THE TRUTH ABOUT

HEART DISEASE AND CHOLESTEROL

WHAT THE MAINSTREAM MEDICAL COMMUNITY DOESN'T WANT YOU TO KNOW

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INTRODUCTION

For decades we have been told high cholesterol will increase our risk for heart disease, heart attacks and strokes. Cholesterol, of course, is the "bad guy", everyone knows that! But what if I told you everything you "know" about cholesterol is a myth? What if I told you cholesterol really isn't the bad guy at all?

Cholesterol is actually a vital nutrient necessary for many important processes in the body. It is so important in fact, without it you would die. While all of this is true, the fact remains 1 in 3 deaths in the United States is caused by heart disease and stroke and approximately 80% of deaths caused by coronary artery disease (a type of heart disease) are directly attributed to unhealthy lifestyle behaviors.

So if cholesterol isn't the culprit, what is?

You may be shocked to hear there's a silent killer inside your body that your doctors aren't telling you about. This silent killer is the real culprit and cholesterol is nothing more than a scape goat. And I'll be revealing that silent inside this report.

BUT MY DOCTOR SAID...

Before we move on I want to first explain how the cholesterol myth got started. Back in 1951 an article, "Lipid Hypothesis" by George Duff and Gardner McMillan was published in the American Journal of Medicine. This paper was simply Duff and Gardner's theory on how blood lipid levels might be associated with cardiovascular disease and stroke. After the article was published, a man named Ancel Keys decided to design a study specifically to prove the "Lipid Hypothesis" right. The problem is, studies should not be created to prove something right. This automatically creates bias in a study which, by design, are meant to be unbiased.

Keyes collected data from 22 different countries for his study but only published the data from 7. You might be wondering "Why would he do that?" Well the data from the other 15 countries did not back up what he was trying to prove! Even though Keyes chose to exclude over half of the data collected, the American Heart Association endorsed his "Seven Countries" study, which claimed to "prove" heart disease and strokes are caused by fat consumption and cholesterol. Once this theory hit the market, it became the "golden rule" for heart health even though it is based on flawed science.

I just want to be clear, I am not saying doctors are the enemy. Doctors must rely upon the tools given to them in medical school. Furthermore, doctors have very limited schooling in nutrition. Out of their entire 8+ years of school, most only spend a few hours on nutrition! Doctors are also bound to the strict regulations and standards set forth by government agencies which limit the procedures and protocols they can recommend to their patients. Unfortunately, these standards and policies are based on SICK care not HEALTH care.

I understand that what I'm saying is contrary to everything you have been told up to this point, but the science speaks for itself. For example a 2011 study, published in the Journal of Evaluation in Clinical Practice, found women with high cholesterol levels were 30% LESS likely to die from heart disease. A study done in 2009, published in the American Heart Journal, reported nearly 75% of all patients hospitalized for heart attacks had cholesterol levels that were considered NORMAL. These studies prove there is no correlation between cholesterol levels, heart disease and strokes, regardless what doctors and big pharmaceutical companies say.

WHAT DO ALL THESE NUMBERS MEAN?

You may have had your cholesterol levels tested but do you really know what all the numbers mean? If you are like many of the clients I have worked with, your doctor handed you a copy of your results, told you if your cholesterol was "good" or "bad" and then sent you on your way. In actually, there is a lot more to your numbers than just "good" or "bad."

Your results will generally contain the following four numbers: total cholesterol, low density lipoprotein (LDL), high density lipoprotein (HDL) and triglycerides. LDL is considered the bad cholesterol, you can remember this by thinking L= Lousy, HDL is considered the good cholesterol, you can remember this by thinking H=Healthy, your total is simply both LDL and HDL combined. The current ranges for cholesterol and triglycerides can be seen in the chart below.

Total Cholesterol	Under 200	Desirable
	200 - 239	Borderline High
	Over 240	High
HDL Cholesterol The GOOD kind	Over 60	Optimal
	Under 40	Low for Men
	Under 50	Low for Women
LDL Cholesterol The BAD kind - a lower number is better	Under 70	Optimal for those with heart or blood vessel disease
	Under 100	Optimal (also for diabetics & those with risk factors for heart disease)
	100 - 129	Near Optimal
	130 - 159	Borderline High
	160 - 189	High
	Over 190	Very High
Triglycerides	Under 150	Normal
	150 - 199	Borderline High
	200 - 499	High
	Over 500	Very High

There is also VLDL (think "very lousy"), which is perhaps the worst type of lipoprotein in our blood. It often closely associated with triglycerides.

When it comes to your cholesterol, doctors will often use total cholesterol to determine cardiovascular risk but it is not your total cholesterol you should be concerned with. The first indicator you should look at is your **HDL-to-total cholesterol ratio**. Your HDL should make up 25% of your total cholesterol. The second important indicator is your **triglyceride-to-HDL ratio**. This ratio should be below two.

Now let's say you have a total cholesterol of 220, with an HDL of 50 (below optimum), an LDL of 150 (borderline high) and triglycerides of 160 (borderline high). You might be wondering why the HDL and LDL do not equal 220. There are other lipoproteins found in the total; however, we are only going to discuss HDL and LDL today. Now we can plug the numbers into the equations mentioned above to find out how they measure up:

> *HDL to Total Cholesterol*
> *220/50 = 4.4*
> *100/4.4 = 23%*

We want this ratio to be 25% or higher so this is a bit low. If we were to do this equation with 60, which is considered optimum, it would equal 27%.

The next ratio we will determine is the triglyceride to HDL ratio which should be two or lower:

> *Triglyceride to HDL ratio*
> *160/50 = 3.2*

As you can see this ratio is 3.2 which is high and not where we want it to be. Now take your own numbers and plug them in so you'll know where you stand.

