Ancestral Dietary Strategy to Prevent and Treat Macular Degeneration:
A Special Interview With. Dr. Chris Knobbe

By Dr. Joseph Mercola

JM: Dr. Joseph Mercola
CK: Dr. Chris Knobbe

JM: Welcome, everyone. This is Dr. Mercola, helping you take control of your health. Today we've got a real treat for you. Dr. Chris Knobbe, who's written a book – Actually, he's written a book about the most common cause of blindness in the United States, which is age-related macular degeneration (AMD). But the story behind the book and his research is just extraordinary. Dr. Knobbe is really an exemplary physician, really the true type of physician who you want.

He's trained as an ophthalmologist. Of any type of professional to write a book on blindness, it would be an ophthalmologist. No question. Not only has he had the proper training, but he's got the curiosity and the drive and the passion for the truth. In fact, he's associated or at least aligned with the Weston Price Foundation. He reminds me of Dr. Price in many ways, who, 100 years ago, is a dentist who went around the world to figure things out. Dr. Knobbe didn't go around the world doing this, but essentially did, virtually by just exploring the medical literature in a way and a fashion I have not seen previously. It's just extraordinary to read his journey on how he figured these things out.

What he found out is – I'm going to tell you. It's going to astound you. It astounded me. I first found out about him when I was watching the Ancestral Health videos. These people are kind enough to just stream all the videos so you don't have to go to the conferences to see it. There is no question he had the best presentation at the entire conference, from my perspective. Because he gives you insights into the common disease that virtually no one knew about. It's really is shocking. With that introduction, I want to welcome and thank you for joining us today, Dr. Knobbe.

CK: Dr. Mercola, it's a great pleasure to be here and to be with you. It's an honor. The comparison to Dr. Price, I have to tell you the truth, it gave me chills when you said that. I don't deserve that at all.

JM: You do, in my view. What you've done in your area is incomparable, in my view.

CK: I'm going to try to live up to that as much as possible. I honestly did. Dr. Weston Price is actually one of my heroes. I consider myself an acolyte of Price. That is really what I tried to do in my research. It, as much as possible, is to follow in his footsteps. Ultimately, that is the next step that I want to do. It's actually to physically go out into the world and evaluate these people, the few niches around the world that are still consuming ancestral diets and analyze their macular degeneration. But to the best of my ability to do that through the published research and all of the history, that's what I try to do. We can get into all of that.

JM: We'll get into that. I'll tell you, you actually did Dr. Price a step above that. That's largely for the reason that he couldn't do what you did, because the access to the literature was not available as easily as you could do it. You've laid the foundational premise academically. I did not realize you're going to go out across the world. But 100 years from now, people are going to be describing you in the same frame as they do now with Dr. Price. Yeah. Thank you for your work.

Let's check over to what you found, which is just shocking, because as a trained physician, we are taught that macular degeneration is something that's always existed. It's an inevitable consequence of aging. You just found something that was an absolute untruth. Why don't you start there? Or maybe even before if you want. What led you on this journey?

CK: Right. I'll tell you, what initially led me on this journey was my own health problem. I honestly – I'll keep this part really short – but I began to suffer with arthritis when I was about 34 or 35 years old. It actually progressed rather severely. I saw physician after physician, almost all of them my friends, family doctors, internal medicine doctors, orthopedic surgeons, rheumatologists, up until the point I was 50 years old, which was eight years ago. I was treated with an immunosuppressant. The very next day, I dropped that because I've heard about the paleo diet. I switched over to paleo.

I wasn't convinced but I eliminated grains and dairy. In a nutshell, in about eight or 10 days, my arthritis was 80% better. This was so incredibly shocking to me after suffering for 15 years that I really wanted to know all I could know about nutrition. It just changed my life. I started investigating then.

To be honest, this was in 2011. Then for the next couple of years, I investigated nutrition as much as I could. I learned so much but I was lost, until I came across the research of Weston Price. For those viewers who don't know him, I'll just say very briefly that Weston Price was a highly accomplished scientist, researcher and dentist who, back in the 1930s, spent the better part of that decade evaluating people all around the world on five continents, 14 nations, hundreds of tribes and villages, thousands upon thousands of people as they transitioned from native, traditional diets over to westernized diets.

Price called this the foods that the people westernized their diets with. He called these "the displacing foods of modern commerce." He defined those as refined white flour, sugars, canned goods, sweets, confectionery and vegetable oils. What Price found was that as people transitioned to those foods, they began to develop all of these diseases of civilization. It started with, interestingly, arthritis and cancers. They lost immunity to infectious diseases, like tuberculosis. They developed severe tooth decay. Their children developed abnormal dentition, crooked teeth. That, in a nutshell, was what Price found.

Price analyzed these diets from these native, traditional people. He sent back samples of these foods from all around the world, five continents, thousands and thousands of samples and had them analyzed. The take-home point here is that he found that these native, traditional foods contained 10 times as many fat-soluble vitamins, which are vitamins A, D and K2, four times as many water-soluble vitamins, which are all the B vitamins at sea and one and a half to 60 times more minerals than did the American diets of his day. That was the 1930s. Price published this in

1939 in two books, 1939 and 1945. When I read Price's book cover to cover, 500 and some pages –

JM: There are a lot of pictures in there.

CK: Yes. It just transformed my life. That was in early 2013. Then I began to understand that it's these displacing foods of modern commerce, our Westernized processed foods, which are really – I've simplified it down to refined white flour, sugars, polyunsaturated vegetable oils and trans fats. When we consume these foods, we develop this essentially mushroom cloud of chronic non-communicable disease. This includes heart disease, cancers, stroke, hypertension, Type 2 diabetes, overweight, obesity, all the autoimmune disorders and so forth.

I understood this in 2013. Later that year, it finally hit me. I asked myself, "Could macular degeneration be another one of these diseases?" Might it be a disease that follows processed food consumption? That question changed the course of my life. That was coming up on almost six years ago now. I began an investigation in 2013 and in early 2015. I left ophthalmology practice and pursued this full-time, because I felt like it was the only way that I could pursue this and do all the research, and write a book and publish papers, and things like that, to try to get this word out and basically that our research supports the hypothesis with every last detail.

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JM: Well, I didn't realize that you actually had left your practice and were doing this full-time. It's not surprising, because the amount of work that you've put in this book is just extraordinary. It's obviously hundreds and hundreds of hours. It's much more work than most is put on health books that I read. You did a complete historical analysis. You got all the ancient ophthalmology textbooks from more than 100 years ago. You searched for this thing. I want you to describe that.

In conjunction with that description, also explain the conventionally held position before you started your research about AMD. I think it's probably still being taught today, if I'm not mistaken. They think that it's been around since time immemorial, and it's a natural part of aging.

