidize and collect along the arterial walls, much like piles of litter along a superhighway. Before you know it, the superhighway is getting clogged and traffic -- or in this case, your blood -- slows down to a slow crawl.

Given enough time, it's possible that this arterial debris actually completely blocks your arterial walls, preventing the flow of essential oxygen for the survival of your body's tissues.

There are several individual causes of the breakdown:

First, your body has too many LDL "packages." This could occur because your liver produces too much LDL cholesterol. Your body just doesn't need all of these. In turn, there are more LDL packages than your HDLs can clear.

It could be that the problem lies with the HDLs in themselves. Your body may have too few of the HDLs. While your body isn't producing an overabundance of the LDL, it just doesn't enough of the good cholesterol to take the normal amount away.

# Your Liver: The Third Cause of High Cholesterol

The third possible cause of high cholesterol could lie with the liver. This organ may not be properly signaling to your body that the LDLs actually need to be picked up.

For some people, the problem is due to damage along the interior walls of your arteries. If inflammation exists, it throws off that delicate delivery balance.

Finally, a final cause of your high cholesterol may be in the transformation of the LDL "packages" into "litter." In this case, free radicals -- independent and unstable oxygen molecules in your body -- attach to some of the LDL

packages and oxidize them. This causes them to become large and sticky. That's when they attach to the walls of your blood vessels.

#### **Total Cholesterol**

We've talked about the two major categories of cholesterol -- HDL and LDL. Now it's time to talk about the ratio of these types in your system. Undoubtedly, a healthy "total" cholesterol level includes both the good and the bad type. If your cholesterol is low, then you'll surely reduce the likelihood of your developing heart disease (which we discuss in more detail in the next chapter).

If, on the other hand, your cholesterol score is high -- by most accounts more than 240 -- then you're at a corresponding higher risk of developing heart disease.

But in examining your total cholesterol level we will also look at the ratio between the LDL and the HDL. You might have already guessed this, but it's healthy to have higher levels of HDL in your bloodstream. These are the packages that take the bad cholesterol out of the bloodstream.

It's easy enough to calculate your ratio. Simply divide your total cholesterol level by your HDL count. If you're a man, your ratio should be 4.5 to 1 or less. If you're a woman, the ratio needs to be at 4 to 1 or less.

According to the U.S. government, more than half of all adults in this country possess total cholesterol levels that are greater than 200. This means that more than half of us may be at an elevated risk of cardiovascular disease. Of these people, another half of them don't even realize they have high cholesterol.

# What? Cholesterol Really Does Serve a Purpose?

When I try to explain to people that cholesterol is necessary for good health, sometimes I get blank stares. Most of the time, I merely get dismissed as someone who doesn't quite have all my apples in one basket.

But it's true! Your body needs a certain amount of cholesterol in order to be healthy. Of course, as with just about everything in this life, too much of a good thing can soon morph into a bad thing.

And so it is with cholesterol. But if your body did not have cholesterol, you couldn't survive. Below is just a small list of the amazing ways cholesterol goes to work for you every day, keeping you healthy!

The presence of cholesterol in your body:

- Directs the development of certain cells in a growing fetus.
- Is a portion of the membranes that protect each and every cell in your body.
- Is found in plentiful supply in your brain, which is composed mostly of fatty tissue. (Who knew?)
- Helps to create hormones, including testosterone and the adrenal hormone, cortisone.
- Is found in digestive juices, like bile.
- Is needed for the creation of vitamin D, manufactured when sun activates the fatty tissues just under your skin.
- Helps to build synapse, the vital structures through which your nerve cells send messages.

I told you that cholesterol was pretty darned important. And now you know just how vital it is!

#### **Show Me The Numbers!**

Now we're talking! You'll never be able to gain a true understanding of the importance of cholesterol unless you understand how the medical community measures the substance.

Cholesterol, as well as other fats, is measured using a system called milligrams per deciliter. You'll find this more often noted in the abbreviation of mg/dL.

The chart below explains the parameters of cholesterol levels -- total, LDL and HDL -- as well as where these levels fall in terms of your health. Remember as you read this chart, you want your total and LDL levels low, but you really want high levels of HDL! Yes, sometimes this whole topic does get a bit confusing.

#### **Cholesterol Level Guidelines**

Total Cholesterol Level	Description
Less than 180 mg/dL	Optimal
Less than 200 mg/dL	Desirable
200-239 mg/dL	Borderline high
240 mg/dL	High
LDL Cholesterol Level	Description
Less than 100 mg/dL	Optimal
100-129 mg/dL	Near optimal

130-159	Borderline high
160-189 mg/dL	High
190 mg/dL and above	Very high
HDL Cholesterol Level	Description
HDL Cholesterol Level Less than 40 mg/dL	<b>Description</b> Low

Now that you understand a little better what cholesterol is and just how much should be in your bloodstream, let's go one step further in talking about how it affects your health -- and its relationship to your heart. Chapter 2 gives you a brief -- but informative -- overview of how cholesterol can affect your heart health.

# Chapter 2

# Now Just How Does Cholesterol Affect My Heart?

# The relationship between high cholesterol and heart disease -- and how to tell if you're at risk.

"Bill, come here," his wife Laura called from the den. "I think I've found how your high cholesterol levels affect your heart health. This is pretty interesting."

Bill and Laura studied several websites about heart health together.

"I never realized how closely our health depended on our cholesterol levels. Maybe controlling cholesterol is something we should take on as a family project. It looks like we would all benefit from it!"

hat's all the fuss about? Okay, you say, I'm beginning to get a grip on this cholesterol thing. But I'm still not sure I understand what the big fuss is about high cholesterol.

Too much cholesterol in your system is dangerous. When you have high levels of LDL, then some of the excess cholesterol is deposited on the walls of your arteries. It forms a hard substance that we call **plaque**. Given enough time, that plaque causes the arteries to narrow.

Think about it. There is only so much space inside an artery. And the more plaque that forms, the less room there is for the blood to flow freely and swiftly. This then triggers a condition called atherosclerosis, or what we normally call hardening of the arteries.

When hardening of the arteries affects the **coronary arteries**, those blood vessels that carry blood to the heart, we call this **coronary artery disease**. If you have this, then you're at a greater risk for having a heart attack.

When the hardening of the arteries affects the vessels **supplying the brain**, then we call the condition **cerebral vascular disease**. This puts the individual at a higher risk of having a stroke.

Hardening of the arteries may also block blood flow to other vital organs, even to the kidneys and intestines.

#### **Are You At Risk?**

Some individuals are at a greater risk than others for developing high LDL cholesterol levels. Some of the risk factors are beyond your control, but a surprising number are within your ability to handle.

For example, if you're overweight, you're at a greater risk of developing high cholesterol levels. Similarly, your diet -- something over which you have some control -- may also put you at risk for higher cholesterol levels.

Cholesterol can either be manufactured by your body or consumed from what you eat. Knowing this, you can lower your risk by eating less foods from animal sources. At the same time, you'll want to increase your consumption of fruits, vegetables and grains.

One of the factors that may put you at risk for higher cholesterol levels is your family history. This is an aspect that you don't have any control over. If cholesterol problems have plagued members of your family, the odds are greater that you'll be bothered by it too.

Another factor over which you have no control is your age. The older you get, the greater the chances that your cholesterol levels are elevated.

Similarly, the more active you are, the greater your chances are of increasing your levels of the good cholesterol levels -- HDL. And that, in turn, reduces your odds of developing heart disease.

Everyone banters about the term heart disease, but few of us really understand the deep implications of this disorder. When we're talking about cholesterol -- and especially natural ways to lower it -- it only makes sense to spend a little bit of time explaining just what heart disease encompasses.

# Meet Your Heart and Circulatory System

The heart and circulatory system works to maintain the proper flow of blood throughout your body. The system works to ensure that the flow is not only continuous, but also consistent. This, in turn, guarantees the delivery of essential oxygen as well as nutrients to all of the tissues in your body.

But that's not the only function of the circulatory system. It's also charged with the removal of waste products from the cells back to the lungs, liver and kidneys -- or proper filtering. Your circulatory system also contributes to a healthy nervous system, since it affects your heart rate and the proper functioning of your vessels.

Your heart works 24 hours a day, seven days a week -- nonstop. All too often we take its proper functioning for granted. And that's to be expected. To fully understand its workings and its shortcomings we need to review (just briefly, I promise you!) the structure as well as the function of your heart.

### **Your Amazing Heart**

The human heart is indeed a remarkable organ. It's located in the upper left center of your chest, next to your lungs. The organ has four separate chambers, or segments. The upper two chambers are called atriums. The bottom ones are referred to as ventricles. Your blood enters into the right side of your heart and exits via the left side.

In order to guide the blood flow in one direction, each chamber connects to the next one through valves. These valves open upon the contraction of your heart.

Blood that no longer has any oxygen enters your heart -- yes, on the right side -- through a large vein called the vena cava where it flows into the right atrium. Upon the contraction of your heart, it then goes into the next valve, called the tricuspid valve. Here it enters the right ventricle.

From the right ventricle, the blood goes into what's known as the pulmonary artery through (naturally enough!) the pulmonary valve. It's here that it gets converted into freshly oxygenated blood, thanks to the work of the lungs.

This now oxygen-rich blood then leaves the lungs to flow back into the heart through the left atrium through the pulmonary vein. Upon the next contraction of the marvelous organ, the mitral valve opens, allowing

blood to flow into the left ventricle. This, by the way, is the strongest section of the heart.

When this section of the organ contracts, your blood rushes through to the aortic valve into the aorta. From there it travels throughout your body delivering oxygen and other nourishment to your cells.

### So What Makes Your Heart Contract?

That's a question many of us have. Just how does your heart perform these vital contractions? You may be surprised to learn that an electrical stimulus regulates your heartbeat. Located in your right atrium is a specialized group of cells. It's called the sinoatrial node.

Many individuals simply refer to this as the SA node or even just the sinus node. It's this group of cells that actually triggers the electrical impulses which then cause the chambers to contract.

