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Cholesterol

Hi, I think cholesterol's role in health and longevity is very important but unfortunately it's really misunderstood by most people. I want to start this video by telling you right now that the decisions you make concerning cholesterol could have fatal consequences. Cholesterol matters and it matters a lot.

But look, I get it. I watch all those same you tube videos as you do and I hear some people, some of them who seem sincere, and they say things like cholesterol does not matter, high cholesterol is ok and that it does not cause heart disease or stroke. I mean I watched one video where the presenter said cholesterol numbers as high as 400 or 500 are ok, and you don't need to worry. In fact he said these higher cholesterol numbers equate to a healthier person, specifically he said a much higher sex drive... wow! I have to admit, it's all very entertaining and influential. I mean who does not want all that, right? So because I am a nerd it made me go back and restudy cholesterol because I thought I may have missed something, but more on that later.

For right now let's defocus on the controversy and instead let's have a clinical discussion, because that is what I understand, and what I have experience with. I am a clinician and not a scientist, so all my experience and opinions are based on what I see happen to my patients, and myself (because I am also my own patient?... that sounds a bit weird?). But ya that's what I have to offer you and that's what I am bringing to the video today. This is a cholesterol deep dive, Plus as an added bonus I am going to include my own blood results that I got from testing out some of these theories.

So If you have been told that you have high cholesterol, or you are thinking about taking a statin medicine or maybe you are already taking one, or perhaps you are interested in preventing heart disease and stroke and promoting health and longevity, then you are the person I made this video for.

Why Cholesterol Matters

Cholesterol is a waxy, fat-like substance found in every cell of the body and it's crucial for building cell membranes, it produces certain hormones like cortisol, estrogen, testosterone, and even less common ones like Vitamin D. Also it may surprise you to learn that cholesterol has a pivotal role in bile production, which helps us digest fats. Hmmm.

Now something else I want you understand, is that our bodies produce cholesterol naturally, I mean, yes, it's also found in certain foods like that double cheeseburger but we actually get very little cholesterol from dietary sources. We make most of the cholesterol we need, it comes from our liver and not our diet. Look, If you eat only 200 to 300 milligrams (mg) of cholesterol a day

(one egg yolk has about 200 mg), then your liver will produce an additional 800 milligrams per day from raw materials such as fat, sugars, and proteins to make up the difference. That should tell you cholesterol must be pretty important, and it is.

But since cholesterol is a fat, it can't travel alone in the bloodstream because it would just end up as useless globs (imagine bacon fat floating in a pot of water) To get around this problem, the body packages cholesterol into protein-covered particles that mix easily with the blood. These tiny particles, called lipoproteins (lipid plus protein), move cholesterol throughout the body. The ones that transport cholesterol from the liver to the body are called Low-density lipoproteins (LDL's) and the carriers that transport the cholesterol from the body back to the liver are called High-density lipoproteins (HDL's). Most of us are familiar with these two terms LDL's and HDL's, but just realize, they are not different cholesterols, same cholesterol just a different packaging that the cholesterol is transported in.

So like I mentioned most of our Cholesterol is made in the liver, and used for many body functions but I think the most useful purpose of cholesterol is its role in helping repair the linings of our blood vessels. By the way this lining is almost like a teflon coating, that is the best way to picture it and Yes, cholesterol actual helps repair and heal that lining. Let's go deeper here because this is where the misinformation starts.

We can start by look at how the body responds to vascular injury? Ok so first you need to know that your blood vessels have a teflon like coating on their surface and this allows fluids to glide effortlessly through the vascular system but this surface can get disrupted by some specific events. And I want you to pay close attention to these because essentially what I am giving you is the causes of heart disease, stroke and atherosclerosis.

Ready? Alright, well no surprise that smoking and drinking are top contenders, so just stop that. There is a push to suggest moderate alcohol is ok, but it's not. Next eating too much sugar is another big one and we'll tackle diet in a minute, but if you are diabetic or have blood sugar challenges you already know that you are higher risk for cardiovascular diseases and it's because sugar injures the blood vessels.