CK: Right. Absolutely. The conventional, orthodox, allopathic thinking, which is from allopathic medical schools, which is really the only – This is primarily almost exclusively where ophthalmologists are trained, the belief system, for many decades, has been that age-related macular degeneration, AMD, is a disease primarily driven by aging, just that we're getting older, and genetics. As of 2016, the belief is that 45% to 70% of this disease is driven by genetics. They've connected 52 different gene variants – the single-nucleotide polymorphisms, SNPs – 52 different genetic variants to macular degeneration. That's the belief system.

Then there's a little bit of the concern about environment, and then smoking and we get overweight, we don't exercise enough, and a bunch of other things that are kind of thrown in there to top it off. But again, up to 70% of the disease is driven by genetics and the majority of the rest driven by aging.

Of course, with the hypothesis that was in my mind, I questioned that. I knew that if I was going to be able to draw connections between Westernized diet and macular degeneration, the first thing

I needed to do is to go back and explore all the history of macular degeneration. Honestly, I thought that I would be able to go onto PubMed or Google Scholar and I would find some excellent reviews and some papers that had covered this. There was nothing of the sort. In early 2015, I spent three or four months solid just doing nothing but trying to research the history of this, because I couldn't find any kind of review that had ever been done of this.

As you know, we physicians, the medical schools don't teach us anything about the history of disease. It's an incredible oversight, because if you don't know where you've been, you don't really know – You don't have a perspective. Anyway, I began investigating this. Essentially, here's what I found. The question is, "Did macular degeneration always exist? Did it exist with the prevalence that it is today, which is epidemic? If not, how did it change? Did it change in correlation with our diet?"

Here's the first thing I found. It's that ophthalmologists could begin to see the macula, the central retina, beginning in 1851, because this German physician and physicist, Hermann von Helmholtz designed the ophthalmoscope. That's a little device you use to look into the back of the eye. He published this design in a brief little book, so that this technology could spread. It rapidly did. In fact, there were lectures given in London, England, to the ophthalmologists by 1854. In 1855, ophthalmologists started producing atlases of the retina. They began taking pictures, even in the 1850s and 1860s, using lamps for light.

But interestingly, 23 years went by after Helmholtz's design of the ophthalmoscope was released. By the way, within 10 years, the ophthalmoscope use had spread entirely around the world. It was on every continent. But it took 23 years before the first ophthalmologist described macular degeneration for the first time. That was Jonathan Hutchinson in London, England, in 1874. He described what looked like four cases.

Another 11 years of silence goes by and a German ophthalmologist, Otto Haab, talked about macular degeneration in a lecture. He didn't present any cases. Then 1895, the same ophthalmologist, Otto Haab, looked into this and he reviewed 50,000 ophthalmic patient records and determined that macular degeneration was as rare as traumatic maculopathy and myopic maculopathy. These are extremely rare disorders. For example, I saw one case of myopic maculopathy, which is a near-sighted kind of macular degeneration. I saw one of those in my entire career, 24 years of ophthalmology. We go to 1889, an Austrian ophthalmologist, Ernst Fuchs, published his first textbook. That textbook is an 800-page textbook. This is it right here.

JM: It must have been a small fortune getting those books.

CK: Yeah. I did. This is about an 800-page book. In this book, he wrote one sentence about macular degeneration. It was basically like a footnote, as if this condition does exist in the elderly.

Just so you know, Dr. Fuchs, this ophthalmologist, would become the most prominent ophthalmologist over the next four, almost five decades, up until 1940. In his 1899 book and his 1919 book, they were almost identical. The 1899 had one sentence. The 1919 book, he used part of a paragraph to describe macular degeneration. In both of those, up through 1919, he still said, "Myopia was the main cause of macular degeneration."

Then if we jump forward to – Just for example, there's a whole bunch of these kinds of text, like Julius Hirschberg, one of the most prominent names in ophthalmology, 1914, he published a textbook of all the history of ophthalmology, he did not mention macular degeneration in that entire book, 1914. In 1927, this man, Sir Stewart Duke-Elder, published this book. This was his first textbook. He became the most prominent ophthalmologist from about 1940 to 1970. Then Duke-Elder, in that 1927 text, he did not mention macular degeneration. In fact, in the opening paragraphs of the book, he said the two most common diseases of ophthalmology are glaucoma and cataract. He did not even mention macular degeneration. I read the entire book to make sure.

But then by 1940, Duke-Elder, who didn't mention macular degeneration in 1927, in his next textbook, 1940, he dedicated 13 pages to the condition of macular degeneration, 17 images, six of which were in full-color. He called macular degeneration, "A common cause of failure in central vision in old people." That's a quote. In 1927, I don't think he even knew what macular degeneration was, which was typical. By 1940, it was becoming common.

By 1975, in the U.S., we had the Framingham study. At that point, Americans over the age of 52 had – 8.8% of them had macular degeneration and 27.9% of those over the age of 75 had macular degeneration. If you do the math, that translates to about 4 and a half million Americans affected with AMD. If you look back 50 years previous to 1925, there was no more than about 50 cases of AMD in all of the world's literature.

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Now, let me just say that ophthalmologists, their first kneejerk reaction to this is, "Well, they weren't looking." I'm telling you, they say that because they haven't read these textbooks. If you look at these textbooks from the 19th century, these clinicians were extraordinary clinicians. Their attention to detail makes ours look pathetic because they didn't have magnetic resonance imaging (MRI). They didn't have optical coherence tomography (OCT) scans like we use, fundus cameras and fluorescein angiography. They didn't have any of that. They had an ophthalmoscope and they had their eyes. They did extraordinary exams.

In the 1880s, they were using six different dilating agents by the 1880s. By 1880, two ophthalmologists, Edmund Landolt and Herman Snellen had collected 86 different types of ophthalmoscopes. By 1901, they had collected 140 different types of ophthalmoscopes. By 1913, Landolt had collected 140 different brands, models and versions of ophthalmoscopes by 1913. And yet between 1851, when they could first discover macular degeneration, and 1930, again, no more than about 50 cases of AMD in all the world's literature. It's just an extraordinarily rare disease.

If we jump forward to today, bringing us all the way up to today, there are – It's estimated that in 2020, there will be 196 million people with macular degeneration. By 2040, 288 million expected to have macular degeneration. As of 2006, 3.15 million people blind in the world in both eyes. This is blind, both eyes, from this disease. That was the latest data that we had on blindness.

I can't even imagine what it must be today. But I'm going to estimate it's 4 to 5 million people blind from this disease. I did the math and it turns out that in this world, at least 270 people will

go blind every single day due to macular degeneration. In other words, they've lost vision in one eye. Then today, they're going to lose vision in their second eye. It'll leave them permanently blind with a big central blind spot.