The rate of this impulse is regulated, but the rate also varies depending on the different chemical stimulators in the body. In this way, your heart responds to your different needs.

### When A Good Heart Goes Bad

It happens, you know. A heart may not always function perfectly. But you already know this. And if you've read the first chapter you have some idea of what exactly can happen if a good heart has problems.

Several disorders exist that can have adverse effects on your circulatory system by reducing that precious flow of blood throughout your body. Some of these problems are genetic -- meaning they've been passed down through the family through no fault of your own. Others may be due to harmful types of cholesterol in your bloodstream. Below are some of the most common types of problems your heart may encounter:

- Arrhythmias, which are essential problems with the electrical system
- Congestive heart failure, which describes a weakness of the muscular pump
- Congenital defects which my include a hole between the two atrium chambers
- Narrowing of the heart valves themselves from calcification or from tumors in the heart
- Leaking valves, also called insufficiency

 Damage to the muscle itself from the blockage of the coronary arteries

Each disorder contributes to a heart muscle incapable of pumping sufficient amounts of blood through your body.

### The Heart Disease-Cholesterol Link

Heart disease of any type is called **cardiovascular disease**. Many people just call it **CVD** for short.

The most common CVD is coronary heart disease. This accounts for more than 50 percent of all cardiovascular diseases. Included in this disease are **angina pectoris**, or chest pain from the narrowing of your blood vessels as well as myocardial infarction -- or what you and I would call a heart attack.

Believe it or not, it really is possible to have more than one type of cardiovascular disease at the same time. (Isn't that a kicker?) It's not unusual, for example, for an individual to have both coronary heart disease and high blood pressure.

And it's really not that unusual to develop some type of cardiovascular disease. Your odds only increase as you age. According to the now famous Framingham Heart Study sponsored by the National Heart, Lung and Blood Institute, the average lifetime risk of developing coronary artery disease specifically once you reach the age of 49 and beyond is 49 percent for men and 32 percent for woman.

Let's look at just a few of the health problems that involve high cholesterol. The first is atherosclerosis, or hardening of the arteries. We've mentioned this in the first chapter briefly.

### A Group of Diseases

In effect, atherosclerosis is actually a group of diseases characterized by the thickening of the walls of your arteries. This thickening is caused by the continual buildup of plaque on these walls.

In addition to cholesterol, plaque is composed of various other types of debris that collect on areas that are inflamed on the inside of the walls of the blood vessels. This causes the narrowing of the passageway of your arteries, which, in turn, naturally restricts the flow of blood.

While you may see plaque as just one type of substance lining the inside of your artery walls, in reality, it really is a diverse substance. It forms in a variety of shapes and sizes. The smaller pieces of plaque accumulate throughout the arteries in the entire body. These can be incredibly difficult to detect.

Doctors have a much easier time finding the larger, hardened type of plaque that settles along the inside of the coronary arteries. These are usually the ones that cause chest pains associated with angina.

That doesn't mean that the small pieces can't be dangerous in and of themselves. Because they can be. Recent research has discovered that the small pieces of plaque are less solid on the outside. This means that they aren't very stable. Consequently, the odds are greater that they may rupture, releasing cholesterol masses into the bloodstream.

This concentrated form of cholesterol then contributes to the formation of blood clots. Ultimately, if a small plaque buildup in the coronary arteries ruptures, forming a blood clot, it has the potential to trigger a heart attack.

#### **Atherosclerosis and Strokes**

If the plaque lands in the carotid artery instead of the coronary one, this may lead to a stroke. When the plaque breaks, the clots go to the brain where it causes a reduction in the blood flow or a complete blockage.

At least that's the simplified version of the relationship between these two items. But to get the fuller measure of exactly what's happening in your body, we need to take one more step.

You may not have been aware that there are really two different types of strokes. Cholesterol plays two amazingly different roles depending on what type of stroke we're talking about.

The most common category of stroke is called an ischemic stroke. Caused by a blockage of the flow of blood, the risk factors include high cholesterol. The risk factors for this are the same as for those of coronary heart disease.

But then there's another major type of stroke. It's called a hemorrhagic stroke. This is caused by the rupture of a blood vessel that bleeds into the brain. Surprisingly, an elevated cholesterol level actually reduces your risk of developing this type of stroke.

# Atherosclerosis and Peripheral Arterial Disease

It's true! High levels of your total cholesterol as well as your LDL levels combined with low levels of your HDL certainly do increase your risk of developing peripheral arterial disease or PAD.

The amazing aspect of this situation is that an overwhelming number of women with PAD also possess high cholesterol levels (a whopping two out of three). Yet less than half of these women are actually aware that their cholesterol levels put them at risk.

Recent research not only bears this point out, but also adds another interesting dimension to the situation. It appears that for every 10-point increase in your total cholesterol, your risk of developing PAD rises by five to 10 percent.

Don't despair though! Research also reveals that your HDL level may play a more important role than the medical community once thought when it comes to PAD. It appears that possessing higher levels of HDL -- that health cholesterol we keep talking about -- actually lowers your risk of PAD by 10 percent. This is true even after other risk criteria are factored in.

In the next chapter we review the allopathic medical community's answer to high cholesterol -- prescription drugs. We'll review the several categories of medications available to you and how they work.

But more than that, we'll also reveal what many doctors and pharmaceutical companies don't want you to know -- or even ask about - the potential harmful effects of taking these drugs.

# Chapter 3

# The Good, The Bad, and The Dangerous: Prescription Drugs

Some cholesterol-lowering prescription medications may indeed do what they're advertised. But some also have a high price tag: serious adverse side effects.

"Bill, come here!" Laura called from the den. "Did you see this? Isn't this the prescription medication that your doctor gave you to lower your cholesterol?"

Bill walked into the den where Laura was intently staring at the computer. She pointed to a website.

"Did you know how this medication worked?" she asked him. "But more importantly, did you know that these dangerous side effects were connected with this drug?"

Slowly, Bill shook his head no.

ne of the first steps your doctor probably takes in treating your cholesterol level is to prescribe you medication. Not all prescription drugs to lower cholesterol are created equal.

That doesn't mean that some are better than others. It does however mean that some may work better for one individual than another. Your physician may even prescribe you with a combination of different drugs.

Because of the different drugs -- which all work in slightly different ways -- you may become a little more than confused about what you're taking and why. It's not unusual. Many people are. I know I was for the longest time.

Basically speaking, there are four different categories of cholesterol lower drugs. We'll talk briefly about them.

# The First Category of Cholesterol-Lowering Medications: Statins

The first are called **statins**. These are probably the most commonly prescribed medications for this purpose. They block a substance your liver needs in order to make cholesterol. This means that your liver then removes cholesterol from your blood.

Statins may also help your body re-absorb the cholesterol that was built up from the deposits on your artery walls. This means that it has the potential of actually reversing coronary artery disease.

What type of medications is considered a statin? The various types are listed below. The generic name is provided first and the brand name under which they're sold in parenthesis.

- Atorvastatin (Lipitor)
- Fluvastatin (Lescol)
- Lovastatin (Altoprev, Mevacor
- Pravastatin (Pravachol)
- Rosuvastatin (Crestor)
- Simvastatin (Zocor)

That doesn't mean that these drugs are without their adverse side effects. It appears that all prescription drugs these days come with some dark side. They all appear to have the potential to harm your body in some way, despite the incredible good they may do.

Some of the better-known side effects of statin drugs involve your liver. Your liver may not function as it should. Granted this occurs in a relatively small fraction of the individuals who take this class of medications, but it does occur.

Many physicians, aware of this, ensure that you take specific blood tests at regular intervals to monitor this problem. If your liver's function appears to be too abnormal, then he'll halt your prescription. After that, the liver returns to normal.



# **Beware of Possible Muscle Damage**

Another symptom is with the muscles of your body. Called **myopathy**, it involves actual damage to the tissue of muscles. At times this situation can be serious. If you're taking statins and develop new, unexplained muscle pains, weakness or tenderness, you should report this to your doctor immediately.

If allowed to continue, this condition could escalate into a condition called **rhabdomyolysis**. Not only is this a serious condition, it may even be fatal.

This particular effect more commonly occurs with individuals who are taking statin drugs in addition to another cholesterol-lowering medication. This is particularly common with those persons taking niacin or gemibrozil including the statin.

If you develop muscle symptoms while on statins, your physician will probably give you a blood test called **CK or creatine kinase**. This checks for the presence of any possible muscle damage.

CK is considered a muscle enzyme. This test may also be performed during suspected heart attacks, testing or damage to the heart muscle itself.

# **Taking Statins With Other Medications?**

Not only that, but other classes of drugs, when used in combination with statins, may also increase the risk of your body developing some problems. If you're taking certain types of antibiotics or antifungal agents, you need to make your prescribing doctor is aware of this. Actually, it's an excellent idea that your physician is well aware of all the various medications and supplements you take. This helps to prevent problems even before they crop up.

If you should become seriously ill or if you're scheduled for surgery, talk with your physician about the possibility of not taking the statin medication for a while.

# What? Grapefruit Juice, Too?

Other medications and supplements aren't the only substances that may hinder your cholesterol-lowering medications. Take, for example, grapefruit juice. This innocuous breakfast morning drink has the ability to affect the metabolism of many of the statin drugs. It can increase blood levels.

You'd be smart, then, to just avoid drinking it when you're on this class of medicine. The curious aspect of this situation is that other citrus juices don't seem to have this affect. Drinking other juices appears to have no affect on the drug.

#### **Still More Side Effects**

These aren't the only possible side effects of these drugs. There are some side effects that are less well known. You may be taking this class of drugs and be experiencing some of these symptoms without even realizing what's causing your problems.

The first of this involves **your ability to think**, **concentrate and remember**. More than a few people report that they experience changes in not only their memory, but also when it comes to their attention and concentration when their taking statins.

You may find, for example, that finding just the right word when you speak becomes difficult, or you may forget you've started one task and just go on to another one. Some people, in fact, have some problems following conversations as well.