CHOLESTEROL AND ATHEROSCLEROSIS

Coronary artery disease is a type of heart disease that occurs when plaque builds up in the coronary arteries. Overtime, the plaque will build up, causing the arteries to narrow, leaving less space for blood to flow through. This process is called atherosclerosis and is depicted in the picture below.
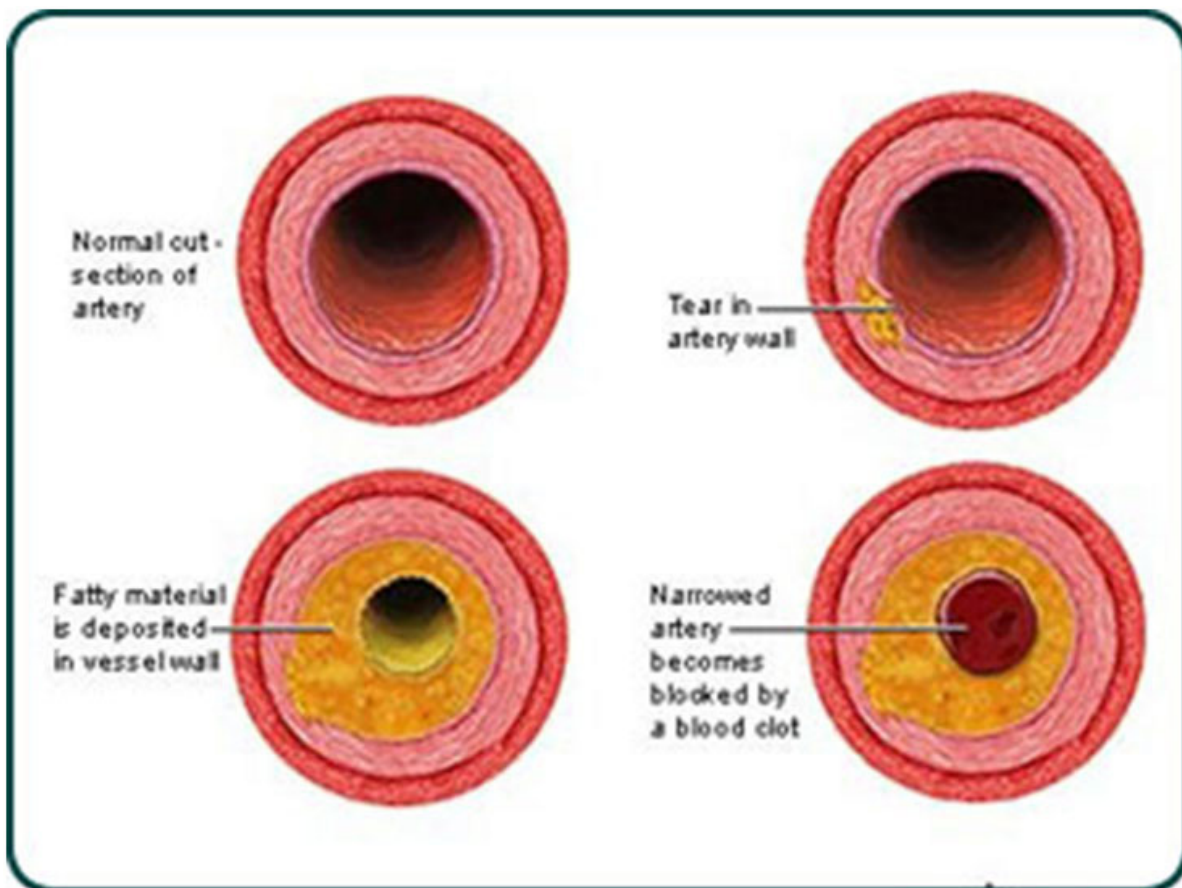
One of the symptoms of CAD is tightness and pain in the chest because the narrow arteries are unable to deliver enough blood to the heart. Overtime, this will weaken the heart which can lead to heart failure. An irregular heartbeat, or arrhythmia, can also develop. Shockingly, heart disease for the most part is asymptomatic, which means that for most people their first sign is a heart attack. That is a scary thought!

Most doctors and pharmaceutical companies will tell you that atherosclerosis is caused by high levels of cholesterol. While plaque is created in part by cholesterol, along

with other constitutes, cholesterol is not the actual cause of this disease. The truth is elevated insulin levels and chronic inflammation are the true silent killers, guilty of raising triglyceride/VLDL levels (bad stuff) and scarring your artery walls, respectively. In the latter case, cholesterol is simply called upon to cover up the damage. Overtime, cholesterol (among other things) will get "snagged" particle by particle until it eventually causes a partial or full block. In other words, if you less inflammation and lower insulin levels, then cholesterol and heart disease is rarely an issue.

In his article, "Heart Surgeon Speaks Out", Dr. Dwight Lundell says,

"I have peered inside thousands upon thousands of arteries. A diseased artery looks as if someone took a brush and scrubbed repeatedly against its wall." He goes on to say, "Despite the fact 25% of the population takes expensive statin medications and despite the fact we have reduced the fat content of our diets, more Americans will die this year of heart disease than ever before."

So if inflammation is the bad guy, where does it come from and how does it cause so much damage in the body?

FREE RADICALS, OXIDATIVE STRESS & INFLAMMATION

Oxidation, free radicals, and inflammation are terms you may have heard before but do you really know what they mean?

A free radical is a molecule with one unpaired electron in its orbit. Since molecules are only stable when all of their electrons are in pairs, having one unpaired electron makes their molecular structure unstable and highly reactive. For this reason, free radicals are forced to either donate or accept an electron from another molecule to become stable again. Depending on the molecule and the type of exchange that occurs, the free radical is either stabilized or more free radicals are created.