JM: This is such an extraordinary story. Thank you for doing the due diligence. I mean you really essentially established the new norm for the historical precedence of AMD, which was, prior to your investigations and literature review, really unknown in conventional ophthalmology in medicine. That's historic work that you've done. I really appreciate all of that. In many ways, it parallels the incidence of two other major killers. AMD is not a killer, but chronic disease is, which would be heart disease and cancer. Due to foundationally the same problems, which were the same issues that Price found when he was focusing on – His focus was on dental decay.

CK: Right. Exactly. You know, I just reviewed this because I'm working on another paper. I'm actually working on a second book. Would you mind if I hit on some of these other –

JM: Sure. Absolutely. Go for it.

CK: I think you'll find it interesting, and I think our audience will too. Because here's the thing. It's that macular degeneration is strongly associated with heart disease, Type 2 diabetes, obesity and metabolic syndrome. Now, it hasn't been connected to cancer directly, but I'm sure if we dug down that path, I think you could easily make that connection too. Let me just hit this real quickly. Because if we look at what's happened with those diseases historically, they all run parallel.

Let's take heart disease for example. There was a study published in 2012 that looked at the history of all these chronic diseases, basically the killers over the last 200 years. This was done by Jones and colleagues. What they found was evidence in – the town sounds funny to me – the town of Boston, Massachusetts, in 1811, where they had all the causes of death for that year was 942 deaths. There wasn't a single death attributed to the heart. Although there were 25 sudden deaths. Even if you said all those were heart-related, which is impossible, but if you said they all were, that's still only 2.5%.

In the 19th century, there was, to the best of my ability to tell – and I've read a number of reviews – there were about eight cases of heart attack, myocardial infarction (MI), coronary thrombosis in the entire 19th century.

JM: I didn't know it was that low. That's crazy.

CK: Eight cases. And then Sir William Osler, who was one of the most famed physicians, he was one of the founding partners of Johns Hopkins Medical Center in Baltimore, in 1897, he published a paper in which he had reviewed his previous 21 years of hospital experience. He noted about roughly around six cases of angina, chest pain, that might be cardiac, not a single MI in that 21 years – 21 years of hospital experience and not a single MI and about six cases of angina. That was 1897. In 1910, he gave a lecture in London. He reviewed the next 13 years and he said, "In these 13 years, in 1897 to 1910, there was an additional 208 cases of angina. Still, no heart attacks."

In 1912, this physician, James Herrick published the first case of heart attack in the United States, where they actually connected the symptoms, the chest pain and all that, to an MI confirmed on-autopsy. This was the first confirmed case where they had symptoms and pathology, right? Nobody took him seriously. In fact, this was ignored for about a decade. It wasn't until the 1920s. They started taking this seriously, because as you know, by the 1920s and 1930s, we started getting heart attacks. It's just like macular degeneration. By the 1950s and 1960s, we're getting epidemic proportions, right?

But in the 1900s, this research from Jones, they showed that 12.5% of the deaths in the year 1900 were cardiac, but these weren't coronary artery deaths. They were all valvular deaths. Cardiac valve-related, which is all infectious ideology. It's driven by rheumatic fever, syphilis and endocarditis, right? They still didn't have coronary artery disease. Twelve and a half percent, none of them coronary artery disease. If we fast-forward to 2010, what we have is 32.3% of the population dying of heart disease in the U.S. We went from extraordinary rarity in the 1800s to the leading cause of death, taking 1 out of 3 lives with heart disease in that timeframe.

Now, cancer. Let me hit this real quick. This is pretty interesting too, but I'll make this quick. In 1811, in that same study out of Boston, they attributed 5 out of the 942 deaths to cancer. That was 0.5%. In 1900, the work from Jones, what they discovered was 5.8% of people died of cancer in the 1900s. Advance to 2010, 31.1% of the people died of cancer. Again, it was 1 in 188 deaths due to cancer in 1811, 1 in 17 in 1900, nearly 1 in 3 in 2010.

JM: That increase is actually more extraordinary from 1800s to the 1900s, because there's a tenfold increase. It was almost unheard of. To go up tenfold from 0.5% – I mean 5% to 30% is bad, but it's not as big as the percentage increase.

CK: Right. Right. Okay. Type 2 diabetes, again, which correlates with macular degeneration to a degree. Again, the evidence shows that it was clearly rare in the 19th century. In 1935, they did the first analysis that looked at this. The prevalence of Type 2 diabetes – Or just diabetes in general, which most would be Type 2 probably. Anyway, 0.37% in 1935. In 1960, 0.91%. It was a two-and-a-half-fold increase.

JM: Wow.

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CK: In 1991, 2.97%. That's an eightfold increase. In 2010, 6.95%. In 2015 – that's our latest data – 9.4%.

JM: Wow.

CK: From 1935 to 2015 was a 25-fold increase in the prevalence of Type 2 diabetes, 25-fold. Alright, and then I'll just hit obesity real quick. There's a researcher by the name of Scott Allan Carson, who's done some brilliant work looking at them, because this data is so hard to come by looking at obesity and all these diseases back in – kind of in antiquity, back to the 19th century. Carson analyzed the prisoners in Texas and in Nebraska, for example, because they weighed and they checked their height. He figured out their body mass indices (BMIs). For the entire century,

the entire 19th century, the BMI of all these men, teenagers to 70 to 80 years of age, the obesity was 1.2%.

JM: BMI over 25 or 30?

CK: BMI over 30 was 1.2% from 1800 to 1900. If we fast-forward to the next data we have – the earliest really is 1960 – that was 13% obesity in 1960, 13% obesity in 1980 – we stayed pretty level. In 1988, 23%. In 1999, 30.5%. In 2005, 34%. In 2011, 35.7%. In 2015 and 2016, 39.8%. It's very similar in the youth. We see the youth. Obesity was less than 5% in 1963. It just keeps going up. Today, 18.4% of children between ages 12 and 19 are obese. If you look at the adolescents, it's 20%. We could go on and on.

JM: We could talk for hours. But, boy, I just can't tell you how much I appreciate you finding this information and sharing it and putting disease in its proper historical context, which is, as you mentioned earlier, is rarely ever done. This is massively valuable information and really supports the foundational approach that you and I both share to address the cause of this disease, and pretty much all disease – chronic degenerative disease in Western civilization. Why don't you highlight that now?

Then I want you also to share some of your exciting examples of what you've done to actually reverse this disease. Because this is all pretty depressing information that you share, but I think it's important. And it really is historically incredibly valuable, but you want to get people some hope that they can turn this thing around, that you don't have to follow these patterns, that you can, in fact, avoid virtually all of them if you follow a simple strategy.