Certain individuals who are so bothered by these side effects describe it as having "holes in their memory." When they stop using the drugs, they discover that their memory is restored to normal. Sometimes even reducing the dosage of the medication helps their memory.

### **Statin-Induced Depression**

Some individuals report that their mood actually changes when they are placed on statin drugs. Some of the symptoms may include a general loss of interest in activities as well as a loss in being socially involved. Others simply report that they are depressed.

While this may be a difficult link to prove, many individuals have no problems making the connection. This is because once they discontinue the drug, their mood and depression lifts.

In extreme cases, people have reported that they have become violent, developed a psychosis, and even attempted suicide while taking statins.

#### **Painful Medication**

In addition to muscle pain, which we've already discussed, some people report that they experience other pain as well. Some of the symptoms include headaches, joint pain and in some cases, abdominal pain.

# **Tingling and Numbness**

It's true! Studies have even confirmed that tingling or numbness may occur with these drugs. You may even experience a burning pain. This is called, in the medical community, peripheral neuropathy.

Just when you think we've come to the end of the possible adverse side effects, you discover that there are still some we haven't covered yet. The list includes the following:

- Sleep problems
- Sexual problems
- Fatigue
- Dizziness
- A sense of detachment
- Swelling
- Shortness of breath
- Changes in vision
- Weight change
- Hunger
- Breast enlargement
- Blood sugar changes
- Dry skin
- Rashes
- Blood pressure changes
- Nausea
- Upset stomach
- Bleeding
- Ringing in the ears

### **Bile-Acid Binding Resins**

Another class of cholesterol-lowering drugs is known as **bile-acid binding resins**. As you recall, your liver uses cholesterol in order to create bile acids. These substances are needed for good digestion. The medications in this class include Cholestyramine and are sold as Prevalite and

Questran, coleseveniam sold as Welchol and Cholestipol which you can purchase at the pharmacy under the brand name of Colestid.

These drugs lower cholesterol in an indirect way through the binding to the bile acids themselves. This prompts your liver to use the excess cholesterol to make even more bile acids, which consequently reduces the level of cholesterol in your blood.

These drugs appear to carry less adverse side effects than the statins, though several have been reported. Some people report constipation, heartburn, gas as well as other gastrointestinal problems. Many of these are problems that some people simply cannot tolerate.

### **Newer Drug Does Less Harm**

A newer resin, Colesevelam, appears to be the one drug that causes the least amount of problems.

Research is studying the probability that these drugs may be contributing to the loss of calcium in the body. If this is the case, that means taking these could put an individual at an elevated risk for osteoporosis.

In addition to this though, the drugs may also contribute to certain vitamin deficiencies, most notably vitamins A, D, E, and K. If your doctor prescribes this category of drugs, you may want to talk to your doctor about taking vitamins to compensate for this.

#### **Research Confirms Side Effects**

Before accepting a prescription for any statin drug, consider the results of this statistical study conducted by researchers in England. It just might open your eyes to the very real dangers these drugs can cause if used for an extended period of time.

Researchers examined the medical records of more than two million users of statin drugs in England and Wales. They wanted to quantify the side effects of this medication during the first five years individuals used it.

In those initial five years of usage, individuals, according to the results, were more likely to develop the following complications:

- Moderate to serious liver problems
- Acute renal failure
- Moderate to serious impaired muscle function
- Cataracts

If this isn't alarming in itself, consider this other piece of news from the medical community regarding this standard prescription medication. There is talk in the medical community that doctors will routinely prescription statins even for those patients whose LDL levels are not elevated. This option is based on a recent medical study. Of course, the study, called JUPITER, is funded by pharmaceutical companies.

Before you accept that statin prescription, or lament to your doctor that you can't lower your cholesterol level without some help, think back to this statistical study.

# Bile Acid-Binding Resins And Other Medications

There is still one more possible side effect that bile-acid binding resins may trigger – they may interfere with the absorption of other medications. This includes the thyroid replacement hormones, digoxin (Lonoxin), warfarin, any number of beta-blocker drugs and some drugs that treat low blood sugar.

This side effect can be prevented, though. Research has shown that if you timed your ingestion of medications just right, you may be able to avoid this. Take your other drugs either one hour before or four to six hours after the bile acid-binding resins.

### **Cholesterol Absorption Inhibitors**

Cholesterol is absorbed in your small intestine. From there it gets released into your bloodstream. Based on this fact, the drug ezetimibe -- known by its brand name Zetia -- helps to reduce the blood cholesterol through limiting the absorption of dietary cholesterol. This particular class of drug can be used with any of the statin drugs.

This class of drugs also comes with some side effects, some of which are quite diverse. They range from diarrhea, abdominal pain, back pain, joint pain and even sinusitis.

Sometimes people experience hypersensitive reactions that include a swelling of the skin as well as the underlying tissues of the head and neck called **angioedema**. In some cases this condition can even be life threatening. This reaction, though, is actually quite rare.

Other side effects that have been reported include pancreatitis, muscle damage and nausea as well as hepatitis.

### One More Option ...

Your doctor still has one more option when it comes to prescribing medications for your high cholesterol. It's a drug that is a combination of a cholesterol absorption inhibitor and statin.

The combination drug ezetimibe-simvastatin, which you may recognize as the brand name Vytorin, actually decreases both the absorption of dietary cholesterol in your small intestine and the production of cholesterol in your liver.

Side effects that this drug carries include headaches as well as some muscle problems. Other side effects include the yellowing of the eyes and skin, the excretion of dark urine, fatigue, persistent nausea, and stomach and abdominal pain.

### **Possible Allergic Reactions**

Some individuals actually have an allergic reaction to this drug. Symptoms include an itching or swelling, especially of your face, tongue and throat. Other allergic reactions include dizziness and difficulty breathing.

It has not yet been determined if this combination more effectively reduces your heart disease risk than by taking only simvastatin alone.

Now that you're well aware of all the possible side effects of these prescription drugs, you may be asking the next apparent question: if not drugs, then how do I lower my cholesterol

I'm going to answer you in one word: diet. It's not necessarily the only change you'll eventually make in your lifestyle, but it's a great place to start. And that's the topic of our next chapter!

# Treating Cholesterol With Diet

# Simple changes in the way you eat can sometimes prove miraculous in busting that high cholesterol level.

"Bill, come here, honey. I'm finding more information on that medication you're taking." Laura was once again surfing the web, this time looking at the effects of her husband's prescription drugs.

That's when she discovered some surprising news. "Read this clinical study," she asked him. "Did your doctor tell you about these options?"

As Bill read the article, his face lit up. "This is great news. And no. He just handed me this prescription. He acted as if I had no other choice. But now I know better."

"Some of these suggestions are easy. I bet it wouldn't hurt me to adopt some of them right along with you."

Bill and Laura had hit the jackpot. They discovered that some simple changes in their lifestyle might help Bill lower his cholesterol levels -- every bit as effectively as that prescription drug he was taking -- and without any of the potential harmful side effects.

erhaps there was no bigger -- or well-known -- fan of fast foods in the last couple decades than former U.S. President Bill Clinton. The press, you'll recall, loved to trail him as he made his fast food stops, his "hamburger joint" junkies, and devoured hamburger and fries with the same gusto that most Americans experience.

But then once out of office, he found himself in the emergency room of a major hospital. And the next thing you know, he discovered he was in the operating room of a major hospital. His fast food fetish -- along with the

stressors of being president of the United States -- eventually took a toll on his body.

# Former President and Junk Food Fan Clinton: Radically Redesigned His Eating Habits

Today, Clinton has not only lost a considerable amount of weight, but he has radically redesigned his eating habits. The former president has eliminated all meat (not just red meat) from his diet. The only exception he makes is an occasional fish dinner. He's also eliminated dairy products.

Instead, he now eats a plant-based menu that concentrates on "beans, legumes, vegetables and fruit." Former President Clinton is just one -- albeit the most famous -- individual to grab control of his health and change his future.

If you feel as if you're stuck on a treadmill of using prescription drugs to control your cholesterol levels, think again. Taking those harsh drugs is not the only option you have. Scientific studies are now showing what many doctors have been advocating for some time. Cholesterol levels can indeed be reduced without drugs -- or surgery.

# Are You Ready for Lifestyle Changes?

Indeed, you may be able to lower your levels of cholesterol through what Mark Fuhrman, M.D., a nutritionally-based medical doctor and advocate of natural healing methods, calls "significant dietary and lifestyle changes."

Before I even begin to outline what some of those dietary changes may look like, let me provide you the stunning results of research that reveals just how effective dietary changes can be in lowering your cholesterol level.

A clinical study called The Seven Countries Study compared the diets of individuals in several countries with low as well as high coronary heart disease rates. The results are quite graphic. They reveal a direct correlation between the amount of saturated fat in a person's diet, his blood cholesterol level, and the incidence of heart disease.

There's quite a difference as you travel from country to country. The rate in Japan, for example is at a low of 100 per 100,000 to a high of 900 per 100,000 in Finland.

The Japanese, who eat little beef, depend mostly on a diet of fish. The Finns, though, base their diets on large quantities of cheese and whole

milk products -- foods, as you're about to learn, which contain high levels of saturated fat.

Countries with high rates of coronary heart disease all have one thing in common: saturated fat. This accounts for more than 15 percent of the calories in the average diet. What countries would that be? Yep, count the United States in as well as Scotland, Holland, England and the previously mentioned Finland.

Those countries coming in with low blood cholesterol levels and corresponding low coronary heart disease have, not surprisingly, diets in which saturated fats account for less than 10 percent of their total calories. The two the researchers named were Japan, which we've already talked about, and Greece.

### What Happens When People Migrate?

Now, you might be thinking that these statistics can very easily be chalked up to coincidence. But, consider the results of this study. It shows what happens when a group of Japanese migrants to Hawaii and San Francisco adapt their diet to fit the culture in which they're living.

As you'll recall, the Japanese -- as living in Japan -- have among the lowest rates of coronary heart disease in the world. They have also had correspondingly low cholesterol levels. The average level was discovered to be less than 170 mg/dL.