Although we need oxygen for survival, oxygen containing free radicals are more reactive than any other type of free radicals. Oxygen containing free radicals are capable of damaging DNA, proteins and lipids, while other free radical species are not. The damage caused by free radicals leads to inflammation in the body. Free radicals are created through normal metabolic functions like energy production and digestion but they are also caused by smoking, excessive alcohol consumption, consuming trans fats, processed and refined foods, high blood sugar levels, chemical exposure, high blood pressure, and high levels of stress which also happen to be the root causes of inflammation too.

An antioxidant is a molecule that can donate an electron to a free radical which makes it stable and neutralizes it. This reduces its ability to do damage to our body. This is described as their free radical scavenging property. Some antioxidants like glutathione are found in the body, while most others can only be found in the diet.

When free radical generation out weights antioxidant defenses, it results in oxidative stress. Oxidative stress is associated with damage to many bodily systems all of which leads to inflammation. This inflammation is often measured by elevated levels of inflammatory cytokines like TNF-alpha, IL-6, and many others. Oxidative stress (excessive free radicals in the body) is the first step towards atherosclerosis. It is essentially the "knife" that creates little cuts and scrapes along the walls of the arteries. As with any other injury, cut or scrape you may have, inflammation soon follows after it occurs.

CHOLESTEROL'S ROLE IN ATHEROSCLEROSIS

When LDL floats around in the bloodsteam for too long it becomes oxidized or "rancid." Oxidized LDL is drawn to macrophages, a type of immune cell, which will uptake the LDL into itself. When the rancid LDL and macrophage combine, it results in the creation of a *foam cell*. These sticky foam cells then float through the bloodstream and can easily occlude arteries – big and small. In addition, these foam cells cause the area to become more inflamed, which only attracts more foam cells to the site. They then continue to accumulate forming a "bump" that attracts even more adhesion and eventually partial or full arterial blockage. You can see an example of this in the picture below. This accumulation is what leads to the narrowing of the arteries associated with heart disease.
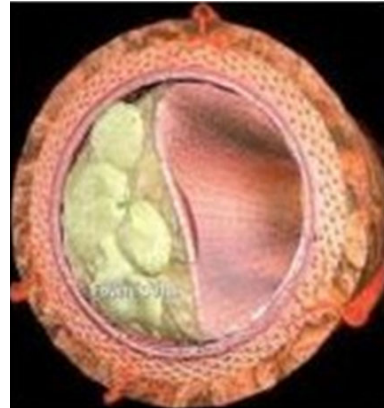
With that said, a study published in the *Journal of the American Medical Association* in 1964 analyzed 1,700 patients with heart disease. The researchers found a higher rate of heart disease among those with cholesterol levels between 1 and 250 and less incidence in those with levels between 300 and or higher, proving there is more to the heart disease equation than just cholesterol. As you can see, cholesterol is not the bad guy! The truth is chronic inflammation is the real culprit.

HOW MUCH CHOLESTEROL IS TOO MUCH?

According to expert Dr. Caldwell Esselstyn, maintaining a cholesterol level of less than 150 can make one practically "heart attack proof." This level also ensures against further progression of heart disease. One well known study called the China Study, found heart disease is virtually unknown in regions where the average cholesterol level is less than 150, and researchers in Fermium found in a five year period there was not one heart attack in anyone with a cholesterol level of under 150.

Three-quarters of the population, primarily in Asia, Africa and South America, have cholesterol levels of or around150. However, I'd like you now to consider this, a study done on approximately 500,000 citizens of the Mediterranean island Crete, over a ten year period and of the 500,000 participants not one heart attack occurred over the entire 10 year period yet the average citizen had a cholesterol level above 200. This

population eats a Mediterranean diet full of antioxidants from fruits and vegetables, and monounsaturated fats from olives and olive oil. As I mentioned previously, antioxidants prevent free radicals and oxidative stress from tearing up the inside walls of your arteries. The people of Crete prove that where our fats come from is very important for heart health. In the Western world a cholesterol level of 200 would be on the high side simply because the vast majority of Westerners do not following a Mediterranean or plant based diet.

CAN I HAVE TOO LITTLE CHOLESTEROL?

By now it should be clear that cholesterol is not the bad guy it has been portrayed to be. HDL for example, is a type of cholesterol we should try to increase in our blood. HDL, our "healthy" cholesterol, removes excess cholesterol from tissues and then transports it to the liver where it is broken down and excreted through the bowels. This process is called *reverse cholesterol transport*. This is just one of the many reasons we need cholesterol in our bodies. It seems that the only things highlighted about cholesterol are negative. The truth is, cholesterol is a vital component of cell membranes, sex hormones like testosterone and estrogen, Vitamin D formation and bile production.

In fact, having too little cholesterol increases your risk of cancer, memory loss, Parkinson's disease, hormonal imbalances, stroke, depression, suicide and violent behavior. If we don't have enough cholesterol, our cell membranes become weak, allowing things, both good and bad, to come and go as they please. To have healthy cells and to have a healthy body you need cholesterol. Without it you will die.

CHOLESTEROL SENSING MECHANISM

Because cholesterol is so important, cells actually have a cholesterol sensing mechanism to ensure they have enough cholesterol to do their various tasks. When a cell is running low on cholesterol, LDL will be shuttled to that cell, where it will bind to an LDL receptor. Once it binds to the receptor it is then taken into the cell. However, since cholesterol is vital to so many processes, sometimes cells can actually create their own cholesterol. In this process a molecule of acetyl co-a is transformed into HNG co-a and then into cholesterol.