CK: Okay. Sure. Right. What I'll tell you first of all is that I've always had an interest in nutrition even though up through 2011, I really didn't know anything at all. The only thing I knew was just pretty much what I would get from Men's Health and those kinds of things, from magazines. I just was interested in fitness and trying to help myself mostly. But one of the things that I always had an interest in was talking to my patients.

What I began to just notice was that there was a pattern. I noticed that people who ate junk food, processed food, were the ones getting a lot of these chronic metabolic and degenerative diseases. Even before I had investigated it, it started clicking with me a little bit.

Let me go back and give what I think that our viewers need to know. It's that when I investigated the history of our diets, here's what I found. It's that no matter where you lived, any place in the world, up until 1880, you had to consume a native, traditional diet. You could not consume processed foods of any sort. There was no manmade processed foods of any sort, with exception of sugar. Sugar was an extremely valuable commodity up through the end of the 19th century, when the price started to come down.

Then in 1880, we got vegetable oils. The first one was cottonseed oil. Manufacturers determined that they could take cottonseeds, which were a waste product from cotton harvesting, they just could take the seeds, crush them, heat them, press them and we could talk about all the processing

they go through. But that they could produce these seed oils. 1880 was the first time we ever had seed oils.

What happened was is that eventually we got soybean oil and then we got – I don't know the exact order. But they were mostly these polyunsaturated oils or soybean, corn, canola, cottonseed, rapeseed, grapeseed, sunflower, safflower and rice bran. That's primarily all of those. All of those have been produced since 1880. They've kind of overtaken lard, butter and beef tallow. If we look at the data in the year 1900, 99.5% of the added fats in our diet came from animal fat. They were lard, butter and beef tallow. If you advanced to 2005, if you move 105 years ahead, 86% of the added fats in our food became vegetable oil.

This has had, to me, the most extraordinary, devastating effect to our health of anything. We got those in 1880. Because they were cheaper, manufacturers sold them to try to replace butter and lard. That's exactly what they did. In 1911, Procter & Gamble, they had partnered with this German chemist, E.C. Kayser, who had figured out how to bubble hydrogen gas through this cottonseed oil in the presence of a nickel catalyst and produce trans fats, these partially hydrogenated vegetable oils.

Procter & Gamble, they were candle and soap makers. Their candle business was drying up because of electricity. They tried to figure out a way – What are they going to do with their business? They partnered with Kayser, who showed them how to make this trans fat product, which looked kind of like lard. They decided to sell it as food. That began in 1911 – or was it 1909? It was one of those two. Sorry.

But anyway, as we know that those partially hydrogenated vegetable oils/trans fats began also to overtake butter and lard. All of these, just on a trajectory, they're all going way up – sugar, vegetable oils, trans fats. The fourth was refined white wheat flour. Up until 1880, all the flour in the world had always been ground on stone mills, which would give you a whole grain flour.

In 1880, they introduced roller mill technology. Roller mill could sheer away the bran and the germ of the wheat, of the grain. That would effectively remove B vitamins, E vitamins, fiber, minerals, omega-3 and omega-6 fatty acids. It produces a nutrient-deficient food. If we look today, 20% of the world's diet is wheat. In the U.S., 85% of that is refined. Meaning, it's nutrient-deficient, kind of like sugar in a lot of ways. If you advance all the way to 2009, those four foods – sugar, refined white wheat flour, polyunsaturated vegetable oils and trans fats – they make up 63% of the American diet. This is the recipe for disaster. This is what sits at the base of all of this metabolic disease, including macular degeneration.

By the way, I think Loren Cordain points out that if you throw alcohol in there, it pushes that processed food consumption upwards of 70%. That means that Americans are getting about 30% to 35% of their foods from sort of native, traditional foods, but even those are not native, traditional.

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As you know, Dr. Mercola, because those are coming from a lot of animals that are raised in CAFOs, concentrated animal feeding operations. They are fed genetically modified organism

(GMO) corn and soy and all of that. It changes their fatty acid profile. Even those are not native, traditional, good, healthy foods.

JM: Yes, indeed. Thank you for sharing that. Clearly, sugar is not going to be beneficial for reducing your risk for disease. But if you were to rank-order the items that you mentioned, would you agree that the industrially processed vegetable oils and seed oils would be probably the most pernicious one on the list? Because of the fact that sugar, you can burn, especially if you're working out or having hard labor or physical labor and not necessarily cause excessive oxidative stress. But these fats, these transform malignant oils actually get embedded into your membrane. They stick around a lot longer and cause pathology or leads to pathology.

CK: Right. I would agree with that 110%. I believe that these polyunsaturated vegetable oils are sheer danger. These are the most dangerous things in our food supply. If we go back to those, here's what it takes in order to produce these. These have to be crushed, heated and pressed. Then they go into a petroleum-dried hexane solvent bath, then they steam it, degum it, then chemically alkalinize, bleach and deodorize this. It's heated four or five times in high temperatures. All of these produces a very dangerously oxidized oil. But it looks pretty in that bottle. But the interesting thing is –

These are oxidized. They're dangerous. They're dangerous in the bottle. If you cook with them, they're going to oxidize further. When you consume them and metabolize them, as you know, Dr. Mercola, these oxidize further. They create oxidized linoleic acid metabolites. Linoleic acid is the primary fatty acid from these seed oils. It's the 18-carbon oil or fat that comes out of these. These are connected to all of our non-communicable diseases of civilization, if you will. I think that they're driving all of this disease. I think it's the beginning point for almost all of these diseases.

One of the things that all of these disorders, from heart disease to cancer to obesity, macular degeneration, Alzheimer's, one of the things that they all share in common is mitochondrial dysfunction. I believe that these are driving that very condition. When we start digging down into all that complicated molecular pathophysiology, I believe that they're at the root of this. They're driving these oils because they are oxidized and because they oxidize further, they create reactive oxygen species. They create these oxidized linoleic acid metabolites. These wreak havoc all throughout the body.

If you look at – Let's just take the opposing view that's been held for five decades, that all of this disease was driven by saturated fat. Well, let's talk about the mechanisms by which that happens. We're done. Because there are no mechanisms that I've ever come across. I don't think there are any molecular mechanisms to tie saturated fat.

JM: Here's the mechanism. You want to know what it is?

CK: Sure.

JM: It's guilt by association. Because when they do these epidemiological reviews, they assess either by food diaries or sometimes, chemically, the amount of saturated fat. But what they fail to

include in the analysis is the amount of the trans-fat and these other types of oils that are damaged and highly oxidized. They parallel each other. The saturated fat is vilified by association.