But when a group of Japanese migrated to Hawaii, their diet change. And we know this because researchers studied their habits. These individual ate more fat and, in particular, more saturated fat than they had in their native country. The diets weren't as high as the standard American diet, though.

As a result, the Japanese in Hawaii experienced higher blood cholesterol levels and, not surprisingly, higher rates of coronary heart disease than their counterparts in Japan.

Those Japanese who migrated to San Francisco, however, adopted an even more "Americanized" diet, according to this study. And they have the cholesterol levels of your average American.

The researchers are convinced these statistics prove that diet -- and not genetics -- plays a large part when it comes to the presence of cholesterol in your bloodstream.

And here's just one more shred of evidence which points to diet as the culprit. Recently, American fast food restaurants have been springing up in Japan. And they are popular.

As you might expect just from the direction of the previous research, cholesterol levels too are popping up along with an increased incidence of coronary heart disease. In fact, heart attacks have increased fivefold.

# **But Where Do I Even Begin?**

For most of us, consciously transforming our diet is a daunting task. Indeed, if you were to change everything that needed to be changed immediately, it would be overwhelming.

But more than that, it probably would be totally ineffective. Few of us could bear that much change in our eating habits overnight. So I could rattle off everything that needs to be done in order to affect a lower cholesterol level. Instead, I'll provide you with changes in a step-by-step format.

Taking specific small steps can be quite effective. Once you see these small steps as helping lower your cholesterol, you'll be much more receptive to tackling other aspects of your diet as you go along.

# Let's Start With The Fats: The Good, The Bad, and The Ugly

It's true! Your body needs fat to function properly. It's your energy source. Don't believe me? Consider this: for every gram of fat you eat, you're adding nine calories of energy to your body.

Fat is, in fact, one of only three nutrients that actually supply you with the necessary energy that your body demands. The other two? Proteins and carbohydrates.

But too much of anything isn't healthy. This holds especially true when it comes to fats. And then you have the complication of the different types of fats.

Overall your dietary fat intake should be no more than 35 percent of your diet. Many medical specialists recommend even going as low as 25 percent. And then there are certain cardiologists who insist that a person needs to make an even bigger cut in his fat intake.

Trying to tell the good guys from the bad guys in the world of fats, though, can be difficult. But you can ease the confusion some by remembering there are two broad categories under which all fats fall: saturated and unsaturated.

# Let's Examine Briefly The Bad Fat

**Saturated fat** is the unhealthy variety. Found mostly in animal products, such as red meat, poultry, butter, and whole milk, it's implicated in raising your blood cholesterol levels as well as increasing your risk of developing heart disease.

By the way, you'll be doing your body a huge favor by reducing your intake of saturated fats. It's also been associated with a whole host of other degenerative, aging related diseases.

You can recognize these immediately. At room temperature they solidify. Think of bacon fat. I remember how my grandmother used to fry bacon, then save the fat for later use! While it was hot, she'd pour it in a container. When it cooled to room temperature, it was solid. Lard – and even butter – are examples of this type of fat.

Just for the record, I'll mention now that many health experts say that saturated fats should make up no more than 10 percent of your total calories for the day. So, if you eat a 2,000-calorie diet, then ideally you should strive to consume no more than 20 grams of saturated fat.

Also, many foods which contain large amounts of saturated fats also possess high amounts of cholesterol as well.

# The Cholesterol Lowering Benefits of Unsaturated Fat

**Unsaturated fat**, by contrast, is the healthier of the two major categories. Depending on the type you choose, unsaturated fat can help improve your overall health and lower your risk of developing certain diseases.

And perhaps here is where confusion reigns -- because within this broad category of fat, there are several sub-categories.

First, there's **monounsaturated fat**. In contrast to the saturated variety, monounsaturated fat is usually a liquid at room temperature. If you store it in the refrigerator, though, it probably will begin to solidify.

Oils that are rich in monounsaturated fat include olive, peanut and canola. There are several foods that also contain an abundance of this healthy fat, most notably avocados and just about all nuts.

Another source of unsaturated fat is the **polyunsaturated** variety. Visually you can recognize these because they not only stay in a liquid form at room temperature, but also in your refrigerator. For this reason, they're found mostly in a variety of vegetable oils: corn, safflower, sunflower, soy and cottonseed.

# **Meet Omega-3 Fatty Acids**

Now, I'm going to throw you a curve ball because under the category of polyunsaturated is still one more type of fat. You've undoubted heard something about this fatty acid. It's **Omega-3**.

The source of for this oil is found mostly in seafood, although you'll find it in a few other foods as well. These are the ones that seem to be amazingly healthy. In fact, these essential fatty acids are so important in maintaining your health, that I'm devoting an entire lesson to this variety of polyunsaturated fat.

For many, however, getting to 35 or 25 percent intake is a great start, you can decide once you get that far how much lower you need to go.

As you might guess, you'll want to keep your consumption of fats, as much as possible to the good kind. These include vegetable fats -- normally called monounsaturated and polyunsaturated fats. And you'll want to include Omega-3 fatty acids, much of which comes from fish.

This means that your goal is to reduce your consumption of the bad fat -- or saturated fats. These fats are notoriously found in animal products, including meats, dairy products and eggs.

# Trans-Fatty Acids: Eat At Your Own Risk

You'll also want to avoid -- in fact eliminate altogether if possible -- your consumption of **trans-fatty acids**. This fat, the only man-made fat, is formed by adding hydrogen to vegetable oil. Some experts have labeled this fat the largest mistake in food history. That may be closer to the truth than anyone could possibly guess.

Yes, trans-fatty acids are found in french fries and (oh my goodness!) doughnuts, to name just two foods.

#### **Smart Food Choices**

Knowing this little bit about dietary fats takes you a long way on making smart choices for your diet. You want to avoid meats -- especially red meats -- as much as possible. There are many cardiologists who suggest that adopting a vegetarian lifestyle may be the healthiest move you can make when you're facing down stubborn high cholesterol levels.

No doubt you've heard of Dr. Dean Ornish. He's one of the most respected doctors who advocate this approach.

But for many of us, that just doesn't seem like a practical stance. Many health experts say you can make a difference in your cholesterol levels just by making a series of dietary changes. And you don't have to eliminate all meats from your diet.

### And Here Are Some Easy First Steps To Take

You can make progress attacking your cholesterol, for example, by limiting the amount of egg yolks you eat as well as full-fat dairy products.

Of course, it goes without saying that fried foods are also high in fat content, so you'll want to avoid them as much as possible. Instead of eating French fries, eat a baked potato. Better yet, many health experts say, eat a baked sweet potato.

But what many individuals don't realize is that processed foods are also high in saturated fat and cholesterol. And processed meats, like deli meats, sausage, hot dogs, bologna, and salami are among the worst offenders.

Some health experts recommend that you cut back your consumption of these foods to no more than six ounces in a day. An even better option they recommend is to substitute fish for these meats. Fish, they say, is an even better choice than the traditional chicken we have all substituted for so long.

If you must eat chicken choose either skinless chicken -- preferably the breasts -- or take the skin off before you prepare it for your family. When you do eat it, consume less than you have in the past.

### **Increase Your Fiber Consumption**

Oh yes! By all means. Fiber is the secret weapon of cholesterol-busters everywhere. More specifically, try to increase the amount of soluble fiber you consume daily.

Remember that plant-based menu that we mentioned President Clinton is now eating? Yep, you guessed it! It's rich in fiber. Fiber is also found in abundance in legumes as well as whole grains (not refined white flour!). So if you choose fruits, vegetables and whole grains over processed and packaged foods, you're well on your way to "busting" that cholesterol level.

### Why Does Fiber Lower Cholesterol?

Of course, many individuals may never actually ask this question. But knowing how fiber can knock down your cholesterol level helps you understand the vital role it plays in your health. And you're more likely to stay with a diet when you know how it helps you.

You'll only find dietary fiber in plant foods. (Hmm! You're already getting an idea where this is taking you!) Fiber is, in effect, the structural framework of plants. Not only that, but it's a compound that is found abundantly in nature.

### **But Your Body Doesn't Digest Fiber!**

As important as it is to your health, you may be surprised to learn that your body can't break down this compound. Because it isn't digested, your body does not really absorb it.

Fruits and vegetables are great sources of fiber, naturally, as are whole grain produces like breads and cereals. In addition, you'll find fiber in nuts and legumes -- another term for beans of all kinds!

For a substance your body doesn't absorb, it's of great benefit to your health. Not only does it improve your intestinal health, fiber also helps to prevent heart disease and possibly some cancers.

Two types of fiber exist: **soluble or insoluble**. You'll discover that most foods contain some combination of both. The fiber actually speeds the movement of food through your intestines. This promotes regularity.

Fiber, by the way, is usually excreted for the most part intact. Insoluble fiber is found in whole-grain foods like wheat bran as well as many vegetables and fruits with the skin still on it.

**Soluble fiber**, by contrast, dissolves when you mix it with water. You might hear this referred to as viscous fiber. Then it becomes a gel-like substance. It actually slows the transit of food through the small intestine. Sources of soluble include oats, beans, peas, apples as well as citrus fruits.

Research seems to bear out that soluble fiber is probably a more effective tool at lowering your total cholesterol level. But don't let that stop you from including both in your diet. Both types are quite important for your overall health.

### **How Does Fiber Work?**

You may wonder just how fiber can help lower cholesterol. Soluble fiber can reduce the amount of bile that is reabsorbed into your intestines. Instead, the bile is simply excreted in your feces.

And the liver, to compensate for the bile loss, simply manufactures additional bile salts. And surprisingly, bile salts are made with cholesterol. In order to do this, the liver then increases its production of LDL receptors.

These receptors are then responsible for taking the cholesterol out of the LDL molecules in your blood stream. The bottom line is this: the more bile salts your liver makes, the more LDL cholesterol is taken from the blood. It's a pretty cool system.

## So How Much Fiber Do You Need?

Research says that simply by boosting your intake of soluble fiber by as little as five to ten grams daily reduces your LDL level by nearly five percent.

