

# The Carnivore Diet — A Dangerous Fad or Health Rescuer?

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#### STORY AT-A-GLANCE

- > A carnivore or meat-only diet can be uniquely beneficial for some people, especially those struggling with autoimmune diseases, Crohn's disease, ulcerative colitis, chronic pain and mental health disorders
- > It can also be used as a detox strategy for three to 12 months
- One of the primary benefits of a carnivore diet as long as you focus on red meat and limit chicken and pork — is that it's a really low in omega-6 fat, which is the most harmful type of fat and a primary driver of chronic disease
- You're also removing most or all sources of oxalates, found in many plant foods, and plant lectins. Both can trigger inflammation and a variety of health issues, including chronic pain and autoimmune diseases
- > Another benefit of the carnivore diet has to do with carnosine, which is a sink for glycolated lipids. Glucose attaches to the carnosine and as a result, your glucose level goes down. Carnosine is also a longevity molecule

In this interview, Dr. Shawn Baker discusses the carnivore diet, why he's on it and why he thinks it can be a beneficial choice for others. He also has a regular podcast called "Revero," where he shares his expertise on this topic. Revero is the name of the company he cofounded, which specializes in getting people off pharmaceuticals using diet and other lifestyle changes.

Baker's background is actually that of an orthopedic surgeon. He's also a competitive athlete and played professional rugby in New Zealand for a number of years. As he entered his 40s, he started experimenting with nutrition, and around 2008 got hooked on the ketogenic diet.

# From Orthopedic Surgeon to Lifestyle Coach

Around the same time, orthopedic surgeons were told to not operate on morbidly obese patients (a body mass index of 35 or higher) to encourage them to lose weight, thereby lowering their risk of surgical complications and improving outcomes. One thing led to another, and at the end of it all, Baker ended up transforming his career.

"I started suggesting these low carb ketogenic diets with my patients. Not all of them would try it, but some of them did. The ones that did, not only would some of them lose weight, but what was more profound and interesting is they would have a profound reduction in their pain, so much so that many were taken off the OR schedule.

Well that thing got me thinking, 'Why can't I do this for more patients?' So, I started to talking about that. I printed out flyers of books and videos you could watch. I would hand out 20 a day, easily, because I was seeing 40, 50 patients a day and at least 20 of them I thought could benefit from this.

That got frustrating because it was a very inefficient way to get this message out, so I talked to the hospital administration. I said, 'I'd like to spend half a day once a week doing some lifestyle counseling.' What really shocked me was their profound reluctance to do that. They flat out said, 'No, that's not happening.'

I was an employee of the hospital. I was the head of the surgical group. I was like, wait a minute, I'm making these people avoid operations that have potential complications. Then I quickly realized ... we need to make revenue. I was a good source of revenue because I was one of the busiest surgeons in the hospital ...

I ended up leaving and went on to do what I'm doing now, which is promoting lifestyle. I got to say, I'm so much happier. I enjoyed what I did as a surgeon, but it's nowhere near the satisfaction I get today, seeing people's lives completely change ...

So, in my dietary journey, I went on this low carb ketogenic diet, [but I also] saw these crazy people doing an all-meat diet. I thought, 'God, that's so stupid,' but I was morbidly curious. I just followed these guys on social media ... I kept reading [while thinking] 'I can't believe this is true.'"

# **Entering the World of Carnivore**

In 2016, he finally took the plunge and decided to try the carnivore diet for himself, first eating nothing but animal foods for one whole day, then two and three days in a row. By the end of that year, he went a whole month eating a meat-only diet.

Despite fears of suffering all sorts of negative health effects, he actually ended up feeling the best he had in a decade. So, he kept going, and after two months, his chronic tendonitis vanished. He's now been on a carnivore diet for six years.

"I don't think everybody has to do it," he says. "I don't think it's the only way. I think there are people that uniquely benefit from this. Even if you use it for a period of time as an elimination phase — three to six months, maybe a year. Then many people are able to incorporate a few other things. It's been an interesting journey. I've really enjoyed it.