CK: That is exactly right. That's exactly right. Yeah.

JM: That's the mechanism. But anyway, thank you for sharing that. I want to give our listeners and viewers some encouragement and hope. Why don't you share the strategies you've used and the successes you've had in actually reversing this disease? Sort of set a framework for expectations that people can have. Because millions of people are being blinded. You have several hundred people being blinded every day in the world. Why don't you discuss that? Because I think it's useful.

CK: Okay, sure. In order to do that. Let me draw on some of the research that we did. Because the most important think to realize about diseases like heart disease, macular degeneration and Alzheimer's disease is that they have a very long incubation period. If a child is born today, his parents are consuming processed foods and the first thing he gets is processed food, he consumes that for 40 or 50 years, it takes that long before he has a heart attack, right? It's very similar for macular degeneration and, of course, Alzheimer's is probably even longer.

But these diseases, just like when you're exposed to a cold virus and maybe you get the disorder or the cold three to four days later, chronic diseases have an incubation period too and it's very long for these diseases. It's the exact reason that we don't have randomized-control clinical trials for heart disease and Alzheimer's and macular degeneration, and there are never going to be, because you can't control people's diets very well in the first place and you certainly can't control them for decades.

If we look at our research – I'll throw out a couple of quick examples. Because we looked at the data in 25 different nations as it related to processed food consumption as we used the proxy markers for sugar and vegetable oils. We track those because they're proxy markers of processed foods. When you're getting those, you're getting processed food generally. We track those to evaluate processed food consumption, essentially.

But in any case, if you look at Japan, for example, which, I've always said is one of the quintessential nations that illustrates this point. In the 1970s, from 1974 to 1979, there was a study that shows that their prevalence of macular degeneration was about 0.2%. Then 30 years later, in 2007, their prevalence of macular degeneration went to 11.4%. That is the most conservative number. That shows that their macular degeneration elevated 57-fold in a 30-year period. Now, this cannot possibly be explained by aging or genetics. But when you look at the data, here's what happened: their sugar consumption approximately doubled. That wasn't the big issue.

Here was the big issue: In 1961, they were consuming 9 grams per person per day of polyunsaturated vegetable oils. By around 2000, they were up to 40 grams a day. Their vegetable consumption increased four-and-a-half-fold. Everybody knows that if you investigate just a little bit, you can Google this and find very rapidly that they began to westernize their diet. They started getting fast food restaurants and so forth. They started getting all of our processed foods. They started consuming those over the last five decades.

New Zealand is another one where we see that back in 1967, I believe it was – Their prevalence of macular degeneration was 1.3%. By 2014, it was 10.3%. It elevated eightfold. Again, this couldn't possibly be explained by anything about their genetics, aging of the population or their environment. None of those had changed. But what did change was they were consuming a much higher level of vegetable oil. The vegetable oil was something like 1 gram a day in 1961. I believe it was in the – I don't remember exactly, but I think 20-some grams a day within about 30 years. It just went up and up. Here's what I would say.

[-----50:00-----]

Now, since I published this research really – We published the research actually in a scientific paper in 2017. But I published the book and began to speak about this publicly in 2016. We have a lot of people who would report to me over the past three years. What we have found is we're getting almost all the people report to me that their macular degeneration has stabilized. A few of them report that their vision is better. Some report that their maculas look better, that the ophthalmologist tells them they look better.

So far, I've only gotten one report from a person who was at least transiently worse and seemed to be following this diet or she was trying to, but she was travelling worldwide. She knew that that's the problem. It's when you leave home and you begin to consume foods, you're just at risk because you don't know what's in them. That's where restaurants – Almost all restaurants are going to cook with these polyunsaturated oils. It's almost all soybean and canola oil in the United States.

By the way, people don't need to ever have a bottle of vegetable oil in their house or pour oil into their foods in order to get massive amounts of these. The average American, our data showed by just a few years ago, was getting 80 grams of vegetable oils per day. Eighty grams a day. It was zero in 1879. By 2010, it's 80 grams a day. Out of that, about 18 grams of that, or more, but at least 18 grams a day is nothing but linoleic acid, the 18-carbon omega-6 fatty acid.

JM: 80 grams is 80,000 milligrams.

CK: Yes.

JM: Most supplements come in milligrams, so – They don't come in grams.

CK: Right.

JM: On that point, I mean I had known about this for a long time, but your book was very inspiring. In some ways, a bit problematic for me personally. Because it's virtually impossible for me to look at someone eating French fries, a whole plate of French fries, and just not have a really adverse physical reaction of disgust, realizing that they don't have any idea of the damage they're doing to their body. If they knew, they wouldn't be eating that.

I just want to sort of scream at them. Sometimes I do actually, if I know them well enough, that they can't do that. That is just an absolute desperate prescription for disaster. I mean you've just got to understand it as a foundational basic.

Let's go back to the success. The book is a few years old. Tell us the name of your book again too. In the book, you shared like nine case reports of people actually improving substantially with the program.

CK: Right. I don't know if you can see it. This is a copy of the book. It's "Ancestral Dietary Strategy to Prevent and Treat Macular Degeneration."

JM: That's a great title.

CK: This book may eventually be repurposed to ophthalmologists, optometrists and vision scientists. I'm working on another book that will be simpler for the public.

JM: Let me just give my comment on that. Because it is. It's a very intensive book. If you're a physician or if you have macular degeneration, it's definitely a book you'd want to get. But it goes very deep. If you're a student of health, I think you'd appreciate it. If you appreciated Weston Price's book, "Nutrition and Physical Degeneration," you'd like this one too. But you're very detailed in this book. You really go into a lot of specifics.

CK: Right. I really felt like if I had to be – I'd rather be a little over-the-head of people than a-little-too-dumbed-down, a-little-too-simple. Because the take-home points are so simple. One of the things that – I remember, back in that era, 2011 to 2013, when I struggled so much trying to understand nutrition and what was causing us to have all of these disease. Like I said, I was lost until I came across Weston Price's book, "Nutrition and Physical Degeneration." I have always said to people, "If you only read one book about nutrition in your life, read his. Don't read mine." I think it's sort of the nutritional bible. Once you understand that, you have a framework that sets the stage for us to understand everything else. It's really just such a shame that that's not taught in medical schools.

I want to point it out with regard to this interesting fact here, a couple of facts, Dr. Mercola. This research that comes from Tanya Blasbalg – I mention that in my book. But she's from the NIH. They did research that looked at the omega-6 and omega-3 fatty acid consumption as far back as they could, as far back as we have data to 1909, comparing that to 1999.