As you can see in the picture below, the cell first determines whether it has too much or too little cholesterol, it then transmits this information to the DNA. After this step, one of two things can occur:

1 The cell will produce more enzyme HMG CoA reductase in order to create more cholesterol or…

2 It will create more LDL receptors on the cell's surface so it is able to uptake more cholesterol from the blood.
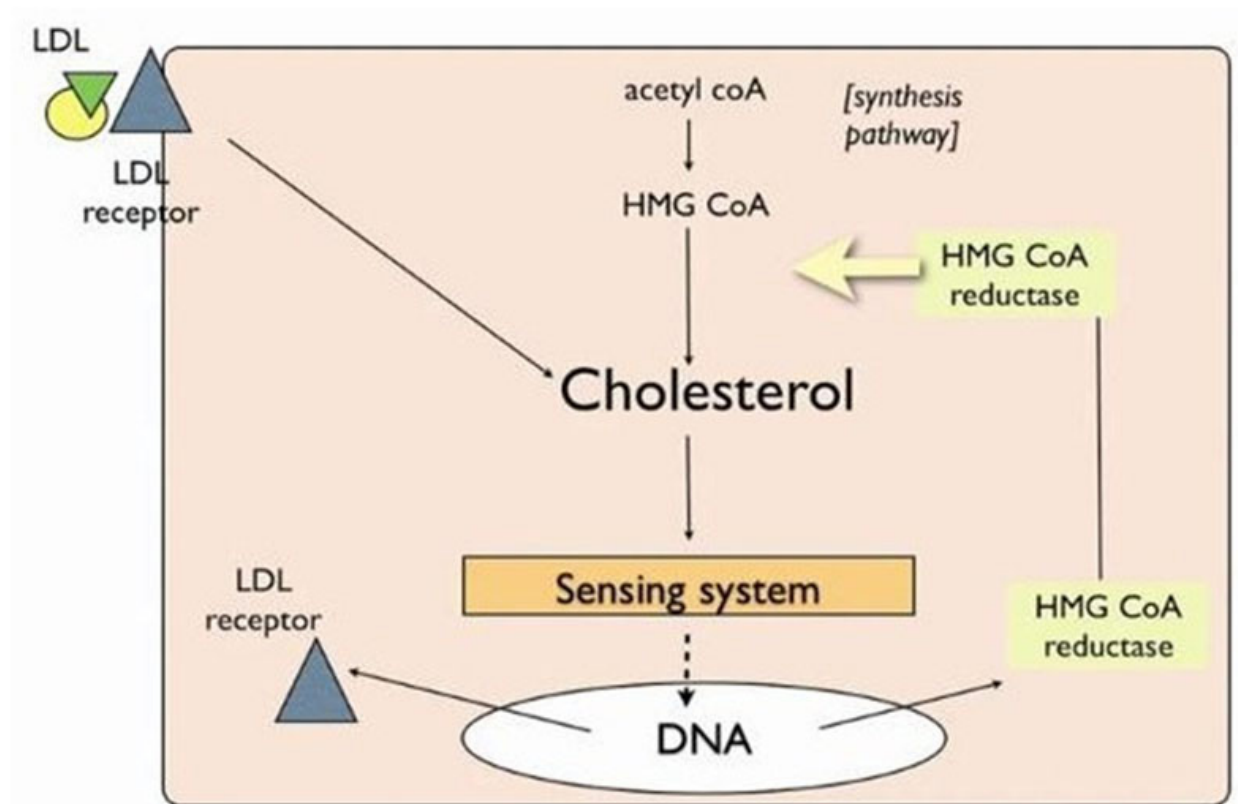
Because our cells have this sensing mechanism they are able to determine how much cholesterol should or should not be in the cells and in the blood. This means that even if we reduce our cholesterol by eating low fat "healthy" foods or taking medications our cells will simply continue creating the cholesterol they need.

While cholesterol has this sensing mechanism, triglycerides do not. It's been shown conclusively that high triglycerides, which result from consuming too much sugar and refined carbohydrates (resulting in elevated insulin), are a much bigger problem for heart disease than high cholesterol levels.

TRIGLYCERIDES

We often hear about the dangers of cholesterol, however, triglycerides are actually a huge risk factor for cardiovascular disease. Triglycerides are essentially fat in blood. Have you ever seen the yellow layer of fat floating on the surface of a can of soup? Basically, that is what triglycerides are in the body. In 1994 Hodis and colleagues found LDL cholesterol appeared to actually mask the arterial damage caused by triglyceride-rich lipoproteins called very low density lipoproteins (VLDL.) This is significant because despite aggressive treatment with cholesterol lowering medication, the patients who had high triglyceride levels continued to suffer damage to their arterial walls. This study shows, yet again, how cholesterol is not the bad guy.

THE CONNECTION BETWEEN TRIGLYCERIDES & INSULIN RESISTANCE.

The relationship between triglycerides and insulin resistance is an interesting one. Insulin resistance is a syndrome caused by the constant spiking of blood sugar and insulin levels caused by the over consumption of low quality, processed, high sugar foods. Because insulin resistance causes high blood sugar levels, it is a risk factor for type II diabetes, atherosclerosis, and cardiac hypertrophy (enlarged heart.) Approximately 50% of people with high blood pressure also suffer from insulin resistance, but why is this?

In the picture below you will see the liver and inside the liver there are fat cells. Insulin resistance will cause high blood lipid levels for two reasons:

1 It increases insulin levels, and

2 It increases glucose production in the liver, while also decreasing the disposal of glucose out of the liver (which can lead to fatty liver disease).

