

## HHM - 9 It's Time to Let Saturated Fat Out of Jail

# HOLISTIC HEALTH MATTERS

WITH:

*Dave  
Sandstrom, ND*



David Sandstrom 0:04

Welcome to the Holistic Health Matters podcast where it's all about maximizing your health potential in body, mind and spirit, so that you can pursue the abundant life more effectively. I'm your host, David Sandstrom, naturopathic doctor and biblical health coach. And this is episode number nine.

David Sandstrom 0:27

In this episode, we're gonna debunk probably the biggest myth in nutritional science history. In the last

episode, I talked about the number one rule for healthy eating, which is eat food as close to its God given natural form as possible. In that episode, I recommended that you eat red meat and consume whole fat dairy, while when you milk a cow, the cow's milk comes out whole fat, and that's as close to its God given natural form as it can be. And when we consume red meat, like Beef, bison or lamb that animals should be fed its natural diet. And when it is that meat is as healthy as it can be for us. After producing that episode, it occurred to me that some people might be saying, what rock has this guy been living under? I mean, the American Heart Association, the USDA, the FDA, the Centers for Disease Control, the World Health Organization, Harvard health, they all recommended a diet low in saturated fat. So Dave, are you saying that all of these organizations are wrong and you're right? Yes, that's exactly what I'm saying. And I'm not the only one saying it. We need to replace the term artery clogging saturated fat. With healthy saturated fat. It's time to let saturated fat out of jail. The trial was a sham. It was wrongly convicted. And it's time for a pardon. In this episode I'm going to give you some convincing evidence that that is the case. So this idea that since saturated fat raises LDL cholesterol, it leads to heart disease is referred to as the lipid hypothesis. Over the last several decades, it's become dogma in the medical community, it almost sounds like heresy to suggest something different. Well, it's worth asking the question, how is it or why is it that the medical community is holding on so tight to this hypothesis? And by the

way, the lipid hypothesis is just that it's always been hypothesis, and over the last 20 years or so, it has been thoroughly debunked. But most experts are ignoring the evidence.

Unknown Speaker 2:45  
Why is that? So?

David Sandstrom 2:46

One of the reasons is, there's a lot of money to be made by lowering people's cholesterol with drugs. Lipitor, the cholesterol lowering drug that hit the market in 1992 is easily the best selling drug of all time in 2017, revenue for Lipitor totaled \$95 billion. And that was three years ago. So I'm sure by now it's surpassed \$100 billion. I would suggest that there's about 100 billion reasons to perpetuate the lipid hypothesis myth. The second reason is that treating heart disease risk like high cholesterol with a pharmaceutical fits the traditional medical approach to healthcare. In Episode One, I talked about the traditional medical approach to health care versus the naturopathic approach. In traditional medicine. They treat the illness that has the person with nature, apathy, we treat the person that has the illness, and that's there's a very different approach to the style of healthcare. So if you haven't listened to Episode One, I recommend that after this episode, you go back and listen to that one because it's very informative. pharmaceutical companies have taken a risk factor for heart disease, which is high cholesterol, and turned it into a disease, and they've made a lot of money off of it, statin drugs do lower LDL cholesterol. But as we're going to see, those reductions don't amount to a significant reduction in your risk for heart disease. But the medical community in large part is still ignoring the evidence that supports that conclusion. It's like they're sticking their fingers in their ear and going La La, la, la, la la. And they just don't want to hear it because they're very comfortable with the model they've embraced. Another reason that this information that I'm about to share with you is not widespread is the news media is very reluctant to report potentially derogatory information towards a pharmaceutical drug because pharmaceutical companies spend a lot of money on TV ads, I mean, just turn on primetime television, and you'll see, you know, probably close to something like half the ads you see are from drug companies. So why would a network television station bite the hand that feeds them?