The national Academy of Sciences says that men up to age 50 need a minimum of 38 grams of fiber daily. Women in this age group need a minimum of 25 grams. For men who are older than 50, it's highly suggested that they receive 30 grams daily. Women in this same age group are encouraged to eat at least 21 grams daily.

Sadly, most Americans aren't even getting this much. The average American, research shows is only getting about 15 grams of fiber daily. Diets that are abundant in fat -- like the typical American menu -- are for the most part poor in fiber.

We've already mentioned how to increase your fiber content. But it definitely bears repeating. Eat more fruits, vegetables and legumes. You also want to include whole grains to boost that overall fiber content.

While you're increasing your consumption of these foods, you should take the opportunity right now to decrease your consumption of packaged and processed foods. I know I've mentioned this before, but it really is that important!

Now that we've given you some broad outlines on revamping your diet, the next chapter gives you 12 of the most powerful Cholesterol Lowering foods around. Incorporate these in your daily meals and you're sure to meet success in your attempt to lower your overall cholesterol level!

## Cholesterol Lowering SuperFoods: Healthier By the Dozen

## A dozen of the best foods that provide Cholesterol Lowering benefits. Bon Appetit!

"Bill, I went to the grocery store to stock up on foods that help lower your cholesterol." Laura began unpacking the groceries.

Soon, Bill was beside his wife, examining what she bought.

"According to everything, I've read," she said, "I bought the best of the best. See what you think."

the previous chapter we talked about some of the general changes you should consider making in your daily eating habits if you want to lower your cholesterol naturally.

In this chapter, we target 12 superfoods that possess powerful Cholesterol Lowering traits. If you include as many of these foods in your diet as you can, you may find that your dependence on cholesterol prescription medication lessens. And that's always a good thing.

### 1) Almonds

Probably not the most popular of snack nuts, the almond does hold a remarkable reputation for being a cholesterol-buster. Perhaps the ancient Greeks instinctively knew this. The nut was so popular in that culture that it was nicknamed the "Greek nut". While we no longer call it that, researchers are now beginning to call it an essential part of a hearthealthy diet.

Their high monounsaturated fat content has proven effective in lowering the LDL -- or bad cholesterol without destroying the good or HDL levels. Now that's the best of both worlds.

It appears according to the latest research that about 65 percent of the total fat found in almonds is of the monounsaturated variety.

So feel free to snack. Just watch for the calorie content of these nuts. You'll be tempted to eat more because of the ideal combination of taste and health. But it may also mean more calories than you need!

### 2) Apples

Think of fruit and many think of the apple first. For quite a few of us it's the definitive healthy snack. And with good reason, it turns out.

Apples should be one of your top choices in the fight against skyrocketing cholesterol levels.

Its success can be explained in one word: pectin. If you're not familiar with this substance, pectin is the sticky soluble fiber naturally found in many fruits and veggies.

The average apple, by the way, contains just a little over a gram of pectin.

More than one scientific study exists revealing apples' innate ability to keep cholesterol levels low. One of the most straightforward projects comes from France. In this study, 30 healthy men and women simply added two to three apples daily to their diets for 30 days. They made no other changes in their diets.

On average, 80 percent of those participating experienced some drop in the cholesterol levels. On the average, this lipid level dropped by 14 percent. One individual, in fact, actually experienced a 29 percent plummet in the fat.

### 3) Artichokes

It's true! The research is in. The artichoke may be just the ticket to help you fight your high cholesterol numbers.

Containing the compound known as **cynarin**, this Cholesterol Lowering food increases the amount of bile your liver makes. At the same time, cynarin also increases the bile flow from your gallbladder. As we've noted

in a previous chapter, bile is a key player in eliminating extra cholesterol from your system.

Research is just beginning to confirm the marvelous benefits of the artichoke. German researchers, for example, administered 1,800 mg of dried artichoke extract or a placebo daily for six seeks to participants of the study.

Those who took the extract were able to drop their total cholesterol level by an average of 18 percent.

By contrast, the group who took the placebo only experienced an 8 percent drop in this biomarker.

Specifically, the LDL level in those who took the extract plummeted by more than 20 percent. While the study used artichoke extract, there's no reason why you can't enjoy these same benefits – with perhaps even better results – with fresh artichokes!

### 4) Avocados

Ah! This fruit has certainly received a bum rap over time. It's been called everything from fattening to oil-soaked.

It's true that the avocado contains fat. But here's the secret about this tasty delight: it contains monounsaturated fat. Of course, you now know that's the variety that helps to lower your cholesterol.

But more than that, the avocado also contains an abundance of oleic acid. It's the same Cholesterol Lowering substance that olive and canola oils have.

It's true, the avocado is rich in fat -- even if it is the good fat. So just monitor how you indulge in this healthy fruit.

By the way, scientific research confirms the Cholesterol Lowering prowess of this fruit. One of the first studies ever testing the avocado's abilities involved 15 women.

They alternated between eating a low-fat, high-carbohydrate diet and an "avocado-enriched" diet. This latter diet equaled close to a half to one and a half avocados daily.

It took a mere three weeks for researchers to notice the change. In that time, those women who ate the avocados experienced a drop in their cholesterol levels.

On average, the levels went from 236 mg/dL down to 217 mg/dL. This equals about an eight percent drop. This compares with only a 4.9 percent decrease experienced by those on the low-fat diet.

But that's not all, the ratio of total cholesterol to HDL -- the healthy variety - actually increased for those women who were on the low-fat plan.

For those who ate the avocados, the ratio fell nearly 15 percent.

So, go ahead and indulge -- in moderation -- in this tasty fruit. You'll be reaping Cholesterol Lowering benefits at the same time.

### 5) Beans

With high cholesterol, you may be searching for an alternative to your standard fare of red meat. Well, look no further than beans! Yes! The bean is rich in proteins, low in fat and as an added benefit, relatively inexpensive. This makes it the perfect occasional substitute to your usual plate of red meat and accompanying saturated fat.

It's not surprising to learn that the bean is a cholesterol buster of exceptional proportions. Many types of beans contain an abundance of soluble fiber, which is just what the doctor ordered to bring down your lipid levels.

But that's not all. There's still another Cholesterol Lowering aspect to beans. Some types are also great sources of Omega-3 fatty acids. As you'll recall from a previous chapter this is a polyunsaturated fat -- one of the good fats.

But if all this isn't evidence enough for you, consider the results of a recent study.

Researchers took 20 men with extremely high cholesterol levels -- more than 260 mg/dL -- instructing them to eat a one and a half cup mixture of pinto and navy beans daily.

At the end of the three-week period, their total cholesterol level dropped by an average of 56 points. Not only that, but their LDL levels decreased by a whopping 51 points!

James W. Anderson, Professor of Medicine and Clinical Nutrition at the University of Kentucky conducted the study.

### 6) Carrots

"What's up doc?"

Cartoon character Bugs Bunny is probably the most well known of carrot lovers. The carrot, as everyone knows, is a rich source of vitamin A, which contributes to good vision (Well, how many rabbits have you seen with eyeglasses?)

And the carrots are a great source of vitamin C. But one of its little known traits is its ability to deflate that high cholesterol level.

The carrot, it turns out, is a great source of soluble fiber. Specifically, it's a source of calcium pectate, a certain type of the fiber. Calcium pectate works to lower your cholesterol level through its ability to bind bile acids. And bile acids, as you recall, assists in taking cholesterol out of your system.

But don't take my word for it. There's clinical research to back up these assertions. A portion of the research comes from Scotland. Scientists at the Western General Hospital in Edinburg asked five individuals to eat 200 grams of raw carrots. While this may sound like a lot, it equals roughly two carrots. (That's a doable addition to anyone's diet!)

After only three weeks, the cholesterol levels of these individuals fell approximately 11 percent. Not only that, but the levels remained low for three weeks after they stopped eating the vegetable.

### 7) Chocolate

Wait you say. Did I read that right? Could it be that chocolate has the power to lower my cholesterol numbers? This must be heaven on earth!

Before you run out and gorge yourself on this sweet treat, you may want to get all the facts.

Yes. It does appear that the consumption of chocolate not only has the potential to lower your bad or LDL cholesterol count. But, it can, at the same time, raise the level of the healthy or HDL levels. Again, we're looking at the best of both worlds.

One ounce of dark chocolate possesses ten times the antioxidant found in a single strawberry. That's the conclusion of Penny Kris-Etheron, Professor of Nutrition at Pennsylvania State University.

An ounce is about all you need to help bust those cholesterol numbers, she says.

Remember, chocolate contains fat -- which can contribute to weight gain. So you really want to indulge sparingly. Make sure you enjoy every bite.

### 8) Oats

Oats. The breakfast of champions. Well, it's at least the breakfast choice of those lowering their cholesterol

Why is that? Because, oats are a valuable source of soluble fiber, which reduces the bad LDL levels.

But other foods contain soluble fiber, you say. What makes oats so special?

Granted, oats are on par with beans in reducing lipids. But this mighty grain takes health-transforming power one step further. Unlike beans, oats can help preserve your good cholesterol.

Clinical studies are flooding the professional journals backing up these claims. In one study, conducted at the University of Kentucky College of Medicine, 20 men who had elevated cholesterol levels added either oat bran or wheat bran to their daily diets through their daily consumption of cereals and muffins.

In as little as three weeks, the total cholesterol of those who consumed the oat bran dropped nearly 13 percent. In addition, the bad cholesterol specifically fell 12 percent. This compares to the group who consumed the wheat bran who had no change in their numbers.

But that's not all. A review of the existing research revealed tremendous news. Researchers gathered the results from more than 10 studies involving 1,300 individuals.

Those who ate the equivalent of one and a third bowls of oat bran daily experienced an average decline of almost 6 mg/dL in three months (in some cases it took less than three months!).

What's more exciting, though, is that those individuals who had the highest levels at the beginning of the trials -- 240 mg/dL -- had the greatest drop, on average 16 mg/dL.

### 9) Olive Oil

This Cholesterol Lowering food should come as no surprise. This oil is the epitome of heart health. It contains a wealth of monounsaturated fat.