When our cells are resistant to insulin, hormone sensitive lipase (HSL) is activated inside our fat cells. HSL breaks down triglycerides into three free fatty acids (FFAs) and a glycerol molecule. Once broken down, the FFAs are secreted into the blood stream which moves them to the liver. High levels of insulin, switches on lipogenic genes (denoted in

the picture as SREPP-1c) in the liver which are genes that basically turn things into fat. The excess glucose produced in the liver is then converted into fatty acids.
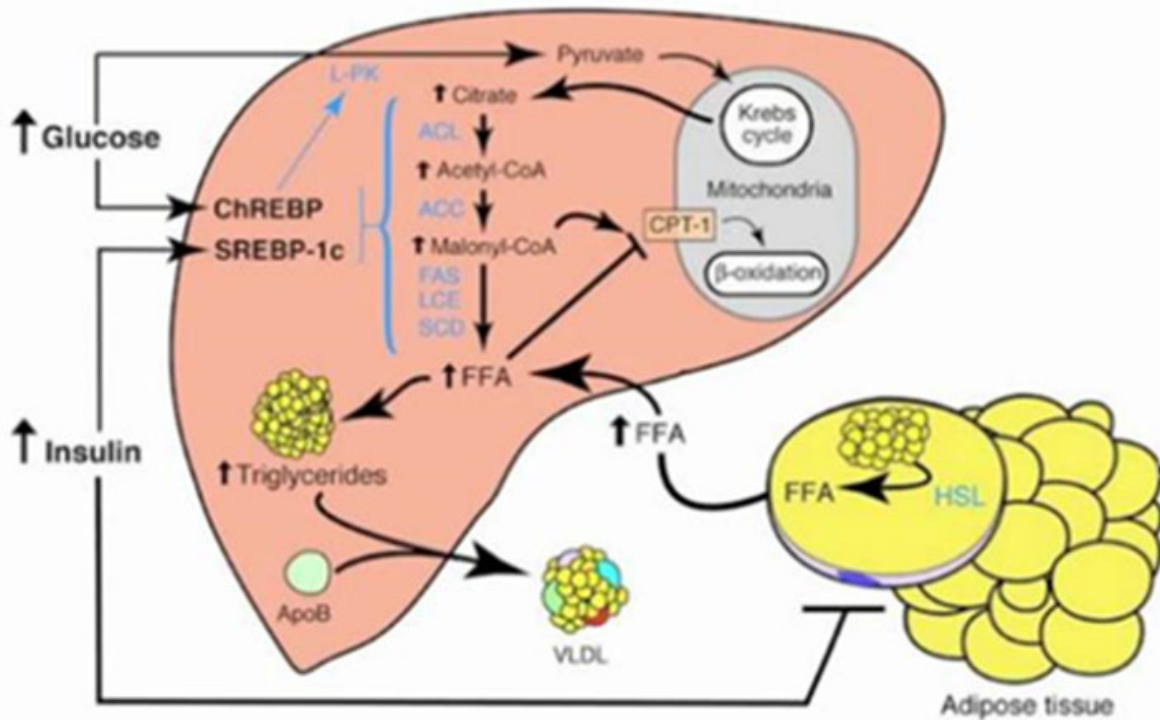
When fatty acid production is increased, so is the production of malonyl-CoA. Malonyl-CoA, inhibits CPT1, the protein responsible for transporting fatty acids into the mitochondria or "power house" of the cell. Because CPT1 is inhibited, instead of being transported to the mitochondria to fuel cells, the fatty acids are converted back into triglycerides. When there are high levels of triglycerides in the liver they are packaged up and sent into the blood as VLDL, This is not a good thing because, as I mentioned above, research shows the triglycerides found in VLDL cause arterial damage even when LDL (your "lousy" cholesterol) levels are low. So all of this is caused by insulin resistance and insulin resistance is the direct result of the over consumption of low quality, high sugar, processed foods. These facts simply provide yet another reason to decrease the amount of unhealthy, processed, refined sugar laden foods in our diet.

TRIGLYCERIDES: HOW MUCH IS TOO MUCH?

If you are over the age of 20, you should have your triglyceride levels checked minimally every five years. In the US, triglyceride levels are considered normal when under 115 mg/dl, borderline high when between 151–200 mg/dl, high between 201-499 mg/dl, and very high when 500 mg/dl or more. It is important to point out, when levels hit 190 mg/dl blood starts to thicken. This is detrimental because the heart has to work harder to pump thick blood around the body. When levels reach 500+ mg/dl it can cause pancreatitis, an inflammation of the pancreas, among other problems.

WHERE DO TRIGLYCERIDES COME FROM?

We take in triglycerides from the fat in the foods we eat, especially from foods high in saturated fat. However, foods that contain refined sugars are also bad for triglyceride levels even when the food is low in saturated fat. As we now know, when blood sugar levels are high on a consistent basis, it not only leads to the formation of triglycerides in the liver but also the reduction of their removal.

Just to be clear, I am specifically talking about refined sugar here. Many researchers have made the blanket statement that carbohydrates are "bad" but what they fail to mention is their studies used refined white sugar rather than whole foods. Essentially, these studies force fed their participants refined sugar and the results found were obviously bad. If they had fed participants complex carbohydrates like starchy vegetables, quinoa, amaranth, millet, or buckwheat the results would have been completely different.

NORTH AMERICAN STATISTICS

Cardiovascular disease is the number one killer in the US for both men and women. Compared to previous decades, the proportion of those between the ages of 20 to 74 with high cholesterol has dropped by half from about 33% in the early 1960s to 16.3% in the early 2000's. During this same period, average cholesterol levels fell from 222 milligrams per deciliter to around the optimal level of 200. One in three North Americans has high cholesterol and 200 million prescriptions for cholesterol lowering drugs were written in 2008 alone. Approximately one in six adults has a total cholesterol above 240, giving them a two times greater risk of heart disease when compared to those with optimal levels.