David Sandstrom 5:02

Alright, so I'd like to explain and give you a little bit of background. Now biochemistry can be a little complicated, but I'd like to give you some basics to demystify this concept a little bit. So I'm going to give you an I'm going to break this down and give you some need to know information. All fats are combinations of omega six, three, and nine, and saturated, mono and polyunsaturated fatty acids. polyunsaturated fatty acids found in vegetable oils are often referred to as PUFAs, Pufa for short. Fatty Acid molecules are made up of carbon and hydrogen atoms bonded together by either a single or a double chemical bond. Chemical diagrams look a lot like a train where the atoms are like the cars in a train linked together with a Caboose on the end. Now omega means end so chemically speaking, omega means the end of the train or the caboose if you will in the molecular chain. Omega three refers to the position of the final double bond in the chemical structure, which is three carbon atoms from the omega or tail end or the caboose of the molecular chain with omega three fatty acids, the last double bond is the third carbon atom from the end position. With omega six, the last double bond is in the sixth position and omega nine, it's in the ninth position. With a saturated fat, all the carbon atoms are attached to hydrogen atoms with a single bond. The potential second bond is broken and therefore, each carbon atom is saturated with a hydrogen atom by being attached with a single bond. Being bonded this way this chemical structure makes saturated fat solid at room temperatures. Examples of saturated fat include beef fat, which is referred to as tallow, pork fat is lard, butter, coconut oil, palm oil, cacao butter are all made up of primarily saturated fat. Now there are mono unsaturated fats. mono stands for one so that that fatty acid has a single double bond. And there's poly unsaturated fat. poly stands for many So, a polyunsaturated fat has more than one double bond. poly unsaturated fats or pufas are primarily found in vegetable oils, oil such as soybean oil, corn oil, cottonseed oil, canola oil, safflower and sunflower oil. These types of omega six fatty acids are abundant in processed foods, therefore, most people consume way too much of it. Now, all fats are useful for the body. We have omega three six and nines and mono poly unsaturated and saturated fat. The body uses all of them and it needs all of them. But it's important to consume fats and the proper ratio. Most people consume far too many omega six fats and not enough omega threes. So that's why a number of lots of studies show that people can benefit from increasing their intake of omega three fatty acids.

David Sandstrom 8:26

Now here in this episode, what we really want to do is focus in on saturated fat. So I want to give you a little bit of history. The USDA United States Department of Agriculture first started giving nutritional advice in 1894. They called it the Farmers Bulletin. Then in 1943, they came up with the basic seven they had seven food groups back then. And then in 1956, most of us have heard of the four food groups and then in 1992, the US came out with their famous food pyramid. And the food pyramid was very misguided from the beginning and they told us all to bulk up on our grains and to limit our fats and oils. This advice was very misguided. In 2005, they updated the food pyramid to a stair climbing graph. And they had, it looked a little bit like a pyramid but they had little slivers of the pyramid for the various food groups, and they still dedicated a very tiny sliver for fats and oils. Now, the latest USDA guidelines are published in the Dietary Guidelines for Americans eighth edition, and it's to cover the timeframe from 2015 to this year 2020. In this document, they have lots of pretty pictures of smiling families feeding their kids skinless white meat, chicken and salads. In this document there which is their current recommendations, they're still recommending plenty of grain, that we limit our saturated fat intake, and they talk about saturated fat in the same context as sugar or sodium, something that needs to be avoided because it's artery clogging saturated fat. Is this advice working? Well, let's have a look.

David Sandstrom 10:19

Rates of chronic conditions like heart disease, asthma, cancer and diabetes have grown 700% since 1935. Today, six in 10, Americans have a chronic disease. Now every time I make a reference like this, I'm going to include a link to the article in the show notes. So if you want to do some further research on your own, after you listen to this, go to my website [DavidSandstrom.com](http://DavidSandstrom.com) On this episode, and you'll find links to all these articles I'm referencing. In 1935. Seven and a half percent of the population had a chronic disease in 2020 60% Have a chronic disease. Now we have to remember, when the government institutionalizes advice. It's generally followed the American Heart Association, Harvard health news and USDA all say we're eating healthier. The USDA has a healthy eating index score. And in 1999, it was 49. And in 2015, it was 59. So, according to all these respected organizations, we are eating healthier, we have taken their advice, were smoking less. In 1965 42% of American adults were smokers in 2018 14% are smokers. So that's gone down quite a bit. Were exercising more. Yet obesity is on the rise. Obesity is a major