I've seen incredible, life transforming stories over and over again ... I had a guy who was diagnosed with ADHD as a young child and on all these meds; suicidal, in and out of the ER 200 times. I mean 200 times through the ER. How much does that cost?

We put him on an all-meat diet and he is like, 'I'm done [with the meds]. I don't need any of this stuff.' How much does it cost to feed the guy rib eyes? \$10 to \$15 a day maybe.

How much is going to the ER? ... Much of health care is concentrated in a small percentage of people that are 'repeat offenders,' as they call them. They just continue to go to the emergency room over and over again for various reasons, some psychiatric ...

There are now several studies that have come out looking at this diet, all of which show it very positively. There are no negative studies out there. Maybe some will be produced down the road, but in my view the default answer at this point is that it's helpful for people ... Especially for autoimmune related diseases, things like Crohn's disease and ulcerative colitis. It seems to be extremely powerful for those patients.

A lot of them are on super expensive biologic drugs that have side effects.

There's increased risk of infection, increased risk of cancer. I mean it's just bizarre how our medical system has gone. Particularly in the last few years, a lot of people have become somewhat distrustful of our medical authorities and I think for good reason."

# Is a Carnivore Diet Sustainable?

Like most diets, carnivore diets can range in severity. Dr. Paul Saladino, another well-known advocate of the carnivore diet, has diverged a bit from his earlier stance and now integrates foods like fruit and honey, up to 250 grams of carbohydrates a day.

Baker's staples are steak and eggs, but he too will add other foods now and then. "It's not a religion to me," he says, "but I legitimately feel best when I'm just eating a bunch of red meat." At 6 foot 5 inches, 250 pounds, and a very active lifestyle, Baker routinely eats between 3 and 4 pounds of meat a day, which equates to 300 grams of protein a day. He goes on:

"I don't think everybody needs to be on a carnivore diet. I think some people can definitely benefit, and I think a period of strict can be beneficial. Some people choose to continue to do that. I don't see a big problem for most people. I know that's controversial, but I have seen tens of thousands of people do this indefinitely.

I know there's a thought that low-carbohydrate diets in general are unsustainable. Yet you've got people that have been doing it for 25, 30 years ... I think for some people, and this is where I would disagree with Paul [who tells] people you must eat fruits and honey to be optimized or healthy. I don't think that's necessarily true.

That's my observation. I tend to go by what's going on results wise and I've collected data on 12,000 people on the diet ... There was a paper that just came out on hidradenitis suppurativa [painful lesions in the groin]. It was a case study. [After] 43 days on the carnivore diet, boom, gone."

One possible reason for why certain conditions, such as autoimmune disorders, improve on the carnivore diet could be because you're removing most or all sources of oxalates, found in may plant foods, and plant lectins. Both can trigger inflammation and a variety of health issues.

## The Cholesterol Issue

One of the criticisms hurled that those who advocate for a carnivore diet is that it may cause heart disease by allowing your cholesterol to spiral out of control. Baker addresses this issue saying:

"My total cholesterol runs anywhere between 180 and 250, somewhere in there. I had a coronary artery calcium scan as well, and it's zero ... When I assessed my lipoprotein A, it was 2, which is about as low as it possibly comes. A lot of people tell you it's genetic, but there are studies showing that saturated fat will actually drive lipoprotein A down, which is interesting, because again, I eat a lot of saturated fats ...

Most people say, 'You need to be on a statin or a low-fat diet' based on where I'm at. But I also look at all my other risk factors. Inflammatory numbers, blood

pressure, body composition.

I mean, I'm setting world records as an athlete. You don't do that with a bad cardiovascular system. I mean, it's crazy. When somebody comes to me and says, 'Hey doc, my LDL cholesterol has shot up to 304. It was 200.' I don't tell people to ignore that.

I think it's just a situation in which you have to get more information, whereas most physicians will say, 'Stop immediately. Go on a statin.' I think you have to be more circumspect about this. Look at nuance.

One of the things which you talk about is apoB [apolipoprotein B]. If apoB is elevated, it doesn't matter how many particles or the size of the particles. It's a number of apoB that you're exposed to over time and that's going to lead to a damage.