And because of this it helps your system reduce the LDL levels even as it boosts the heart-healthy HDL cholesterol.

You don't need to use a large amount of it to receive startling results. The great news is you can use olive oil (in small quantities, of course!) on everything from crusty peasant bread to corn on the cob.

The problem for a lot of us is deciding on what type of olive oil to use. Have you noticed the bottles on your grocery shelves? There are four kinds.

Choosing the right one, armed with little or no information, may be difficult -- and may end up in you not purchasing any of them out of fear of making a bad choice. Here's a quick down and dirty guide to selecting the perfect type of your olive oil for your needs.

**Extra virgin olive oil** or now popularly called **EVOO**. This is not only the highest quality you can buy, but it's also the most expensive. It has an intensely fruity flavor, adding a rich taste to foods after the dishes have been cooked.

**Virgin olive oil.** This category is not as perfect as the extra virgin variety. It's also slightly more acidic than the EEVO variety.

Olive oil. If you're looking for a cooking oil, look no further than this one. It's a blend of refined and virgin oils.

"Light" Olive Oil. Don't be fooled by its name. This oil isn't called "light" because it contains any less calories. With little or no olive oil taste, this type of oil is perfect for baking. By the way, it has little or no olive taste.

### 10) Onions

There, there, don't cry. While you're swearing at that vegetable for its ability to reduce you to tears, you should at the same time be giving thanks for it. It seems the same substance that can make you cry is also responsible for crushing that cholesterol.

Evidence is just now beginning to pour in on the onion's potential to improve your health. One study, conducted in India, asked 10 men to eat three and a half ounces of butter a day. This elevated their cholesterol levels (little surprise here!).

Then the researchers added two ounces of onion juice to the daily serving of butter. The addition of the juice prevented any increase in the lipid level.

Another study discovered that individuals who consumed more than 600 grams of this vegetable -- in combination with 50 grams of garlic -- weekly experienced far lower cholesterol levels than the individuals who didn't consume this food.

### 11) Popcorn

Yes, I know it's not a staple of anyone's diet. It's merely a snack. But that's precisely what makes this food so exciting. As a snack, popcorn is a great alternative to other snacks void of nutrition but packed tightly with unhealthy substances.

That's because popcorn, believe it or not, is a wonderful source of soluble fiber, which means it can actually help you cut your cholesterol numbers.

Not if you drench them with butter though. All of its health benefits depend on how you prepare it. Get ready, in other words, to start eating air-popped popcorn!

If you pop it in oil and then ladle butter on it, you're defeating all of the amazing benefits of popcorn!

### 12) Fish

Fish. It may just about be the perfect food in your Cholesterol Lowering menu. Just consider a few of these health-giving traits: low saturated fat content, high Omega-3 fatty acids levels.

Some individuals are so amazed by its ability to clobber cholesterol that they consider fish a miracle food. And there's good reason for this show of respect, explains Peter Kwiterovich, a professor at Johns Hopkins University School of Medicine.

Omega-3 seems to have the innate ability to reduce your body's content of VLDL cholesterol. This particular cholesterol, called very low-density lipoprotein, is made in the liver.

And because Omega-3 fatty acids are so effective, you'll want to choose the fish with the highest fat content. The fish with the highest levels of Omega-3 are listed below.

- Albacore tuna
- Rainbow trout
- Atlantic herring
- Pink salmon
- Atlantic mackerel

- Pacific mackerel
- Pacific herring
- Atlantic salmon
- Blue fin tuna
- Lake trout

Researchers have been touting the cholesterol-altering ability of Omega-3 for decades now. Interestingly enough, some of the earliest research traces its way back to the Eskimos of Greenland. Researchers knew the Eskimos ate a high-fat diet, yet as a society experienced little heart disease.

The reason for this was the source of their diet. The fat was rich in Omega-3 fatty acids found in the high amount of fish they ate.

### Skip the Fried Fish Buffet!

Here's one suggestion. You can enjoy fish more often than ever before. If you plan on increasing your consumption of fish, though, eat it any way you like but fried. If you keep that in mind, you too can enjoy the Cholesterol Lowering power of fish!

If some of these foods aren't on your usual list of foods, don't panic. Research is showing that in some instances nutritional supplements can go a long way in helping to crush your total cholesterol level. The next chapter gives you some options.

### Nutritional Supplements That Lower Cholesterol

## Take a good look at this: Cholesterol Lowering nutritional supplements.

"Laura," Bill called from the den. "I just discovered another route to decreasing my cholesterol count. Come in here! This is really cool."

Bill had been randomly surfing the Internet when he came across this method that some individuals use to help bring down total cholesterol level.

Soon his wife was by his side. "Look at this," he said, excited by the prospect of yet another natural alternative. Who would have thought when I first talked with the doctor that all these options are open to me? I'm feeling more confident by the day that I can crush this cholesterol level with a minimum amount of dependence on prescription drugs."

His wife nodded. "And that's a good thing."

hat was it that our friend Bill discovered while searching the Web? He came across several nutritional supplements that have been tested and proven to help reduce your overall cholesterol level as well as specifically bringing down the bad cholesterol.

In fact, some nutritional supplements are known for actually raising your good or HDL levels. In some cases, the effectiveness of these nutritional supplements is amazing.

Not only that, but these supplements can do all of this without the potentially harsh and dangerous side effects that are often associated with prescription drugs.

Are any of these supplements right for you? Only you and your physician can tell for sure. But there are several that work for nearly everyone, so it's possible you can find one that helps your particular system.

This chapter outlines just a few of the many supplements that you may find at your local health food store to help you get started toward a healthier lipid profile.

## Garlic: The Grandfather of All Supplements

It's the granddaddy of all nutritional supplements. Among the first -- if not THE first -- nutritional supplement found to crush and bust your cholesterol level, **garlic** has been used in supplement form for nearly 25 years now.

Perhaps you're already taking it. Many people are. If you're not using this amazing supplement at the moment, perhaps it's a natural option you should be examining.

Right from the start, though, you'll have to be careful when using it. You may want to consult your physician first. It seems that garlic may have an effect or an interaction with some specific medications. (Not to mention the possible consequences of that "delightful" garlic aroma!)

But the benefits appear to be worth it. And since it's been used for literally decades, there's plenty of research to back up the claims. Garlic has been known to clobber high cholesterol levels up to 10 to 20 percent. That's pretty darn effective for a tiny clove!

Researchers believe the compound in garlic that seems to have this remarkable ability over your cholesterol is called **allicin**. And just for the record, it's the same compound which gives garlic its distinctive . . . umm . . . aromatic trait.

## **Garlic's Amazing Powers: The Evidence Mounts**

With more than two decades of use as a supplement, you can imagine that the tiny herb and cooking spice has been studied constantly. Its power over cholesterol seems to hold up over and over again!

A study took 220 individuals, divided into two groups. One group took 800 milligrams of powered garlic for a period of four months. The other group took an inert placebo.

The group with the active garlic supplement experienced a 12 percent drop in their lipid levels. The group that took the placebo, by the way, experienced no significant change in their lipid levels.

Interestingly, garlic is so effective at reducing cholesterol that it's considered a licensed medicine in Germany for the treatment of atherosclerosis -- hardening of the arteries. (Imagine your physician instructing you, "Take two cloves of garlic and call me in the morning!")

In a German study, a group of individuals were placed on a low-fat diet. Their cholesterol count fell by 10 percent before it stabilized. The researchers then added a garlic supplement to their daily habits. This prompted another 10 percent drop in their cholesterol. Pretty impressive!

### In A Study Closer to Home . . .

In another study, this one conducted at Tulane University of Medicine in New Orleans, 42 individuals were divided into 2 groups. Each group had elevated cholesterol levels. One received 900 mg of garlic extract -- divided among three capsules daily. The second group received a placebo.

At the end of 12 weeks, those who took the garlic had a six percent drop in total cholesterol. On average, total lipid counts went from a high of 262 mg/dL to 247 mg/dL. Specifically, the bad cholesterol dropped about 11 percent, from 188 to 168 mg/dL.

This compared with those participants who took the placebo, whose total cholesterol fell no more than three percent.

If you decide to take a garlic supplement, you can expect to experience a drop of close to 10 percent in your total cholesterol.

### Niacin

Sounds familiar? It should. Niacin is a **member of the B-complex of vitamins.** Specifically, it's known as vitamin B-3. And if garlic is the granddaddy of nutritional supplements, niacin is a close runner up.

It's been recognized and used for many years to create a better cholesterol level. And niacin does it through increasing your HDL -- or good -- cholesterol.

Niacin -- or as some medical experts know it, **nicotinic acid** -- turns carbohydrates into energy. It also helps to keep your nervous and digestive systems healthy. Not only that, but this supplement helps maintain healthy skin, hair and eyes.

If you're currently taking a multivitamin supplement, all you have to do is check the label. I can just about guarantee that it's included -- especially if you're taking a formula that promises to provide you more energy.

If, however, you're looking at a supplement that specifically targets your cholesterol, you may see niacin listed under several brand names. Some of them include, Niaspan, Niacor, and Slo-Niacin.

### So Why Does Niacin Work?

As we've stated, niacin raises your good cholesterol, sometimes as high as 15 to 35 percent. This means that this supplement is undoubtedly one of the most effective "drugs" for raising your HDL.

As you'll recall from our previous discussion, good cholesterol carries excessive bad cholesterol back to your liver for disposal. So, the higher your good cholesterol, the less bad cholesterol you have in your blood. Yes, it is the best of both worlds.

In the amounts you may be taking of this supplement, it's possible you'll be experiencing some side effects. The most well known of these is called **flushing**. This may make your skin look red and it may also mean your skin is warm to the touch.

Flushing is annoying, but it's not usually dangerous or harmful. If you do experience flushing, though, talk with your doctor about it. He may recommend that you take an aspirin shortly before you take the niacin. This counteracts the effect.

You can also lessen the flushing effect by not drinking any hot drinks or alcohol. If the problem persists, talk with your doctor about the possibility of finding a type that has reduced flushing effects. These types, however, are only available through prescription.