contributor to chronic disease. In 1975 12% of Americans were obese and in 2018 42% of Americans are obese. Diabetes is spiking dramatically. In 1959, less than 1% of Americans had diabetes in 2020, more than 8% have diabetes. Today, 86 million Americans are pre-diabetic. So what kind of we've listened to the nutritional advice, and what kind of shifts have we made in our eating? Well, we've moved away from consuming red meat, we switched to poultry. And we've moved away from whole fat dairy and we switched to reduced fat 1% or skim milk based products. And this is the big one. we've replaced saturated fats with more pufas or polyunsaturated fatty acids. And yet our our health is taking a dramatic turn for the worse. We've listened to the government advice. We've made the changes they've recommended. It's not working. After 50 plus years of failed nutritional advice. Maybe it's time to challenge the conventional thinking or to rethink the dogma. Maybe it's time for a fresh look at the data. The most significant change to our eating patterns is a significantly higher consumption of polyunsaturated fatty acids, PUFAs or vegetable oils. pufas prior to 1911, weren't used for food. They weren't. They weren't consumed as food. They were primarily lubricating oils for machinery. Then along came Crisco oil. And I went to Cisco's website and they Crisco was introduced in 1911. So I want to give you this quote off of their own website. "In 1911. Crisco, the first ever shortening made entirely of vegetable oil was born, clad in pristine white paper over rap, Crisco was seen as a more pure and economical alternative to animal fat and butter. Soon after our first print and radio as debuted, products flew off the shelves, the first Crisco cookbook taught Americans all of the innovative ways Crisco could be used from baking to frying. And so a cooking revolution was born." And a revolution it was. It really took off in the 40s 50s and 60s however, remember, in 1935, seven and a half percent of people had chronic disease, and in 2020 60% of Americans have chronic disease. during that timeframe, we have dramatically increased our consumption of polyunsaturated fatty acids or vegetable oils like Crisco. The data point that parallels most closely with this increase in chronic disease is the increase in pufas.

David Sandstrom 14:57

I want to give you a little Little information a little background as to how this idea this theory, this hypothesis, this lipid hypothesis came into being. In 1908, a Russian physician by the name of Ingnatowski fed rabbits a diet high in cholesterol, that included meat, milk, and eggs and those rabbits developed arterial plaque. Not long after that, our Russian experimental

pathologist by the name of Anitstacao also fed rabbits a high cholesterol diet and produced aortic atherosclerosis, similar to those seen in humans and proposed a causal role of cholesterol in atherosclerosis to hardening of the arteries. That was back in the early 20th century. According to a 2015 study published in the journal *Pharmacology and Therapeutics*, the study was entitled *Rabbit Models for the Study of Human Atherosclerosis from Pathophysiology Mechanisms to Translational Medicine*. Again, if you want to read these articles for yourself, I'll include them in the show notes. I'm going to quote a quote from this article in 2015. "Now, a consensus has been reached in this field, that in both humans and experimental animals, it is dietary cholesterol that leads to the development of atherosclerosis. In this review, we focus on the features of rabbit lipoprotein metabolism, and pathology of atherosclerotic lesions that make it the optimal model for human or atherosclerotic disease, especially for translational medicine." Let me put this in layman's terms. They use experiments on rabbits to tell doctors how to treat heart disease with statins. Does anyone see a problem here? Anyone? Anyone? Shout out to Ferris Bueller's Day Off when the kids were sitting in class with a boring instructor and he called out to the class once in a while. Anyone? Anyone? The problem is, rabbits are vegetarians. And vegetables don't contain cholesterol. A rabbit would never consume cholesterol and their natural diet. Is a rabbit therefore the "optimal model" for studying human atherosclerosis? I don't think so. Back in the 80s, when minivans were really getting popular, there was a Volkswagen dealership that was advertising locally, and it was called Gunther Volkswagen. And in that ad, they said they showed a picture of a Chrysler minivan. And they said, Lee Iacocca says he invented the minivan, and then they switched to a 1960s vintage VW van with flowers all over it. And they said, "Here at Gunther Volkswagen. we don't think so. Well, when it comes to believing that rabbits are the "ideal model" for studying heart disease in humans beings, I don't think so. I have an MBA and in business school, they teach us to use a lot of models. And in order to use a model a mathematical model, you have to put some numbers into it. And those numbers are just usually drawn up out of thin air. And if the data is flawed, the data that goes into the model, the conclusions drawn from that model will be flawed as well. You could almost excuse scientists in 1908, for making this mistake of using rabbits to study atherosclerosis. But that study that I just quoted from is from 2015.