Now there's another part of that equation. If you believe the model where LDL cholesterol is causal, and it gets pushed under the endothelium of the blood vessels, there's two sides of that equation. One of them is a receptor, or rather the blood vessel itself and how 'sticky' it is. That has to depend on protein glycan content, these glycosaminoglycans that are under modification. What modifies it?

Well, we know diabetes drugs and blood pressure meds make the vessels stickier. If you've got more LDL cholesterol [but] your vessels aren't very sticky, does that cancel each other out? I don't know, but could you find that out? Imaging is the way I typically approach it if the person is of appropriate age. A 20-year-old doesn't need to be getting a CAT scan or anything like that.

If you're 40-plus and your LDL is high but you're like, 'I don't want to change because I feel so good' ... then get some imaging, get carotid Doppler studies. You can get angiography, which is more expensive and tends to be a little more invasive. There are ways to monitor this rather than just going on a low-fat diet."

## **Carnivore Diet Is Very Low in Unhealthy Fats**

One of the primary benefits of a carnivore diet — as long as you focus on red meat and limit chicken and pork — is that it's a really low omega-6 fat diet. As I detail in "How Linoleic Acid Wrecks Your Health," the worst fats you could possibly eat are seed oils because they're loaded with omega-6 fat, and 60% to 80% of that fat is linoleic acid (LA), which is the worst of all.

I'm convinced LA is a primary contributor to nearly all chronic diseases, as it acts as a metabolic poison. Over the last 150 years, the LA in the human diet has increased from about 2 to 3 grams a day to 30 or 40 grams. LA used to make up 1% to 3% of the energy in the human diet and now it makes up 15% to 20%.

Most of it comes from seed oils, found in most processed foods and condiments, but chicken and pork also contain high amounts of LA, thanks to the grains they're fed. Baker comments:

"Clearly, polyunsaturated fatty acids [PUFAs] and seeds oils are not part of the natural human diet. They were only invented in the late 1800s. I don't care what you argue we were eating 1,000 years ago, 10,000 years ago, 300,000 years ago, 3 million years ago ... we were not eating these things. They are not part of the natural human diet.

The other thing that's a big confounder here is, where are these things usually found? They're almost always, with rare exception, found in highly processed foods. It's a proxy measure for how much processed food you're eating.

Either way, [the carnivore diet] is going to get the PUFA out of your diet to a large degree ... Just by removing that ingredient [seed oils], you are removing the processed garbage out of your diet. One way or the other, it's helping you."

# Yes, Saturated Fat Is Great for Your Health

Saturated animal fats, on the other hand, are healthy, and have been exonerated scientifically as well. Back in 2017, the American Heart Association showed its industry bias when it sent out a warning saying saturated fats such as butter should be avoided to cut your risk of heart disease.

The problem was the data and science they relied on was completely outdated and had been refuted and proven wrong multiple times. For details, see "AHA Renders Itself Obsolete With Long-Refuted Dietary Advice."

"There was a study published about a month ago that talked about the boogeyman of saturated fat," Baker says. "It was a systematic review and it said:

'After examining all the RCTs [randomized controlled trials], observational studies and cohort studies, we see no evidence to show that saturated fat is an issue, particularly when it comes from whole foods.'

The other interesting thing with saturated fat is — and I saw this data — in the American diet most of the saturated fat we consume is in the form of junk food, cakes, pastries, and other things, whereas saturated fat coming from red meat is only about 3%. My diet is basically all meat so I get all my saturated fat from meat. And so far, no bad result."

## The Benefits of Carnosine

Another benefit of a carnivore diet has to do with carnosine, which is a sink for glycosylated lipids (ALEs) and sugars (AGEs). Glycation is when a glucose molecule attaches to a protein molecule. Hemoglobin A1C is a measure of glucose control over three months. Basically, it's a measurement of glycated red blood cells.