### Pass the Policosanol, Please!

If niacin doesn't suit your needs, check out the possible effectiveness of an odd-sounding substance called policosanol, a natural derivative of sugar cane wax.

This nutritionally based supplement has been known to lower cholesterol in a two-pronged fashion. It helps to reduce the over-manufacturing of cholesterol in your system and helps to repair the impaired breakdown of cholesterol. (It also has several other benefits as an antioxidant that are beyond the scope of this book, but good to keep in mind!)

According to author and naturopath Dr. Michael Murray, policosanol offers an exciting alternative to many of the harsh prescription drugs. He points to the overall results of a variety of clinical studies that involved about 30,000 individuals.

Murray considers it to be "the absolute best answer to high cholesterol levels, whether we are talking about a nutritional supplement, herbal product or drug." That's a pretty strong recommendation!

### The Proof Is In the Policosanol

In one six-month study, researchers administered 10 mg daily of policosanol to a group of individuals. At the end of those six months, their total cholesterol levels were reduced by 16 percent. Not only that, their bad LDL levels, that bad cholesterol, dropped an astounding 24 percent. But wait there's more . . .

In addition to both of those remarkable results the study also revealed that the good cholesterol of these individuals increased by nearly 30 percent. It's hard to ignore results like these!

Some of the studies performed on this nutritionally based aid have compared its effectiveness to prescription drugs. The results again, are nothing short of amazing.

### Policosanol Beats Prescription Drugs

These trials reveal that five to 20 mg of Policosanol is actually more effective at improving your lipid profile than the prescription medications Lovastatin (Mevacor), pravastatin (Pravachol) and simvastatin (Zocor).

Okay, you say. It seems to work. But is it really safe? Policosanol is one of the supplements that have undergone the most scrutiny by the medical community. It has been tested again and again and been proven to be a safe option for lowering your cholesterol

You may have to take this supplement for several weeks, though, before your numbers start to tumble. It appears that it takes about six to eight weeks before your system actually experiences a drop in cholesterol level.

### **Red Yeast Rice**

If you think you might have heard of this nutritional supplement, you're probably right. It's found itself in the middle of a pharmaceutical



whirlwind of controversy because it appears to have a natural form of statin in it. And statin is a class of prescription drug.

Needless to say, the drug companies don't really want individuals taking a natural substance when they're trying to sell you a synthetic version of the same substance. It's not real good for their business, you might say!

Red yeast rice is actually a fungus -- but don't let that scare you. It grows on rice and as previously noted, naturally contains a specific type of statin.

## Red Yeast Rice Stands Up To The Tests

What's more, this supplement seems to hold up well when scrutinized by the medical community. Overall, the studies have revealed that red yeast rice has the ability to lower your LDL by 20 to 30 percent. That's pretty impressive.

But the evidence doesn't stop there. Many of the newer studies keep confirming these results. A recent study, for example, administered red yeast rice to a group of individuals with high cholesterol. Previously, they had been using a prescription statin drug. But due to the adverse effect of muscle pain, they had to discontinue its use.

Red yeast rice capsules lowered the group's total cholesterol levels as well as the bad cholesterol between 15 and 21 percent. And it did it without the side effect of muscle pain!

Now that you're armed with yet another alternative for supplementing your diet, let's switch gears. I want to talk about what may be the "magic bullet" not just in lowering your cholesterol level, but in providing you with a myriad of untold health benefits as well.

While most of us know that the concept of a magic bullet may be farfetched, we would still love to believe in it. Turn to the next chapter to discover how one single solution may come close to the magic bullet you've been dreaming of.

# Exercise: The Cholesterol Lowering Magic Bullet?

In this chapter we talk about what may be the closest thing to a "magic bullet" for good health. And the best news of all -- it's free!

"Bill! Look what I bought you at the store! It's just what you need to get started on your next phase of cholesterol-lowering lifestyle."

Bill got up from the couch where he had been watching TV. Laura pulled out a jogging outfit. "Now you have no reason not to work out. I think you'll look pretty darn good as you go through your routine."

Bill groaned a little, but realized his wife was right. It was time to start the next phase of his program. He probably had put it off too long.

t's probably human nature. We all would like to find a "magic bullet" that would instantly help with some aspect of our health -- or better yet, with our overall health status. Wouldn't it be great if there were one pill . . . one injection . . . even one food we could eat . . . that would guarantee us good health.

Well, what if I told you that something might exist that comes real close to a "magic bullet" in ensuring good health?

And what if I told you that it doesn't have to cost an arm and a leg? But even better than that, it appears that it works on all sorts of health problems -- and even protects you from developing future problems.

Would you be interested?

But, you say, there is no "magic bullet." Surely, we would have heard about it. And if it were that miraculous at improving health, some company surely would have marketed it in some way so it costs something.

Well, there really is a magic bullet. And you already know about it. The only problem is that we tend to ignore the magnificent potential of this one item.

### What is it? Exercise!

Don't groan. It's true. And you already know it. Exercise is a muchignored aspect of good health. You can do your heart and health a big favor by exercising. The good news for you, though, is that it really doesn't take all that much effort to put the Cholesterol Lowering power of exercise to work for you.

### **How Exercise Busts Cholesterol**

Professional medical journals abound with study after study about the powerful effects even a little exercise may have on clobbering your cholesterol numbers. But when asked why it works, the medical community is stumped.

That's because researchers aren't really sure how regular physical exercise lowers lipid numbers. But with every passing day, it appears that a few more clues are revealed.

Of course, the most obvious way it helps lower your cholesterol is by helping you lose weight. Overweight individuals tend to have higher LDL levels in their blood.

Today the medical community is convinced that there are probably several different mechanisms at work. For one thing, exercise stimulates the same enzymes that assist in taking the LDL from the blood -- along with the blood-vessel walls -- to the liver.

Once there, the cholesterol is then converted into bile for digestion or it's excreted. So it only makes good sense: the more you exercise, the more LDL your body eliminates.

But there's also a second reason why exercise may lower your cholesterol. Physical activity increases the size of the protein particles carrying

cholesterol through the blood. While that may not mean a lot to you, it's quite revealing to medical experts.

In a nutshell, these protein particles come in two basic sizes. The first is small and dense; the second is big and fluffy. The small, dense particles are the more dangerous of the two.

They can squeeze themselves into areas of your body -- line the lining of your heart of blood vessels -- and essential "set up shop there," according to Amit Khera, M.D., Director of the University of Texas, Southwestern, Medical Center's Program in Preventive Cardiology.

Exercise actually increases the size of the protein particles that carry both the good and bad cholesterol. The larger the particles, the harder it is for these substances to find places to hide and hang out.

### Okay! So Exercise IS Good! But How Much Do I Need?

No, you don't have to quit your day job to get enough exercise to lower your cholesterol. In fact, research shows that even as little as 30 minutes a day of moderate to vigorous physical activity can help you. What type of activities should you consider? Think about walking, jogging, biking or even gardening.

A study in 2002 sponsored by Duke University Medical Center discovered that the more intense the exercise, the better its Cholesterol Lowering ability.

Another study involved overweight, sedentary people. These individuals were told not to change their diet. Those who received moderate exercise -- which for the purposes of this study were 12 miles of walking or jogging a week -- lowered their LDL levels.

Those who exercised even more vigorously -- roughly 20 miles of jogging a week -- lowered their levels even more.

### But Wait, There's More . . .

It's true! The good news doesn't end there. Those who exercised vigorously also raised their levels of HDL -- the good cholesterol. But, you have to work harder to get this to happen, according to William Kraus, M.D., an Assistant Professor of Medicine at Duke University. "Just walking is not enough."

But don't let this fool you. Any type of exercise goes a long way in helping to reduce your cholesterol.

But there's still one more thing. According to Roger Blumenthal, M.D., Director of the Ciccarone Preventive Cardiology Center at Johns Hopkins University, among those individuals who had the worst diet and exercise habits to begin with, some were able to reduce their LDL by as much as 10 to 15 percent. They were also able to increase their HDL by as much as 20 percent.

### Let's Get Started . . .

Haven't been exercising lately? Then it's very important that you start slowly. Not only that, but before you even begin, double check with your doctor. He'll evaluate your cardiovascular health to see how your system actually reacts to exercise.

Here are some general guidelines you can follow once you make the decision to exercise and prepare yourself with all the preliminaries.

In the beginning, select a form of physical activity that you can participate in for 10 to 20 minutes at a time at a moderate intensity. Good initial choices including walking, swimming, biking or even some type of exercise machine at a low speed.

While we've already mentioned that moderate exercise is best, you need to be aware that you need to spend a little time doing it. The American Heart Association recommends that you work your way up to 30 minutes daily. If you're also trying to lose weight, that organization also suggests you get as much as 60 minutes every day.

While that may sound like an extended period of time, you can always break this hour up into 10-minute increments and still reap the profits.

The best of all worlds is to discover an activity you love. You're much more likely to stick with it!

Another suggestion is to grab yourself an exercise friend. You not only have an individual who holds you accountable, but you also have a friend who can provide you with moral support. And sometimes that can make all the difference in the world!

Better than just choosing one activity, choose several different exercises. In this way you can switch from one to another and not get bored.

### **Yoga Your Way to Lower Cholesterol**

What you say? Yoga and lower cholesterol levels? How can that be, you ask. In most types of yoga you don't even break a sweat. How is that going to help me with my high levels of lipids?

Yoga uses a series of exercises and poses -- called asanas -- that help you relax as well as tone your muscles in order to massage the internal organs. The breathing techniques -- called pranayamas -- taught in this disciple help to regulate your body's energy levels.

But more than that, the postures in this practice that promote relaxation also perform the double duty of reducing stress, tension and anxiety. And yoga is a marvelous tool to help improve the flow of your blood and oxygen throughout your body. This rids your system of toxins and other waste.

Yoga doesn't work directly on your cholesterol levels then, but rather indirectly, helping to alleviate the stress that often triggers event that eventually promote higher cholesterol levels.