David Sandstrom 18:41

I'm an airline pilot, and we use GPS navigation today with a moving map display in a computer screen in the cockpit and it's very good. But years ago, when I first started flying, we didn't have that kind of sophistication. We had something called an ADF which is an automatic direction finding piece of equipment and it was a round dial with a needle that pointed, and if you've ever listened to a radio the frequency there is an frequency. And just like an am radio was kind of subject to static. The same is true with the signals that we got for this navigation equipment. And it would kind of the needle would move back and forth. And we'd had that just kind of split the difference. And there was no map, the only map we had was a paper map. And we'd have to have two different radio frequencies and then draw a line on two lines on a map to pinpoint our position. Sometimes we did it physically and sometimes we just did it mentally, but it was very cumbersome process. Today, we have GPS navigation with very sophisticated computer displays. And the ability to recognize where we're at where we're going is a lot easier today. So I would suggest that the same is true. With this nutritional science. We have so much more so many more data points today to draw from that we can draw much better conclusions than they did in the early 20th century. So how did this research on rabbits in the early 20th century become dogma in the medical community? In 1955, President Dwight Eisenhower had heart attack, and he was hospitalized for 10 days, while the nation watched in with anxiety, wondering what was going to happen in that year in 1955, nearly half of all deaths in the United States were due to heart disease. Many of the victims were a seemingly healthy men struck down in the prime of their life by a heart attack. Nina Teicholz, author of The New York Times best selling book, The Big Fat surprise says this. "There was an enormous fear overtaking the country. The heart disease epidemic seemed to be emerging out of nowhere." But along came Ancel Keys and he is largely responsible for the liquid hypothesis. He was an imperious physiologist and researcher and he had a very strong, influential personality. In the research community, he was the Tony Robbins of his day. He had a lot of influence. And with a religious fervor, he recruited lots of followers. Now, Keys theorized that saturated fat raises LDL cholesterol. And this LDL cholesterol was responsible for plaque formation in the arteries, which lead to heart disease. This seems to make sense it sounds logical at first glance. The trouble is, the scientific evidence doesn't support the theory. At that time back in the mid 50s, it also fit the low calorie narrative. It was all about calories back then, in a lot of ways it still is today. Fat has more calories than the other macronutrients carbs and

protein. So reducing fat intake, reduces your caloric intake therefore it must be healthier right? That's what Keys believed, and most Americans believe that today. Keys landmark study was the seven countries study and this is the study that put him on the map. Keys showed a connection between higher consumption of saturated fat and heart disease in seven different countries. This study was conducted with a \$200,000 grant from the US Public Health Service. It started in 1956. And he published his results in 1978. But along the way, he was a very outspoken advocate for the lipid hypothesis. He argued that there was a connection between saturated fat intake and heart disease. And because he was so influential, he recruited lots of followers. The seven countries study has been referenced close to 1 million times in literature. Here's the problem, according to the President and Director of the nutrition science initiative and independent obesity Research Center referring to Keys seven countries study, Dr. Peter Attia had this to say "The study was highly flawed. It was not on the level of epidemiology work today." Keys research actually included data from 21 countries. He cherry picked his data, leaving out countries like France and West Germany that had high fat diets, but low rates of heart disease. Keys didn't practice scientific integrity. He set out to prove a hypothesis, and he ignored data to the contrary.

David Sandstrom 23:36

Challenges to the lipid hypothesis have been around for a long time. There's a very famous study called the Framingham Heart Study, and it started in 1948. And it's still ongoing. It was the first long term cohort study. That study has identified risk factors for heart disease such as high blood pressure, smoking, obesity, a lot of very good useful information. But it also uncovered something that's not so widely circulated. According to an article published in JAMA, the journal American Medical Association in July 1992, the director of the Framingham Heart Study, Dr. William Castelli said this "In Framingham, Massachusetts, the more saturated fat one eats, the more cholesterol one gets, the more calories one eats, the lower the person serum cholesterol, the opposite of what the equation is provided by Keys." And again, I'll give you a link to this data in the show notes. Today, we see that increased intake of saturated fat does raise LDL cholesterol, but not in the way we once believed. I'm going to get into that in just a minute. First, a couple more quotes from the research. There is a recent state of the art review published in June this year June of 2020 in a very respected medical journal called the Journal of the American College of Cardiology, it doesn't get more well