The next thing that causes those blood vessels to injure is, specifically stress hormones. These are the nasty chemicals released into the blood when you are all pumped up and wild and these will also break down the important lining. Stress hormones are like scraping a metal knife across a teflon coated frying pan, It scratches the lining just like it tears and injures our blood vessels. But I think the darkest threat is Gly-pho-sate, this is a broad-spectrum herbicide widely used to kill weeds, and you know it under the brand name Roundup. You can go to pubmed.gov and read the studies yourself and decide if this chemical is a problem or not. There is some very creative science involved in this product, for example studies show it is harmless to human cells... but they do not tell you it kills all our micro biome bacteria, and so on it goes and each person will make up their own mind.

But be aware that you maybe exposed to Glyphosate not just in your in food and drinking water but also from your pets, and even your children. If they play outside in commercial parks and

public areas that are maintained with weed killer, they are getting dosed. My father's little dog Hannah rolls around in the grass by his condo which looks like a putting green and she has a skin problem and also heart disease. Is it related... I don't know but sometimes when I pick her up I get a skin rash all over my arms.

Ok so if you noticed, nowhere in my list of things that injure the blood vessels did I mention cholesterol? That's because cholesterol is involved in the injury process but it's not a cause. Let's look at how the body heals this injuries and cholesterol's role in that process.

So first once the injury has occurred the liver starts to shuttle cholesterol in LDL carriers to the injury site. and with that we get a massive release of anti inflammatory agents that flood the system and start to heal the damage. Think of the Cholesterol as our first responders to the scene of the accident. Upon encountering an area of injury the LDL traverses the vessels surface, and delivers it's healing electrons. Ideally this event resolves the problem and then the cholesterol is returned to the liver by the HDL carriers to be recycled.

I mean this is the ideal outcome, But if the injury is excessive and there is a lot of surface damage to the vessel wall, the immune system will get signaled to come in and help clean up the mess. I give a much more detailed explanation of how this happens in my videos on arthritis but essentially if the damage is not resolved quickly these White blood cells end up staying too long, and they age and they become something called a foam cell.

Foam cells are a problem and they can release inflammatory chemicals which signals even more LDL's to the injury and now it becomes a chronic inflammatory cycle. Worse yet when these foam cells die and explode they release all that toxic mess into surrounding health tissues and the problem starts to spread.

This is the basis of many chronic diseases and what happens to an arthritic joint as it degenerates and enlarges. So to as the blood vessel wall fills up with foam cells it starts to thicken and become less effective as a blood vessel which needs to be flexible. So it is from this mechanism that we finally see the demonic plaque emerging. This is how our arteries get clogged.

It's pretty gross right?

So look, now you know that cholesterol is actually our friend I mean it's just trying to do it's job and then the big bad immune system comes in and starts making friggin foam cells... and dropping all that plaque.

Specific Recommendations

What the heck are we going to do? Ok First... stop the things that are damaging the blood vessels. So stop smoking, stop drinking alcohol, and reduce exposure to gly-pho-sate, let's discuss this a minute... buy organic food and be careful around commercial lawns, if you have

an animal they will pick up these chemicals and transfer them to you, so be careful. If you feel that you have been poisoned with this chemical reach out to me and I will recommend a protocol to help remove it from your system. It has a tendency to store in your body fat and must be eliminated carefully.

And on this topic let's talk about diet. Don't worry about cholesterol, like I said it is not the enemy but worry about the chemicals in the food and also limit the saturated fats found in animal foods.

Oh some of you don't like that do you? But look here, saturated fats contribute to these foam cells being made. Na in studies, it only happened with saturated fats from animal sources not plants. Saturated animal fats have other negative health impacts associated with them so try to eat less and if you are really serious about dropping your numbers, eat a vegan diet. Again, if you are serious and you want to see serious results, I challenge you to cut out saturated animal fats for 30 days, and if you do, your numbers are going to drop like stones. BTW that is what I did, and I am including my exact diet in the show notes. And here's something else great, fiber is a major player in helping your body eliminate that saturated fat. If you can get your fiber intake up your health risk for cardiovascular disease is going to go down. Get 20 or 30 grams a fiber a day. This is why we hear things like oatmeal is good for your heart, it's the fiber, ...man it's the fiber. Again diet in the show notes for anyone who wants to follow me down the rabbit hole.