What they showed – They did a sophisticated model, which is really pretty interesting. They determined that our omega-6 consumption in 1909 – Remember, we were already getting some seed oils by then. But anyway, it was 5 grams a day in 1909. That elevated to 18 grams a day by 1999, which is the data I just gave you – that we're consuming about 18 grams a day of omega-6. We're just talking linoleic acid. The omega-3s in 1909, 0.76 grams per day. That elevated to 1.8 grams a day by 1999. Even our omega-3s have doubled. While our omega-6s in that timeframe more than tripled, our omega-3s doubled.

Here's the point I'd like to make. It's that if you lump these together – In 1909, we were getting 5.76 grams of omega-3 and omega-6. In 1999, that jumps all the way up to 19.8 grams. The reason I'm making an issue of this is because there's a lot of interest in the omega-6 to omega-3 ratio. That, today, ranges from about 9 to 1 to 20 to 1 in the United States. But I think the much bigger

issue is not the ratio so much, but the total amount of these fatty acids we're getting. Because let's be real. Omega-6s are highly oxidizable, but omega-3s are also a polyunsaturated fat. They also oxidize. Now they don't turn into the dangerous oxidized linoleic acid metabolites like the omega-6s do, but they still oxidize.

JM: But wouldn't you agree that if you had a non-oxidized healthy source of omega-3s, especially animal-based that have docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), that you may benefit from 4 to 5 grams of those a day?

CK: Personally, what's interesting is I think if you – It's just guesswork. But I think if you went back to, let's say, 1870s, you're getting maybe a half to three-quarters of a gram of omega-3 per day is what most Americans were probably getting. The omega-6s, maybe twice that much, maybe a couple of grams or so of omega-6s in that era, so the total would only be 2 or 3 grams of omega-3 and omega-6 total. I mean, as you know, these are really not – Today we're consuming so many of these that they need to be burned for fuel. Instead, they're really meant to be used in our cell membrane.

JM: Cellular structures.

CK: Yeah.

JM: Or constituents of cell membranes.

[-----1:00:00-----]

CK: Yeah. Blasbalg's research showed that even the long-chain omega-3s and omega-6s, so both the arachidonic acid, which is the 20-carbon, the longer-chain omega-6, and the long-chain omega-3s, the EPA and DHA, all of those have gone down in consumption since 1909. The reason for that, of course, is the fact that people are getting their animal foods mostly from CAFO-raised animals that are eating grain, corn and soy, instead of eating grass, right?

It tells me that in the 19th century, when virtually nobody had macular degeneration, they were only getting really tiny amounts of omega-3s and omega-6s. Almost nobody in the United States was getting fish on a regular basis. I mean they were mostly consuming beef, pork and fowl.

JM: Do you think that was optimal, though? Just because that was the observation doesn't necessarily mean that that was the most highly beneficial.

CK: Right. I do think seafood is really valuable. I recommend seafood all the time, especially wild-caught if you can get it. Because just for example, DHA, the 22-carbon omega-3, plays a prominent role in the macula. Gosh. I'll be honest. I eat fish probably about three times a week. I eat a lot of it. I do think fish is really beneficial. But the really big picture is, to me, that we don't have to have fish and seafood if you were consuming grass fed, organically grass fed beef, pork, which doesn't even exist anymore hardly, and fowl, pastured fowl. I think that alone – If we would just go for the low-hanging fruit –

JM: Will that omega-3 be ALA or would it be EPA or DHA? My impression is that most of it's alpha lipoic acid (ALA) in the animals.

CK: Yes. Absolutely. It would be ALA. Yes. I'm just saying that you could get the – You can get all of those obviously, even from –

JM: Plants.

CK: Yeah. Plants. Yes.

JM: Not that you don't need ALA. I think you do and benefit from it. Flax, hemp and chia, they're all good sources. But there are certainly benefits from taking some preformed longer-chain fats, like EPA and DHA. I want to go into another question now. Because our time is coming short to an end. I like to use supplements as a tool, not certainly the only one. Clearly, the best resource strategy to treat and prevent macular degeneration is looking at the diet and addressing all the factors and variables you so eloquently described.

But when one wanted to use a supplement classically, the carotenoids used to support retinal health would be zeaxanthin and lutein. Those are the two primary ones. I'm wondering if you could comment on that, and then also comment on astaxanthin, which appears to be an even more effective carotenoid too, because it's certainly more potent as an antioxidant. I'm wondering if you've had any experience on synergistically combining them with your dietary approach.

CK: Sure. Since we're on the subject of supplements, let me just touch really quick on the AREDS study. I could simplify this very quickly.

JM: Why don't you tell us what AREDS represents or is the acronym for?

CK: Yes. AREDS is the Age-Related Eye Disease Study. This was the big study that began back in the 1990s, where they looked at vitamin, mineral supplements for macular degeneration. This followed about 4,000 people over a period of about five years. Excuse me. These people got – In the treatment group, they got vitamins E, C, beta-carotene, zinc and copper, or they got a placebo, essentially.

What they found was that – Here's the simplified version. It's that in Stages 1 and 2 of macular degeneration, so the earliest stages, there's no benefit at all with the supplement. If you're in Stage 3, which is moderate AMD in both eyes, or Stage 4, which is advanced AMD in one eye, 20% of that population went onto more advanced AMD over that five-year period. This is the group getting vitamins, right? Twenty percent advanced.

In the control group that had moderate AMD or advanced AMD in one eye, 28% advanced to worse macular degeneration. The difference was 28% versus 20%. This means 8% of the subjects getting supplements were better off. Eight percent was 1 out of 13 people. That's really 1 out of 12 and a half, but you can't have a half, so it's 1 in 12. The AMD, the number needed to treat is 13. What people need to know is if they have moderately advanced AMD or advanced AMD in one eye and they take these supplements, there is a 1 in 13 chance they will benefit. That was the

AREDS study. What they do is they say they were 25% better, but 25% was the relative risk. That's the difference between 28% and 20%, because 8% is about 25% of 28%. It's true, but we want to know our absolute risk. They're telling us relative risk. Absolute risk, you have a 1 in 13 chance of benefiting.

All the studies show that you cannot prevent macular degeneration with supplements. There's never been a study that showed that. Then they did the AREDS 2 study. In that study, what they did was they gave them the AREDS formula. They also gave omega-3 fatty acids and/or the carotenoids lutein and zeaxanthin. What they found in the primary analysis was that said, "There was no benefit for the omega-3s and the carotenoids, the lutein and zeaxanthin. No benefit at all."

Then they went back and reanalyzed all the data again and determined that there was a slight benefit in favor of supplementing with lutein and zeaxanthin. If you look at all the data, there's just a slight benefit for lutein and zeaxanthin.