respected than that. The study was called Saturated Fats and Health, A Reassessment and Proposal for Food Based Recommendations. This study was a very large study, it was a meta analysis, which means a study of studies that covered millions of people over several decades on multiple continents. So very, very large, well documented study. The highlight section of this study has this to say, quote, "Several foods relatively rich and saturated fatty acids, such as whole fat dairy, dark chocolate, and unprocessed meat are not associated with increased cardiovascular disease or diabetes risk. There is no robust evidence that current population wide, arbitrary upper limits on saturated fat consumption in the United States will prevent cardiovascular disease or reduce mortality." That's quite Quote, also included in this paper is this quote. "Furthermore, in a newly published study of 195,000 participants from the UK Biobank, who were followed for up to 10.6 years, there was no evidence that saturated fat intake was associated with incident cardiovascular disease. In contrast, the substitution of poly unsaturated for saturated fat was associated with higher cardiovascular disease risk." Now, this is not from some obscure journal like Tree Hugger Science Today. This is from the American College of Cardiology, and it's signed by 10 well respected authors, people from places like the Department of nutritional sciences and toxicology, University of California Berkeley, Human Nutrition Research Center of aging at Tufts University, Boston, Massachusetts. These are well respected individuals from Well Respected institutions and the study was published in a well respected medical journal. Again, I'm going to provide links to this stuff in the show notes. If you want to have a look for yourself, I'm not making this stuff up. Hopefully, the advice contained in this report will be taken to heart by the USDA when they come up with their next generation of nutritional guidelines for 2021 and beyond. One day, this information is going to be mainstream. I want you to remember that you heard it here first. I didn't make this information up. I'm simply a curator. So I know this is turning into a bit of a masterclass. I'm not going to include a masterclass summary with this this episode. But if you want to read up on this stuff on your own, you can go to my website and go to the show notes and click on the links.

David Sandstrom 27:48

This report that I've been referencing points to a very significant clarification when it comes to LDL cholesterol. What I'm about to share with you is really huge news and it's worth the price of admission for this episode right here. Saturated fat intake does raise LDL cholesterol. But

this doesn't result in increased cardiovascular disease. That is true because we've been looking at cholesterol the wrong way. The medical community has been focused on total cholesterol or maybe the HDL to LDL ratio. The problem is, that's not even the whole story. We've got to consider the LDL particles. This report that I've been referring to talks about a subclass of LDL. That is also explained quite well in a well written Time Magazine article called Eat Butter. Scientists Labeled Fat the Enemy Why They Were Wrong. Again, there'll be links in the show notes to all these articles if you care to look at them. Dr. Ronald cross a cardiologist and researcher who had done pioneering work on LD cholesterol, referring to these LDL particles he had this to say. "Those observations led me to wonder how strong the evidence was for the connection between saturated fat and heart disease. There's a risk that people have been steered in the wrong direction by using LDL cholesterol, rather than LDL particles as a risk factor." In that same time magazine article, Dr. Robert Lustig, a pediatrician at the University of California, San Francisco and the president of the Institute for Responsible Nutrition had this to say "The argument against fat was totally and completely flawed." Now I want to talk about this, this distinction of these LDL particles a little bit Now be sure we're going to be dedicating a whole episode down the road to cholesterol, but I want to give you a little background here because you've got to understand this and connection to the lipid hypothesis.