Don't let this indirect route fool you. Yoga's effect on cholesterol is influential enough to have caught the eye of one the nation's leading cardiologists, Dr. Dean Ornish.

There's only one catch to these marvelous benefits of yoga. For it to work its apparent magic, you need to perform it on a regular basis. This is not a hit and miss exercise program if you're serious about its Cholesterol Lowering abilities.

If you're truly interested in yoga as a possible tool, you may want to sign up for a class at a local center. The instructor will introduce you to a half dozen or so poses that specifically target blood circulation and cholesterol-lowering powers.

We've certainly covered a lot of diverse ground when it comes to Cholesterol Lowering techniques, tips and tricks. You might think we've exhausted all categories.

But wait! There's still one aspect of cholesterol-lowering techniques we've failed to mention. What is it? Turn to the following chapter to find out!

## Cholesterol Lowering Herbs

### A look at nature's way of lowering your cholesterol -without the harsh side effects of prescription drugs.

Bill read the material his wife had printed from the computer. She had been busy surfing through the Web in search of anything that would help Bill and his high cholesterol.

In the time he had been diagnosed with elevated levels of "bad" cholesterol, he had made good progress towards normalizing them. But it seems his wife, Laura, was on a crusade to find every possible route to lower, healthier levels. And this was her latest attempt.

Attached to the printed information was a Post-It Note in his wife's handwriting, "I just want to make sure you live a long and healthy life. Love you!"

erbal supplements. It's true! Laura had found several herbs that promised to promote more natural, lower cholesterol levels. And these herbs seemed to accomplish this feat without the harsh side effects of prescription medications.

Indeed, there are quite a few herbs that have been used for years -- some of them for centuries -- to help protect your heart.

Before you make the decision to use any herb, though, it's best if you visit a licensed herbalist. He can help you select which ones are best for your specific situation. And of course, before you actually use any herbal remedy, you'll want to consult with your physician.

Some herbs and prescription medications may interfere with each other. It's best if your doctor knows what you're taking. He may want to adjust the dosages of some of your medications.

## Evening Primrose As A Cholesterol Buster

One of the oldest and most trusted herbs in any herbalists black bag of remedies is **evening primrose**. It seems among the many healing properties of this legendary herb is its ability to bring down high cholesterol.

There's scientific evidence to back up why so many individuals use it with such success. The seeds of the evening primrose contain an oil rich in a set of compounds that most plants don't appear to have.

This herb is a great source of essential fatty acids. Specifically, it's rich in gamma-linolenic acid or GLA for short. Therein lies the herb's effectiveness.

In a recent scientific study, 79 individuals with high cholesterol levels took the equivalent of 320 mg of GLA. Overall, their cholesterol levels plummeted approximated 31 percent. That's impressive in anyone's book!

If you're considering using evening primrose as a dietary supplement, be aware that the suggested serving starts at 1 gram of gel caps taken two or three times daily.

## Guggul: Not An Internet Search Engine!

This is probably the most effective herb you've never heard of. Yep. You read that right! **Guggul** -- sometimes you'll find it identified as guggulipid -- is proving to be an amazing aid in lowering cholesterol. But few of us have ever heard of it. It's difficult to take advantage of a good thing, if you don't know the good thing exists!

Guggul is actually the gum **resin of a tree called mukul myrrh.** It's been used in traditional herbal remedies in India for centuries. In addition to this track record, guggul has been able to stand up to scientific studies.

In several clinical trials performed in India, this herb produced significant reduction in blood levels of both total cholesterol levels as well as the bad cholesterol levels, LDL.

### **What Others Use**

Many individuals have found good results with herbs that haven't been tested in double-blind or other scientific studies. This short section here -- which provides an intermission from some of the sluggers of the cholesterol-reducing field -- is intended to show you what some people are using.

These are people suffering from the same problem as you. I provide these to give you an idea of what's possible with herbal remedies. If you want to try them, that's solely your decision -- just be aware that science has yet to verify their effectiveness.

### **Sunflower Seeds**

Some individuals have discovered the marvelous Cholesterol Lowering properties of **sunflower seeds**. The effectiveness of this herb owes its abilities to its innate trait of linoleic acid. This particular substance helps in the lowering of cholesterol not only in the blood but around the blood capillaries as well.

**Holy basil** is another herb that is popular in decreasing your cholesterol level. It's reported that this herb is able to dissolve accumulated cholesterol from your arteries and into your bloodstream. From there, the cholesterol is eliminated by the kidneys.

### Alfalfa

Another herb you may want to check into is alfalfa. This particular remedy is said to be effective in treating any problems associated with the arteries. And we know that cholesterol congests arteries.

If you find an herb called **arjuna**, you should consider using it for your high cholesterol. It's a tree whose bark has been used for centuries as a cardiac stimulant. You could use it in its natural state if you can find an herbalist who can show you the proper way to administer it.

Otherwise you can find it in supplement form at select health stores. You may find that this herb may need some time to work its magic.

### **Grape Seed Extract**

It should come as no surprise that **grape seed extract** is effective at lowering cholesterol. Grapes themselves have traditionally been viewed as a very powerful health food for thousands of years.

Now, granted, most of the historical literature that praises the health-giving power of grapes talks about the healing properties of wine. But, the grape seed is where the magic really starts.

Grapes contain chemicals called oligomeric proanthocyanidin complexes (and complex is certainly the right call!) These chemicals are among the most powerful antioxidants you can find anywhere. This means, in addition to its Cholesterol Lowering properties, it can provide you with a host of other health-related benefits.

## So What Do The Scientific Studies Say?

Several studies have looked specifically at grape seed extract's effect on cholesterol. In one study, specifically, 40 individuals suffering with high cholesterol were divided into three groups.

One took grape seed extract in combination with the natural substance chromium, another group used only grape seed extract and a third was administered a placebo.

The groups took their respective supplements for two months. The group experiencing the largest decrease in cholesterol levels was the one that took the combination grape seed extract and chromium.

Not only did this blend lower total cholesterol counts, but it also specifically lowered the LDL or bad cholesterol.

## Flaxseed: One of Nature's Best-Kept Secrets

You may have heard of flaxseed. It certainly has been available for a while. But it never seemed to have earned its rightful place as a supplement as other dietary supplements have.

Flaxseed has been touted as natural remedy for many health problems. It comes as no surprise then that it can work successfully at lowering your cholesterol level. Not only is it capable of lowering your total lipid count but it also helps in bringing down the bad cholesterol as well.

## The Secret Success of Flaxseed

One of the reasons flaxseed is such a value is its abundance of alpha linolenic acid. But it also has a second compound, called lignin. This is a phytoestrogen or a type of antioxidant.

Flaxseed works well against cholesterol for yet a third reason as well. It contains fiber. And we learned in the chapter on diet that fiber is a great weapon against climbing cholesterol levels.

The best way to use flaxseed is in moderation. You can begin including it in your diet in any number of ways. One form it comes in is as an oil. Many people mix it with either plain yogurt or cottage cheese in order to get its benefits daily.

But you can also buy the seeds and add them to just about any food you're making. You can sprinkle ground flax seed, for example, on your cereals and salads.

## Using Flaxseed As A Baking Tool

Or you can use a flax seed mixture as a substitute for eggs in your home baking. Simply take one tablespoon of milled flax seed along with three tablespoons of water for every egg you would have normally used. You'll find that the dish will have a little less volume and may taste a bit gummier.

Having said that, you may want to start out slowly with the substitution process. If your recipe calls for three eggs, only substitute flaxseed for one of them. Use the other two eggs as directed. This gives you an idea what to expect in the way of texture and taste. And then you can adjust as you become adjusted to the substitution.

### Hawthorn

**Hawthorn** is a legendary herb. And truly an awesome one when it comes to heart health. It's probably better known for its ability to lower high blood pressure. But many individuals also find that it's invaluable as a Cholesterol Lowering natural remedy.

It's no secret that hawthorn is a great help for those individuals who suffer with congestive heart failure, chest pain and irregular heartbeats. So it really does seem a natural at reducing cholesterol as well.

Hawthorn works well because it appears that it lowers the accumulation fats in the liver as well as the aorta -- the largest artery in your body!

But the actual fruit of the hawthorn plant may provide an alternative healing. The fruit may actually increase the excretion of bile, which in turn reduces the formation of cholesterol itself as well as enhances the receptors for LDL or bad cholesterol.

However it works, it appears that it's well worth a closer look if you're looking for a safe herbal answer to your rising cholesterol levels.

### Conclusion

## It's really just the beginning of your new health journey!

your search for natural and safe alternatives to prescription drugs, we've covered quite a bit of ground. Diet. Exercise. Herbs. Nutritional supplements. We've really only touched the surface of what's available to you.

If you started this book thinking prescription drug use was the only route you could take to bring those high cholesterol levels down, you hopefully have learned a great deal.

If you thought that cholesterol-lowering prescription drugs came free and clear of adverse side effects, you again have learned something.

### A Window to Easy Natural and Safe Cholesterol-Lowering Alternatives

It was my intention in writing this book to show you that -- despite what your doctor and others of the medical community may say -- there are natural and safe alternatives to pharmaceutically produced medications.

In some cases your cholesterol may be so high that you need that shot in the arm, as it were, of prescription medication to bring it down quickly and safely.

But even while you're taking prescription medication, don't be afraid to make some lifestyle changes -- most notably your diet and an increased exercise routine. For many individuals, that's all that is needed to knock those lipid numbers down.

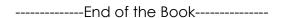
For others, it may take more. And by more I don't mean more medication. You may have to supplement with herbal remedies or nutritional aids. Or, you may just need to increase your level of physical activity.

While this is the conclusion of the book, it really is just the beginning of your life-long journey of improving your heart health through lowering your cholesterol levels.

As always before making any changes consult with your physician and Ayurveda health practitioner. May you find exactly what works for you.

### **Additional Suggestion**

Work with a certified Ayurveda health practitioner to form a more suitable diet as per your mind-body constitution. This diet plan further fine tunes with suitable foods, herbs and supplements as per your unique mind-body.



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