Also another big surprise is to Exercise daily. We need to get into what is called phase 2 cardio, so you can do this by going for a brisk walk and pushing yourself to a comfortable level where you can still carry on a conversation. This ends up being around 60% of your maximum heart rate. Which is your age minus 220 and then take 60% of that number. For me at 54 years old I am getting my heart rate up to around 100 BPM while walking, not difficult, certainly not a marathon but good for keeping my blood vessel injury down and subsequently keeping my cholesterol numbers low.

and reduce your stress... this is serious stuff, no really, get a therapist, start meditating, do some breath work, go to church... whatever it takes but do the work here. If you need extra help watch my other videos on stress, and take some Valerian Complex, <https://drstephenstokes.standardprocess.com/products/valerian-complex> to help train the nervous system on how it needs to react. Since your entire body is controlled by the autonomic nervous system, it is helpful to understand how that works and help regulate it with anti stress techniques.

Finally, there are some supplements that can help, as with most of my recommendations start with a 2 week supply and see how you respond, if they agree with you then complete a 3 month cycle for maximum benefits.

Garlic Forte (2), Coated acid resistant, because acid inhibits the effect of allinase enzyme. lowers blood lipids, coronary artery disease, atherosclerosis, hypertension, peripheral circulation, bowel flora modification, respiratory tract congestion, reduction of heavy metal

burden. 2 a day for 2 months 18% reduction in LDL's. <https://drstephenstokes.standardprocess.com/products/garlic-forte>

LivTon Complex (3): Digestive capacity of the liver, bile production, constipation <https://drstephenstokes.standardprocess.com/products/livton-complex>

Statins

Statins work at lowering cholesterol, no one questions this relationship. But they do something else we'd rather avoid in our lives: they poison our mitochondria, these are the cellular components responsible for energy production in our bodies. This is why muscle pain is the number one side effect; it feels like you've just run a marathon and your muscles are aching. Interestingly, even in patients with no muscle pain and normal muscle enzyme tests, biopsy studies have shown that everyone taking statins experiences muscle damage. Statins can impede our energy production ability and disrupt the pathway responsible for producing some sex hormones, as sex hormones are derived from cholesterol. This could lead to low hormone levels, such as progesterone and testosterone. Low testosterone levels are becoming increasingly common. Moreover, statins might elevate the risk of mild cognitive impairment or cognitive dysfunction.

I want to emphasize that I'm not stating statins are unsuitable for some individuals. What I'm suggesting is that you need to be informed about what questions to ask your doctor and what additional tests to undergo before considering any statin therapy. Familiarize yourself with your body, know your risk factors, understand your numbers, and make an informed decision with your doctor. Regardless of whether or not you decide on statin therapy, you still need to reduce the things causing your liver to make all that cholesterol, you still need to stop the injuries to the blood vessels.

Your Numbers

So we talk about lowering your cholesterol numbers but we are also saying that cholesterol is not the problem... it maybe confusing but it is very simple. We can use the cholesterol numbers as a metric to indicate the health of our blood vessels. There are many detailed tests you can do these days such as the NMR test, and yes that is excellent because it will give you extra information like the size of the cholesterol particles but I want to keep things very simple. In fact in over 20 years of helping people prevent heart disease and stroke, I have never had to go beyond a simple Labcorp lipid panel. This only costs \$15.

Here is what I want you to consider. Try and get your LDL number below 100, and your HDL number above 40. You want your triglycerides under 100 and ideally under 75 and finally divide your triglycerides by your HDL number and set a goal of having that at 2 or less.

If your HDL number is below 40 I would increase healthy fats in my diet and also supplement with flaxseed oil (1 with each meal) and this will bump up your HDL numbers and improve your ratios.