David Sandstrom 29:55

Cholesterol is an essential nutrient and it's good for health. Life itself would be impossible without it. It's a cellular repair protein that is used to combat inflammation. It's manufactured in liver, and it's delivered to various sites in the body. Our creator didn't leave it to chance that we would get enough in our diets. So our bodies make cholesterol in the liver. That's why changing your dietary cholesterol intake doesn't alter your total cholesterol numbers very much because when consumption goes down, liver production in the body goes up, keeping your cholesterol more or less stable. It's a very important protein in our bodies, and it's it's critical for the production of the sex hormones testosterone and progesterone. It's also used for making important steroids that the body needs to function. Not only that, the organ that requires the most cholesterol to function properly is our brains. Cholesterol cannot dissolve in the blood. So By itself, it cannot get from the liver where it's made to the cells that require it. It needs a transporter. That's where LDL and HDL come in. LDL and HDL are not cholesterol, their lipoproteins. LDL is low density lipoprotein. HDL

is high density lipoprotein. LDL transports cholesterol from the liver to various locations in the body to the cells that need it. LDL is like a taxicab that's packed full of people making its way around town, dropping people off where they need to go. That's why LDL is called the bad cholesterol because it can potentially deposit plaque that is rich in cholesterol in our arteries. HDL, on the other hand, transports cholesterol from the cells back to the liver, where it is prepared for removal from the body. HDL is again, like a taxi cab full of people that are all going to the same place. In this case, the destination is the liver. And from the liver, it will be the extra cholesterol will be removed and eliminated from the body. That's why HDL is called the good cholesterol. So we've been told that it's the HDL to LDL ratio is what really matters.

David Sandstrom 32:22

But there's more to this story. It's kind of like the movie my cousin Vinnie. Remember, the two kids were accused of murdering the clerk at the grocery store. And the trial wasn't going so well. And it's looking pretty bad for these kids that look like they were going to jail at the last minute Vinnie's girlfriend gives a devastating testimony and she says that the tire tracks that the prosecution is using to base their case on could not have been made by their car because their car was positraction rear end and this one wasn't. And it was devastating to the prosecution, and the judge simply says okay, case dismissed. Well, it's kind of like saturated fat and the liquid hypothesis is on trial. Then along comes some evidence that changes everything. And here's that evidence. In 2017, a study published in the journal, Oxidative Medicine and Cellular Longevity. It talks about two subclasses of LDL, that are critically important to understand the effects cholesterol has on heart disease. This article is loaded with major truth bombs that you won't hear in the mainstream media or your doctor's office for that matter. These subclasses of LDL, remember LDL is a low density lipoprotein. We now know that there are two subclasses within the LDL protein. One is called Apolipoprotein A, and the other is called Apolipoprotein B. That's kind of a mouthful, so we'll just shorten them up to what most people use is APO-A, and APO-B, B standing for a bad is the small, dense, sticky type that is prone to oxidation. oxidized cholesterol causes plaque formation or atherosclerosis APO-A is the good it's like getting an A on an exam is large, fluffy type of LDL and is not prone to oxidation. It's considered neutral and it doesn't increase your risk for cardiovascular disease. It's APO-B the small dense, sticky LDL particles that is prone to oxidation and therefore contributes to plaque formation

and atherosclerosis which is heart disease. What is oxidation? If you cut open an avocado and leave it, leave it out on the counter air's oxygen is going to start acting on it and it's going to turn brown. That's oxidation. It's oxygen acting on that avocado and it's starting the decomposition process. Another example would be a piece of bare steel left outside gets rained on and it gets rusty. That's oxidation on the steel. Oxidation is like rust on our cells. Hang with me here. Increased saturated fat intake raises APO-A and not APO-B. In other words, the rise in LDL and total cholesterol we see from increased saturated fat intake will not cause an increase in oxidized cholesterol. Therefore, it will not raise your risk for cardiovascular disease. By the way, statins lower the neutral particle A LDL, they have no effect on the heart disease producing particle B. That probably explains why people on statins don't show any reduction in cardiovascular disease incidence. Again, I'll be going into much greater detail on that in future episodes, but for now we're trying to focus on the lipid hypothesis.