As we discussed earlier, if cholesterol builds up in your arteries it will obstruct blood flow. When blood flow is obstructed, the heart must pump harder get the blood throughout the body, increasing blood pressure. Besides the fact high blood pressure can cause damage to vessels, it can also dislodge clots and plaque formations, allowing them to flow freely through the bloodstream. If these fragments become lodged in smaller vessels, it can cause a heart attack or stroke.

CHOLESTEROL-LOWERING MEDICATIONS

There are a few different types of cholesterol lowering medications on the market but statins are the most commonly prescribed. Currently, approximately one quarter of all adults over the age of 45 are on a statin and the industry earns about $29 billion annually.

Statins lower cholesterol by blocking HMG CoA reductase from creating cholesterol. In other words, statins inhibit cells from producing their own cholesterol. This means cells can only get more cholesterol by increasing their number of LDL receptors leading to more cholesterol being taken from the blood. You might think this sounds like a good thing but statins aren't really the lifesavers they are cracked up to be.

Statins may reduce cholesterol but they do very little to reduce inflammation. Statins also lead to side effects like depleted CoQ10 (an important molecule for energy production), memory loss, aches and pains, impotence, irritability, liver and stomach problems, dry skin and breathing difficulties. The bottom line is, regardless of your cholesterol levels, if you don't reduce inflammation you cannot ensure heart health.

Another class of cholesterol lowering drugs are resins. Resins bind to bile acids in the gut which increases excretion rather than reabsorption of cholesterol in the intestines. This also means there will be less cholesterol inside the cells so they will have to create more LDL receptors lowering the amount of LDL in the blood. Again this might sound like a great idea but the truth is, these drugs are inhibiting what our bodies are supposed to do naturally and that is never a good thing.

Ezetimibe is another class of cholesterol lowering drugs. These drugs also decrease absorption of dietary cholesterol from the intestines only this class decreases the actual uptake of cholesterol from the intestines rather than increasing bile production.

DO THESE DRUGS WORK?

The short answer here is yes, they do lower cholesterol levels, however, 99.9% of the time high cholesterol and heart disease can be reversed or prevented through changes in lifestyle alone. Reducing the amount of refined sugar and saturated fat in the diet will decrease triglycerides, VLDL and LDL while also increasing HDL. Statins do decrease LDL by 25-55% but they have no affect on VLDL because there is no sensing mechanism for triglycerides. While Resins decrease LDL it is only to the same degree as changes in diet and while they do increase HDL slightly they also increase triglyceride levels which we know is not a good thing. Ezetimibes have no impact on VLDL, only decrease LDL by 15%-25% and have little to no impact on HDL.

At first glance, it may seem as though statins are the best drug on the market for reducing cholesterol but if you take a look at the chart below you will see the only thing that has a positive effect on every important measure is eating a healthy diet.

	TG (VLDL)	LDL	HDL
Diet	↓	↓ 10-20%	↑
Statins (Lipitor)	↔	↓ 25-55%	↑
Resins	↑	↓ 10-20%	↑
Ezetimibe	↔	↓ 15-25%	↔

ARE CHOLESTEROL LOWERING MEDICATIONS SAFE?

A report published in the Journal of Cancer Research said

"Several trials of cholesterol lowering with drugs to prevent cardiovascular disease have demonstrated an increase in cancer incidence in the subjects treated with lipid altering drugs, statins. The trials were randomized, double blinded and lasted an average of five years. A statistical excess of malignancy was seen in elderly subjects and women randomized to the drug groups."

As I said before, when we take these drugs we are messing around with nature and as a result, the body will find other ways to compensate, in this case it will produce malignant tumors.

A review of approximately 900 studies done by the *American Journal of Cardiovascular Drugs* published in 2008 found that muscle problems, cognitive loss, neuropathy, anemia, acidosis, frequent fevers, cataracts, sexual dysfunction, increase in cancer risk, immune system suppression are all symptoms associated with the use of cholesterol lowering medications.

There are a few people out there who cannot manage their cholesterol levels with diet and exercise alone. About one in every 10,000 people has a genetic condition called hypercholesterolemia, indicated by a total cholesterol above 330. For these individuals medication is necessary, however, for 99% of the population, it is not.

WHAT IF I AM ON STATINS?

If you are currently taking a statin you should consider supplementing with CoQ10 in the form of ubiquinone. CoQ10 is an important antioxidant used to produce ATP in the mitochondria (the powerhouse of your cells). CoQ10 also neutralizes free radicals which are produced in greater amounts in statin users due to mitochondrial damage. Statins deplete this vital antioxidant because the cholesterol production pathway is the same pathway used to produce CoQ10. Statins also reduce the blood cholesterol used to transport CoQ10 and other fat soluble antioxidants. You might be wondering, "How will I know if I need CoQ10 or not?" Some of the signs you should be looking for are weakness, muscle soreness, and becoming easily fatigued. This is interesting because the most noted symptom of statin drug use are muscle problems and muscle soreness.

SHADY BUSINESS PRACTICES

Unfortunately, the promises of money can often make otherwise good people do questionable things. As we mentioned, the companies that sell cholesterol lowering medications earn billions of dollars each year and this fact has caused the industry to be a source of shady business practices.

I have to admit, I find it interesting that the US government spends millions of dollars each year fighting "The War on Drugs" yet they seem to turn a blind eye to some of the shady business practices of big pharmaceutical companies. The Food and Drug Administration (FDA) oversees the manufacture and distribution of pharmaceuticals, many supplements, cosmetics, food, tobacco products and a host of other things. In 2008, the FDA enacted a policy preventing scientists with financial ties to pharmaceutical, biotech and medical device companies from serving on FDA advisory committees. The creation of this policy was due to the criminal-like conflicts of interest that occurred during the previous decade.