Red meat contains carnosine, which acts as a sacrificial sink for these kinds of glycated lipids and AGEs. In other words, the glucose will attach to the carnosine and as a result, your glucose level will go down. Carnosine is also a longevity molecule. Baker explains:

"[Carnosine] particularly affects the central nervous system that way. Our central nervous system is mostly fat. Something like 25% of the cholesterol in your body resides in your brain. So, carnosine has been a wonderful tool.

I think this is the problem when we talk about food. We break it down into different contents. 'Oh my god, meat has saturated fat. Oh my God, cooking your meat is going to produce some AGEs, therefore that's going to destroy you.

Then you say, 'Well what about all the carnosine, the carnitine, the taurine, the creatine?' — all these things that counteract the [bad], because we don't just eat saturated fat by itself. It comes with all these other things. We don't just eat AGEs by themselves. There are these detoxification [molecules] ...

Carnosine is just a wonderful, wonderful thing. The other point I wanted to mention is ... a lot of people that go carnivore, they seem to see benefits that occur up to three years out. They notice it gets better and better.

I'm six years in. I don't know that I get dramatically better, but I just feel good all the time. I'm able to perform and train, and I'm not seeing that decline [in health with age] like other people. At my age, you look around at your peers and you're like, 'Oh my god, everybody's old and dead or near dead.' Why am I not doing that?"

# Will a Meat-Based Diet Harm Your Kidneys?

Another concern that makes many shy away from a meat-based diet is the fear that it'll raise your creatinine level and damage your kidneys. As noted by Baker, it's not unusual to see high creatinine levels in big, muscular people. Your creatinine index is a surrogate of lean body mass.

So, higher muscle mass translates into higher serum creatinine. If you're exercising hard and breaking the muscle down more than normal, you're going to have higher serum creatinine. Creatinine will also be high if you're on a high-protein diet.

Glomerular filtration rate (GFR) is a measure of how well your kidneys are filtering metabolic waste. The problem with GFR is that it doesn't take into account your body size or muscle mass. People with greater muscle mass will have lower GFR, all things being equal, compared to someone with low muscle mass. Lower GFR is typically indicative of poorer kidney function, but it can be deceptive if you're on a carnivore diet or have very high muscle mass.

For this reason, Baker prefers another test called cystatin C. It's an alternative way to assess GFR and doesn't involve protein or protein turnover, while still assessing kidney function.

"Just as an estimate, anytime I have somebody with a high serum creatinine, I tell them to get a cystatin C [test]. It's almost always normal ... For instance, I just did this the other day, if I calculate my GFR based on creatinine, it's 56, which is considered low. If I calculate it based on cystatin C, because my creatinine was 1.92 the last time I checked, my GFR comes up around 124 instead of 56.

I've also had my micro albumin checked directly for protein, and it's been negative. So, I would just, as an experiment, check it side by side. Get the GFR measured both through serum creatinine and cystatin C. You probably will find that your kidney function is better than you think it is ...

[BM] Brenner in the 1980s did studies on rats and mice, showing that feeding them high protein diets led to glomerular damage. However, that doesn't carry over to humans.

Stu Phillips, who's one of the top protein researchers in the world, did a nice paper in 2018, a meta-analysis review of high protein versus low protein diets; no difference whatsoever in kidney function.

David Unwin, who's in the UK, has done a nice study on diabetics with compromised kidney function, Stage 1, Stage 2 chronic renal insufficiency. He's

seen them reverse by going on high-protein diets and just removing the garbage. That's an interesting observation."

### **More Information**

In this wide-ranging interview, we also discuss Baker's exercise regimen and tips for mitigating delayed onset muscle soreness (DOMS) after exercise. We also touch on other healthy lifestyle strategies, so for all the details, be sure to listen to the interview in its entirety.

To learn more about how the carnivore diet can help you, tune in to Baker's podcast. His virtual-first clinic, Revero, will launch in early 2023, but you can sign up for early access if you're interested.

"It's a grass roots movement," Baker says. "The government is not going to adopt a healthy diet style. Corporations, it's just not in their business interest to do it. It's got to be on the people to do it, and this is how we change things little by little."

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