David Sandstrom 36:04

The real enemy, when it comes to heart disease is not cholesterol, it's inflammation. Without inflammation, cholesterol would move freely throughout the body and never accumulate on the walls of the blood vessels. So you might be saying, Well, what causes inflammation? That's a great question. What causes inflammation? polyunsaturated fatty acids, and carbohydrates. Remember earlier I told you that if you consume too many omega six fatty acids that it will be pro inflammatory. Well, if you have an Omega six to three ratio over 10 to one, it's pro inflammatory, and PUFAs, vegetable oils are predominantly omega six, and therefore push our omega six to three ratio into the unhealthy range. The SAD or standard American diet has an Omega six to three ratio of 20 to one or worse, which leads to systemic inflammation. Excess carbohydrate intake leads to both oxidation and inflammation. The two triggers of heart disease. Excessive carb intake contributes to the oxidation of the bad APO-B sub particle of LDL cholesterol, which leads to the depositing of plaque that is full of cholesterol in the arteries. Remember, cholesterol is a cellular repair protein. Would it make sense that it's present at the site of the inflammation, but it didn't cause the inflammation. It's there to clean up the mess. Firemen are usually present at the site of a fire, but we don't blame them for starting it. The firemen are there to help clean up the mess. The same is true with cholesterol in plaque. The plaque is there to help protect our arteries from the damage done by systemic inflammation.

David Sandstrom 38:06

I know we're getting a little deep in the weeds here, but let me let me summarize this for you. Cholesterol is a crucial cellular repair protein. It's used to produce important hormones, and it's needed in large quantities in the brain. oxidized cholesterol is what causes heart disease. There are two types of LDL cholesterol particle A APO-A and particle B APO-B. APO-A does not oxidize easily and is considered neutral because it does not increase your risk for cardiovascular disease. APO-B on the other hand, is easily oxidized and does contribute to plaque formation and heart disease. Here's the important point. Increased intake of saturated fat increases APO-A the neutral particle within the LDL protein and not A PO-B, which is the bad plaque forming particle within the LDL protein molecule. When APO-A exceeds APO-A levels in the blood, you are at greater risk for heart disease. Another measure is high triglycerides are a strong indication that your APO-B is too high. The blood test that measures APO-A and APO-B is called nuclear magnetic resonance or NMR. It's readily available from labs, but most of the time insurance won't pay for it. Go figure.

David Sandstrom 39:43

So you know what this means. It means that T bone steak that you love that you've been trying to limit, you can now eat it without the guilt. If you enjoy liver and onions, go for it. You can get back to cooking with butter and coconut oil. and not worry about raising your risk for heart disease. It doesn't mean that any food with saturated fat is healthy. Ice cream is loaded with saturated fat but it's not a health food. A cannoli has a lot of saturated fat. It's not a health food. flavored yogurt has a lot of saturated fat. It's not health food, cakes, pies, chocolate chip cookies. Most baked goods can have a lot of saturated fat. They're not healthy foods. The sugar content in those foods makes them junk foods. On the other hand, beef bison, lamb, venison are all healthy foods packed with nutrients that we should be consuming on a regular basis, as long as you're eating meat from a pastured, grass fed and grass finished animal. In the last episode episode eight. I go into why grass fed and grass finished is so important And the games that are being played with the way meat is labeled. If you haven't already listened, I suggest you go back and listen to episode eight after you after you're done here. It's it kind of goes hand in hand with this episode.

David Sandstrom 40:12

A great source for healthy meat from animals that are raised properly. The source that I trust with my family is US Wellness meats. If you go to my website, [DavidSandstrom.com/USWellness](http://DavidSandstrom.com/USWellness) click on any of the links on that page and make a purchase from US Wellness, they'll ship some of the highest quality, delicious meat and cheese straight to your door with free shipping. If you use my affiliate link on that page, you won't pay any more. But you'll be supporting the podcast because I'll make a small commission. Using an affiliate link from someone you trust is a real win-win. You get plugged into great products and services. And you support the one who curated those products and services and you get to say thank you or leave a tip, if you will. Well, I think that's enough for now.

David Sandstrom 42:04

I hope you enjoyed this episode. Don't forget to go to my website, [DavidSandstrom.com](http://DavidSandstrom.com). And there, you'll find links to all the research articles I mentioned in this episode, as well as a full transcript that you can read online or download and take it with you to read later. And one last thing is if you have a health conscious friend, and they are still subscribing to the lipid hypothesis and doing things like limiting their red meat consumption and ordering an egg white omelet at a restaurant to try to lower their cholesterol levels. Let them know that those recommendations are based on weak science to begin with. And it's really about 50 year old information. There's better information available today. So share this podcast with them. Turn them on to this information. They'll thank you for it. If you feel inclined, you may even want to share a link to this episode on Social media Let your friends know about. Well, thanks for tuning in once again. Talk to you next week. Be blessed.