<https://drstephenstokes.standardprocess.com/products/flax-oil-with-b6>

Of course there is more to it, of course I care about particular size and by the way if you want the deep dive on all this download my free book on my website on Cholesterol, it has all the nerdy stuff and references you may like, but for now just focus on these numbers and commit to doing the few things I mentioned.

My Results

I have an extra for you, if you have stayed with me this long, let me share something personal with you. I am always experimenting with my health, trying to optimize the balance between performance and longevity, which I believe are inversely related, more on this can be found in my book, but I spent a year eating a high fat low carb high protein diet and in the end it was not for me. Many reasons for this, but mainly I just don't care for the food choices. I did notice that my Cholesterol dramatically increased while I was on this diet, and I did not like the potential for future heart disease and stroke that I knew came with those metrics.

Followed my own advice and dropped my LDL numbers from 160 to 82. So ya this works, and works without any statin drugs. I think that statins can be useful short term if you are not able to make the lifestyle changes but let's be honest, we know there are always side effects to taking medications and artificially altering the body's innate functions.

My Current Diet

I am up at 7am and drink a cup of black organic coffee, while I check emails and mess around. At 8am I do 20 minutes of isometric exercise followed by a 20 minute infrared sauna. Next I take a quick jump in the pool to cool off. I follow with my first meal of the day, a 1/2 cup of Ezekiel cereal, with a small bit of organic soy milk, 2 pieces of silver farms toast with organic raw almond butter and organic strawberry jam, and finally a chocolate organic pea protein shake (TruVani) with 12 oz of organic soy milk. This entire meal provides me with the following metrics, 52 grams of protein, 22 grams of fat, 87 grams of carbs, 24 grams of fiber and 680 total calories. I am 54 years old and my metabolism burns about 1850 calories a day. This is my favorite meal of the day and it tastes great. I will sometimes switch out for oatmeal or buckwheat cereal but basically I this everyday.

Lunch is a big salad with 1/2 cup of pressure cooked beans. Edens, usually chickpeas, lentils or navy beans. The salad will have arugula, bib lettuce, radish, broccoli sprouts, some apple with peel attached, a vinegar and olive oil dressing that I make (very light on the oil), sometimes I add fermented kraut, carrots, and avocado. If available I add in a tomato. Everything is organic. At this meal I also have another cup of coffee and take a few supplements (B12, K2, D3, Tongkat Ali, I eat a few Brazil nuts, and walnuts but may add them into the salad and I will sometimes make a cold brew of Hibiscus tea (organic). Afternoon around 3:00pm I eat a snack, sometimes another protein shake or smoothie, sometimes its organic celery with raw almond butter or sometimes its a piece of dark chocolate (organic, sourced). Then I do a light workout, usually a bit of resistance training, or I will take a 20 minute walk or do a 20 minute pool routine. But 20 minutes is the time frame.

Dinner is usually pasta and tofu (organic everything), or Tempeh or a bean dish. It varies. If I am out with friends I will cheat and eat what ever I can that is the closest to a vegan selection BUT I will not draw attention to myself. If in a pickle I will eat some shrimp, or fish, or even some veggie pizza, or an Italian dish with eggplant. In other words, I will not make others including the restaurant feel uncomfortable BUT in my home there is no animal products, no dairy and no processed foods. I do not drink any alcohol.

After dinner I brush my teeth and signal my body food is now over until tomorrow. I will do work or social activities until around 10pm when I start my night routine. Wash up, change into my bed clothes, and I do an hour of meditation (this is a long story, maybe I will expand on in the future). In total I strive for around 2000-2200 calories a day. I weight 174 lbs. I was 194 lbs. I am making a video on my daily routine, how I organize my work with my healthcare. By the way I work full time in Real Estate and in Medicine, so it is not like I have all day to sit around and just exercise or cook. This diet has so far been the one I enjoy the most and my blood test numbers seem to agree. The only irritation is that there is a lot of gas and cramping when I over do it on the fiber, however I seem to becoming better at processing it.

EPHATHA!

Steve