But just as I said, it's really important to realize that there were some other research done by Carl Awh and colleagues. This has been taken seriously. They looked at genetics versus the supplements. Without getting into the genetic component of it, what we realized is that potentially around 30% of patients taking the AREDs formula, the original AREDs formula will be worse off than if they didn't take any supplements at all. Eight percent were better, but up to 30% could be worse. I think, you know –

JM: I would agree. I think a lot of it may be related to the specific formulations they used. Vitamin E is a supplement. It's potentially highly problematic. It's been shown to cause lots of potential problems, largely as a result of using high doses of a single isomer, the alphatocopherol and none of the tocotrienols.

If you have 400 years of alphatocopherol and leave out the gamma and the deltas and don't give them any tocotrienols, that's going to be a problem. Now, if you give them in the right doses, there could be significant benefits. I suspect that they use synthetic carotenoids. There are a lot of potential conflicting variables there that could have contributed to those results. But you're right. If you follow that form specifically, you have to be highly irrational to do that.

CK: Right. As far as your question about astaxanthin, Dr. Mercola, I don't have any knowledge that there have been any studies relating to that.

JM: The contention is that it seems to be useful. I don't know if this added total improvements or what, but there has been some reports of the benefit and the treatment of AMD. I just thought you might be aware of that. But if anyone, it would be you who would know that most likely.

[-----1:10:00-----]

But anyway, that's good to know. The end results is you're not going to go wrong by following a diet of eliminating these processed foods. I mean that is the key. Not only do you eliminate essentially the common cause of blindness, but what's essentially even more concerning – I mean who wants to go blind? But who wants to lose their mind with Alzheimer's disease? Which is closely associated with it?

CK: That is exactly right. I tell people that, really, this ancestral diet is, to me, just about the simplest diet that you could ever follow. You can make any kind of food you want, any type of ethnic food, whatever you want to eat. I don't care if it's steak or donuts. You can make those ancestrally if you eliminate those processed foods. When people come to me and say, "Well, can I have Mexican food?" or "Can I have Chinese food?" Yes, yes. You can have all of those, but eliminate, make sure – The only way to have them safely generally is to make them yourself or to verify that they're being made without polyunsaturated vegetable oils, without trans fat. Essentially try to minimize refined white flour, sugar.

This is the big picture. It's that we've got to get – If you do those things, I think that you're 95% of the way there, in terms of correcting your diet just by doing those things. I will say, it is not easy. If you don't cook, if you don't prepare your own meals, then I think you take a very serious risk, unless you know that your meals are being properly prepared without those kinds of components.

JM: Yeah. I couldn't agree more. I'd just like to add one thing that I'm sure you'll agree with and just reaffirming the ancestral approach is that if you're going to choose to eat meat, which, of course you have to pay attention to the quality of the meat, non-CAFO, but you just don't want to eat meat. You want to eat nose to tail. That means including ideally the organs, and probably even more importantly, the connective tissue. As something that has really been eliminated from our diet in the last generation or two, the connective tissue.

Fortunately, there's been a resurgence in interest in this, with collagen and bone broth, which will provide similar benefits, because they're high in amino acids, specifically glycine. If you're just eating muscle meat exclusively, you're going to get relatively high levels of methionine. High levels of isolated methionine from animal protein could be highly problematic. But that risk could be virtually eliminated by having the glycine from the connective tissue. That glycine-methionine ratio counteracts most of the risks. Simple strategies, ancestral approaches and you've got it. You beat it.

CK: That's right. I couldn't agree more. I personally like to eat a lot of meat, but I've been consuming bone broth with added collagen now for a couple of years and just seem to be doing fabulous with that.

JM: Yeah. Especially if you're engaging in exercise, because your connective tissue, your tendons and ligaments tend to get injured when you're weight training or something. Almost everyone's going to in time ~~[inaudible 1:13:18]~~. But once you start increasing your collagen and bone broth or connective tissue from the animals, those injuries kind of disappear. I mean you just don't get injured. You don't get those problems anymore, which is great.

CK: Right. Exactly. Yeah. I just want to reinforce the statement you made about the organ meats. This is getting a little bit deeper, but there's absolutely no question in my mind – all the data supports this – that macular degeneration patients are vitamin A-, D- and K2-deficient. We can get those from organ meats, especially beef liver and chicken liver. Cod liver, fish liver oils are fantastic sources of vitamins A and D. Actually, so are the fish eggs, the roe.

For people who eat sushi, those are great sources of vitamins A and D. But for people who don't eat liver at all, then I really strongly recommend they consider an extra virgin cod liver oil supplement. It's just – You can take that, like a tablespoon, twice a week essentially, and get great doses of vitamins A and D. Those are critical nutrients.

JM: Yeah. I couldn't agree more also. But my caveat on that would be that we have the metabolic capacity to utilize vitamin D oil. But it is, in my mind, very clearly not the optimal form. We were designed to get it from the sun shining on your skin. There was just not a microdoubt in my mind. Because not only do you get the vitamin D, but you get the infrared shining on your skin, generally increasing nitric oxide and powering up your cytochromes to improve more ATP generation. It's a whole wide additional variety of benefits.

Personally, I probably get some vitamin D in my diet, but not much. My vitamin D is extraordinary, and I haven't swallowed or taken any supplements for over 10 years. I think, ideally, get yourself in an environment where you could get regular sun exposure.

CK: I could not agree more. I think that's actually really beneficial for the eyes.

JM: Yeah, yeah, yeah. I guess just a quick tangent before we sign off – just a personal curiosity, because I know you're an ophthalmologist – what is your impression about the cataracts? Which is, of course, oxidative stress in the nucleus of the eye. Actually, I forgot to mention too at the beginning of this, one of the reasons I like this topic is before I went to medical school, many people would know this, but I was a technician who removed eyes for transplants, people who died and donated their eyes. Of course, they don't transplant the whole globe. They just essentially surgically remove the cornea and they use that for transplant. They're probably going to stop doing that at some point because that's a pretty easy tissue to reproduce with genetic reengineering.

But right under there, of course, I got to see a lot of cataracts. It was really interesting. You could see how dark they were in the elderly people. I don't remember many of them having had a corneal or lens implants. But what is your impression as to the – Is there a correlation between macular degeneration and cataracts? Do you think the dietary strategy you mentioned are going to radically reduce the risk of cataracts, having the need for cataract surgery?

CK: That's a great question, and honestly one that I have not really dug into that research. My sort of gut reaction, having been a cataract surgeon for all these years is that we know that, for example, diabetics get cataracts sooner. Smokers get cataracts sooner. I think, in general, I do believe that people with poor diets in general tend to get cataracts sooner.