To give you an example, many of the FDA advisors were also chairmen of pharmaceutical companies. These advisors would often favor drugs produced by the companies they chaired, which would no doubt, equal more money in their pockets. This is just one of the reasons why it was so important for the FDA to enact this policy.

A few years ago new guidelines for LDL were recommended by the National Cholesterol Education Program (CEP), a division of the government's National Heart, Lung and Blood Institute. The CEP said everyone should have an LDL of 100 or less and those at high risk for heart attack and/or stroke should have an LDL of 70 or less. These numbers also came along with recommendations for specific brands of cholesterol lowering medications the CEP thought individuals should take. The interesting thing here is the panel of judges who voted in favor of the recommendations were physicians who'd been paid consultants for or involved in the clinical trials for the recommended drugs. These physicians knew that endorsing these lower numbers meant more people would buy the drugs they represent which, in turn, meant more money in their bank accounts! I don't know about you but this sounds very suspicious to me!

The support provided to doctors for continuing medical education (CME) from pharmaceutical and medical device companies has quadrupled over the last decade. These companies spend approximately 1.2 billion annually on providing CME training. Doctors are required to obtain a certain amount of CME's each year to keep their medical licenses up to date. When these companies provide free training, it comes with the expectation the doctors will favor their company's medications or devices over another company's.

While this is true, there is some good news. Pfizer, one of the world's largest drug companies, recently stopped providing support for educational programs. Pfizer recognized industry supported programs should be phased out because they create opportunities for questionable business practices. While this is a step in the right direction, it is my belief that the Federal Trade Commission should be doing more to crack down on these big businesses.

As I said, there have been some positive changes made over the past few years, however, we're far from the promised land. This is something you should keep in mind next time your doctor tries to push a drug on you. Be an informed consumer, ask questions and do a little investigating. You might be surprised by what you find out.

SHOULD I STAY ON STATINS?

With all of this being said, I am not telling you to stop taking your medication cold turkey. Obviously, you need to consult with your doctor. What I am saying is there are other options and I believe you owe it to yourself to explore those options. One of the primary reasons I write these reports is to provide sound information so people like you can make educated decisions about their health.

You now know that the vast majority of the time high cholesterol can be reduced with diet and exercise alone and that cholesterol is not the bad guy. When it comes to fat intake the quality of the fat that you eat is the most important factor. Remember, most of Crete's population had a total cholesterol of 200 yet they recorded zero heart attacks over a 10 year period. This is because Mediterranean cultures consume high quality fats such as olive oil and omega-3s. These healthy fats help to reduce inflammation and have a positive impact on heart health. Conversely, fats like processed vegetable oils and trans fats, are deadly. French fries, potato chips and baked goods all contain trans fats. Trans-fats have well been established to be very problematic for heart health.

The fact is that you are not invincible; it is only a matter of time before your body begins to breakdown if you don't take care it. Now that you know the truth about cholesterol and cardiovascular diseases, it is time for you to start acting on it. There's a lot of variability in how one might respond to dietary cholesterol. Some respond poorly, some respond positively and some do not respond at all. If you are on a statin, talk to your doctor, find out if you have other options. With that said, even if you decide to continue taking cholesterol lowering drugs you should still clean up your diet because, as we know, cholesterol is not what can kill you. It is the inflammation that's the problem.

Interestingly, in 2004 Canada chose to eliminate the upper limit for dietary cholesterol due to the overwhelming amount of research showing saturated and trans fats are the primary determinants of LDL in the blood not dietary cholesterol. So again we see that dietary cholesterol itself it not the problem.

EGGS AND DIETARY CHOLESTEROL

Speaking of dietary cholesterol, it is important to point out that 75% of the cholesterol found in our blood is produced in the liver while less than 25% comes from our diet. The truth is dietary cholesterol has very little impact on the amount of cholesterol in the body.

I can't tell you how frustrated I get when I am at a restaurant and I overhear someone ordering egg whites. Most people think that because egg yolks contain fat and cholesterol, they are unhealthy, but this simply is not true. I personally have only seen two studies that found a correlation with eating six or more eggs per week and risk for heart attacks. These results, however, did not account for other risk factors such as diabetes. This is significant because, as you know, high insulin levels cause high triglyceride levels. The Framingham study, one of the largest and longest running studies ever conducted, looked at the effect of eating six or more eggs per week on heart disease. The researchers found no correlation between the two. Furthermore, a 20 year follow up of participants from the Physician's Health Study, found no correlation between heart disease and eating as many as 7 eggs per week.

With all of that being said, there is a small percentage of the population who are "hyper-responders." These people have a stronger response to dietary cholesterol than others. In these individuals, egg consumption can cause a modest increase in LDL and HDL. But again, for the vast majority, eggs will not have a negative impact on blood cholesterol levels. Not only are egg yolks a good source of cholesterol, they also contain all the vitamins and minerals. While the egg whites do contain five grams of protein per serving, you don't want to miss out on all those amazing nutrients in the yolk.

When it comes to eating eggs, the only thing you should worry about is their quality. Instead of asking for egg whites when you go to a restaurant, you should ask, "Are these eggs organic or from cage free or free range chickens?" You want to know what conditions the eggs were raised in and whether or not the chickens were pumped full of hormones and antibiotics. Just get a good, organic, free run chicken egg and you will be home free, with no problems.