I remember seeing a man, who I presented in my book. I think he was 91 or 93 years old, one of the fittest men I've ever seen in my life. He grew up and lived on a farm his whole life. He always consumed native, traditional American food, which was coming right out of his farm. This is one of the two men over the age of 80 in my life who had crystal-clear, natural lenses.

JM: That was what I was looking for. You just supported it right there. That is the strategy. There's not a doubt about it. But I would encourage you. I'm actually a bit surprised that you haven't

integrated that into your analysis. It wouldn't be that hard. If you do continue to explore this, I would encourage you to integrate that. Because if I'm not mistaken, as a cataract surgeon, you would probably know, I think cataract surgery is the No. 1 surgery in the U.S.

CK: Yeah. It's the No. 1 surgery in the world.

JM: I didn't know the world statistics.

CK: Yeah. I think it's somewhere between – I think it's 2 to 3 million. I should know this, but I think it's over 2 million cases per year.

JM: Yeah. Certainly worthy of your efforts to describe this, because you can help a lot more people.

CK: Sure. One of the reasons I focus so strongly on macular degeneration is because it is heart-wrenching and devastating to see what happens to people who lose their vision. This is one of the worst things. If you ever think about losing your vision, it is just tragic. It's a travesty to me that today 270 people will go blind. Every single one of those from macular degeneration.

JM: It's the same issue with cataract episode. You will go blind unless you have access to Western world surgery. You're blinded. In the past, they can't do it. As you know, in third world countries, they're blind because they can't go to surgery.

[-----1:20:00-----]

CK: Right. Absolutely. I mean I think that's probably why – given my bias being here in the United States, where we've gotten so good at cataract surgery. We're so successful and so rapid that it's not as big a concern for me here. You're absolutely right. I mean in Africa and in India, places where people can't get access to good surgical eye care, yes. It's blinding.

JM: Well, I hope to meet you in person one day. When I'm over 90, you pop an ophthalmoscope in my eye and tell me, "Hey. You're the third guy over 90 who had crystal clear lenses." At some point.

CK: That would be great, Dr. Mercola. Yeah.

JM: Alright. Thank you for all your work. It's been an absolute pleasure. You're just a fountain and treasure of knowledge about this topic. We're all so grateful for you having made this commitment to really extend the breadth of knowledge of medicine. I mean you really are a pioneer in this perspective. I did not mean to, I guess, build your ego at all. But it was a really honest assessment of what I believe the breadth of your work has accomplished. It really is historic. I congratulate you on doing it. Because it takes a special person. There's not many people like you who have this dedication, this passion for the truth. I wish there were more. But you stick out like a sore thumb.

CK: I don't know if I shared this with you, but I even partnered with a well-known retina guy in the U.K. to try to get on stages to present this. Every single major ophthalmology organization,

like the American Academy of Ophthalmology, the number of retina organizations, The Retina World Conference, every single one of them turned us down to present this. They don't want to hear it. Even after the published paper, they don't want to hear this.

JM: What do you think the reason for that is?

CK: You know, I'm telling you –

JM: Is it because they're wrong? They've been wrong for so long that the guilt would be so severe they couldn't stand it?

CK: I believe – Like they always say, people become so invested in their own beliefs, it's so hard for all these guys who have been believing, researching and telling their patients for three to four decades or more that this is a disease of aging and genetics. I think that's a big part of it.

But the American Academy of Ophthalmology even, they turned me down to publish the paper, which we ultimately published in the Journal of Medical Hypothesis. They turned me down to present it at the American Academy of Ophthalmology Conference. The American Academy of Optometry turned me down. The only one –

JM: Optometrists, not even the real doctors.

CK: I know. I thought that would be a slam-dunk.

JM: Geez.

CK: The Christian Ophthalmology Society let me present them this past summer. That's the only big ophthalmology group I've presented to.

JM: That is such a sad commentary on the status of conventional medicine. They're that blinded and unwilling to even consider another approach.

CK: Yeah.

JM: That's beyond well-documented. You have accumulated irrefutable evidence. There's just no counter to what you've compiled. I mean it's just slam-dunk.

CK: That's what I think. I mean I think it's very powerful evidence. You know, one of the things that's comforting to me is that this is what's happened to so many people, just like when Herrick published the paper about BMI in 1912. Nobody took him seriously for like a decade. Harold Ridley, who developed and put in the first intraocular lens in 1948. It was 1975 before the American Academy of Ophthalmology even accepted him as – He was held in disregard and disdain for decades. Really. They just crucified him.

JM: I guess you're in good company then to know that this is just the course of the advancement of science – not just health, but science and medicine. It's just the way of the world. But we'll do

everything we can to accelerate the process, because there's no reason that people need to suffer needlessly with this type of approach. The remedy is so foundationally simple. It's just crazy.

CK: Thank you, Dr. Mercola. It's such an honor and a pleasure to be here with you and to do this interview. Thank you for helping us to get this word out.

JM: Yeah.

CK: This is ultimately reaching people who will save vision. I thank you so much for helping.

JM: We'll have you back on again too, because I know you're writing another book. Whenever you finish that, just let me know and we'll get you back on again to give us an update, because we can go on for hours and hours and hours with all the information you found. It won't be hard figuring out what to talk about.

CK: Right. If you don't mind me mentioning, our website is –

JM: Sure. Yeah. Go ahead. Sorry. Sometimes I forget. Tell us where people can find out more about what you do.

CK: Okay. Yes. The website is CureAMD.org. The organization is Cure AMD Foundation. We are a non-profit 501C3 charitable organization. We give away the books for the cost of printing. The eBooks are available for the cost of a download, which is 50 cents. Our goal is to reach as many people as possible. We are otherwise supported only by charitable contributions. But our goal is to save vision from this horrible disease, macular degeneration. Once again, thanks for helping us to do that.

JM: We'll make sure that your information is really prominent on the article, so people can easily access that. I want to extend your goal. Because if you save vision with the strategy that you're advocating, you're also radically reducing if not eliminating your risk for cancer, heart disease, diabetes and Alzheimer's. You get all for the same strategy. Why would you not want to do that?

CK: Right. I totally agree. It's all the same thing. The same diet that saves your eyes saves your health.

JM: Yeah. People would come in – Modern medicine is so good at diagnosing and developing these very sophisticated Latin names to give them a label. It doesn't matter once you have it. Whatever illness you have, I would say the vast majority – maybe 85% or 95% – It's the same treatment strategy. It's the same thing. It's the same thing we talked about today. You've got to do those first. There are some tweaks that we don't have time to talk about now, like EMF exposures and other things like that that radically increase oxidative stresses. But that's what it is. It's the simple basics. Alright. Thanks again. We will definitely have you back on.

CK: Thanks, Dr. Mercola. I appreciate it.

[END]