8 WAYS TO CONTROL YOUR CHOLESTEROL NATURALLY

As a holistic nutritionist I can guarantee if you follow these 8 recommendations, you will get your cholesterol levels into the normal range. I have personally seen people's cholesterol go from the high 300's to the 175's within a few short weeks. As a matter of fact, even if you just decrease LDL cholesterol by 1% you will decrease your chance of cardiovascular disease by 2-3% and if you increase your HDL by just one milligram per deciliter, will also decrease your chance of cardiovascular disease by 2-3%. This just proves that if you eat well and you exercise regularly, you will be on your way to preventing cardiovascular disease.

1. Get and stay lean!

- Being overweight or obese increases blood cholesterol. If you drop your body weight, you will have less cholesterol in your blood.

2. Eat at least 10 servings of vegetables and fruit per day.

- To have the most impact on your cholesterol levels, 90% of your food intake should be from vegetables, fruits, beans, non-glutinous whole grains, nuts, and seeds. While you can have some animal proteins, the more plant based your diet is the more impact it will have on your numbers.

3. Eat one cup of non-glutinous whole grains or legumes per day (optional).

- Due to its fiber content, eating one cup of non-glutinous whole grains or legumes per day is associated with a 15% to 20% reduction in premature death from ALL causes. Studies have shown those who consume 6 or more serving s of whole grains per week have less plaque in their arteries than those who do not.

- Examples of non-glutinous grains are: quinoa, amaranth, millet, and buckwheat.

4. Eat approximately 1/3rd cup of nuts and seeds per day.

- Examples: Almonds, walnuts and pumpkin seeds.

5. Eat or supplement with omega-3s.

- Eating fatty fish or supplementing with fish oil is one of the most important things you can do. Omega-3 fatty acids reduce inflammation and blood pressure. One note of caution, if you are on a blood thinning medication, check with your doctor before taking an omega-3 supplement because it can lead to bleeding and clotting issues.

6. Exercise!

- I am talking about huffing and puffing and sweating for at least 3 to 5 hours per week. Exercise is one of the few ways to increase HDL. If you have any cardiovascular issues, check with your doctor before starting an exercise program.

7. Spice up your meals.

- Use spices like ginger, garlic, and circumin. Ginger increases circulation, circumin can block cholesterol uptake in the gut and garlic is anti-inflammatory. All good stuff!

8. Limit your meat, processed foods, trans-fats, and dairy consumption.

- All of the items mentioned above have a negative affect on cholesterol. If you do eat meat, make sure it is high quality. You are better off having one organic grass fed steak than 3 or 4 poor quality steaks and if you are drinking cow's milk, switch over to almond or rice milk.

The great thing about these 8 steps is that almost any disease can benefit from them. I often say, "How you heal anything is how you heal everything."

When it comes to cholesterol management, our number 1 goal is to prevent arterial damage. Smoking, toxicity, rancid poor quality fats, and high amounts of sugar not only raise your cholesterol levels, they also damage the inside of the arteries. These 4 things cause more damage than any type of dietary cholesterol. Put it this way, eating 20 eggs per day will have less of an impact on your cholesterol than eating refined sugar, smoking, or living in a toxic environment will.

SUPPLEMENTS

1. Red rice yeast extract

- Like statins, red rice yeast extract prevents the HNG-co-a reductace pathway. Taking 600-1,200 milligrams twice per day with food, along with diet and exercise can help you control your cholesterol naturally. As always check with your doctor before taking this supplement or changing your prescribed regimen.

2. Omega-3 oils

- You should take between 1 to 4 grams of omega-3 on a daily basis. I personally take about 4 tablespoons per day. Omega-3's are anti-inflammatory and anti-clotting. As I said before, if you are on a blood thinning medication, check with your doctor before you begin supplementing with omega-3's.

3. Niacin (Vitamin B3)

- Niacin can decrease LDL and increase HDL. Keep in mind, because niacin is a vasodilator it can cause flushing around your nose and cheeks. This can be decreased by taking it with food or with a small dose of aspirin. 500 to 2,000 milligrams per day with food is recommended, do not take more than this because it can cause liver stress and toxicity.

4. L-Carnitine

- L-carnitine can help control LDL and has also been shown to help in fat burning. 1 gram 2 times per day can be helpful.

SUMMING UP

To sum things up, LDL cholesterol is not the bad guy it has been portrayed to be for so many years. VLDL, which carry the triglycerides are a much bigger problem. Dietary cholesterol has very little impact on cholesterol levels, so rather than worrying about how much cholesterol you eat, worry about the quality of your food. Cholesterol lowering drugs can reduce your cholesterol, but the question you should ask yourself is, "Do the benefits outweigh the costs?"

Now that you know the truth about cholesterol, it's time to decide what you are going to do with your new found knowledge. The choice is up to you.

ABOUT YURI ELKAIM, BPHE, CK, RHN

Coined the "No BS" nutritionist and inspiring fitness expert, Yuri has helped more than 100,000 people worldwide lose weight, get in great shape, eat healthier, and have a much better understanding of their health.

He's a Registered Holistic Nutritionist, Certified Kinesiologist, a High Honours graduate in Physical Education and Health, and a former professional soccer player.

He is the owner of Total Wellness Consulting, the professor of Super Nutrition Academy, the author of Eating for Energy and the Total Wellness Cleanse, and the creator of more than 130 workout programs, including Fitter U and Treadmill Trainer.

For the 7 seasons, Yuri's also acted as the head strength & conditioning and nutrition coach for the men's soccer program at the University of Toronto.

Yuri and his programs been featured across the nation's media including Breakfast Television, Perfect Fit, A-Channel Morning, CTV news, e-Talk Daily, Global News. He's also a frequent contributor to numerous magazines including Maximum Fitness, VIVA, Impact magazine, Wish, and Fitness Business Canada - just to name a few.

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