Diet Doctor Podcast with Ted Naiman (Episode 40)

Dr. Bret Scher: Welcome back to the Diet Doctor podcast with Dr. Bret Scher. Today I'm joined by Dr. Ted Naiman. Now Dr. Naiman is a primary care doctor here in Seattle and he has his own story about how he transitioned from predominantly vegetarian Adventist life both with family and in medical school to learning about the benefits of low-carb lifestyle.

But what separates Ted from sort of your average low-carb doctor, average low-carb enthusiast, is he is not so much in the camp of the low-carb high-fat. Ted is really big on protein and the importance of protein and it's amazing how protein as a macronutrient can be so controversial. Now remember we don't eat fats, we don't eat proteins, we eat real foods, but the percentages matter.

And there's this concern, this fear about getting too much protein. So hearing Ted's perspective is very interesting from the standpoint because it's a message that we don't hear a lot of and is still controversial some of it, but I think it's a great perspective. Now he's also known as the exercise guy. If you've seen his before-and-after pictures he's ripped, I mean this guy is built and fit.

Not super bulky, but fit and trimmed, great lean body mass and he does it on 15 minutes a day of exercise which makes a lot of people unhappy and upset with him, but he gives us some of his secrets and some of his tips about how to achieve that and more importantly how to do it safely for people who maybe don't have any experience in exercise.

Now let's be honest not everybody is going to get the results he has, but the importance of exercise, how it contributes to health is still a crucial concept and maybe doesn't get enough emphasis because although exercise may not be the keto weight loss, there are some other components about maintaining lean muscle mass and strength that can be very important for health and recovering from episodes where you may have struggles with your health.

So we talk about that, we talk a little bit about Dr. Ted as the doctor and as the person. He's got a very relaxed approach to things, a very relaxed attitude that hopefully you will appreciate. If you want the full transcripts, go to DietDoctor.com. Otherwise enjoy this interview with Dr. Ted Naiman.

Dr. Ted Naiman, thanks so much for joining me on the Diet Doctor podcast today.

Dr. Ted Naiman: Thank you for having me, it's an honor.

Bret: It's great to have you here. Now in the world of low-carb, in social media, you're sort of known as the protein guy and the exercise guy. But it wasn't always that case, right? I heard some stories about your upbringing and your background and... very different. I mean, you were brought up in an Adventist tradition and you went to school at Loma Linda which is a Seventh-day Adventist school, which is sort of the contrary to high protein and low-carb.

So tell us about your transition about what you learned growing up in that type of environment and how your thought process differs and how that change happened.

Ted: Okay, sure, so yes I was raised in an Adventist tradition and Adventists of course are famous for being vegetarians. And my upbringing was that you now basically animal fat and cholesterol and saturated fat was really terrible and the goal is to eat as many plants as possible and so I had this really healthy diet on paper where I was eating lots of whole grains, and you know, just basically lots of whole-wheat and that kind of thing and it was supposedly the healthiest diet.

And then I went to Loma Linda Medical Center and of course Loma Linda is this famous blue zone where everybody is vegetarian and it's sort of an Adventist vegetarian Mecca and I just-- well, my personal experience was that I was never in a really great shape. My body composition was not that great, I was not that healthy, I had a lot of issues, I had a really bad eczema and I had a really bad body composition and I didn't feel particularly healthy at all.

And so what I ended up realizing is that diet doesn't matter. Diet is not a big deal because here I am eating the healthiest diet you possibly could and I'm in really bad shape. So clearly diet is not that important. And honestly even though Loma Linda is, a you know, diet based institution, they're very big into diet and lifestyle even there my training was basically, okay if somebody's having a bad health outcomes it's mostly genetic.

If you're obese, it's genetic. If both your parents are obese, there's 80% chance you're going to be obese. If you have type 2 diabetes it's mostly genetic because your parent was diabetic or your grandparent. And so I got this training that oh yes diet is important, you should never eat meat, but at the same time if you get a bad outcome, you can blame it on your genetics and you should just feel sorry for people who are overweight or diabetic.

They can't help it because their parents were overweight or diabetic. So you do the best you can and you just give them more and more drugs. So this is my mindset... is like okay diet is important. Almost from a religious point of view you should not eat animals and you'll be healthy. And then if something bad happens to you it's really just bad genetics.

Bret: So when you started your practice that was still the mindset you had when you were seeing patients one after the other after the other.

Ted: Well, this was my mindset in medical school and in my first year of internship. So I did my internship in South Carolina which was just the diabetes and obesity capital of the country at the time and I saw just a ton of pathology, just like every diabetic complication you can imagine, just over and over again.

So here I am in residency with this clinic with just tons of diabetes pathology and everybody is slowly getting worse, getting fatter and more diabetic and amputations and blindness and kidney failure and the whole thing. And really I'm just there feeling sorry for people, because I think, wow, you know, such bad genetic... You just can't overcome that, right? It's not your fault, you're just born that way.

And then really it was a patient of mine who came in one day and wow, he'd lost 30 pounds and his blood sugar was totally normal. And he told me I feel great and I asked him... I said, "What did you do? You have to tell me what you did so I can tell everybody else to do the same thing." And this guy pulls out a copy of the Atkins book and he said, "I went on this Atkins diet where I just didn't eat carbs and bam... I feel fantastic."

And that blew my mind because never had I seen anyone go on a vegetarian diet and have this miraculous transformation. This was my first experience with diet as a huge lever for health and it was a big deal.

Bret: Were you interested like jump in right away or were you still like, 'yeah, but that can't really be healthy... I'm sure there's something to that that's more concerning'? Did you like resist it right away because of your training or were you open right away? **Ted:** Oh no, I was like this is the coolest thing I've ever seen... I was so excited. And I will never forget what happened to me.

I went to my instructors in residency and I was like, look at this guy, he lost all this weight, his blood sugar is down, his blood pressure is down, his A1c is down, he lost a bunch of weight, he looks like $1 million. And they looked at me and they said, "What happened to his total cholesterol?" And I hadn't really paid any attention to it and so I looked it and I was like, well it did I guess go up 20 points.

So I was crestfallen and my instructors were like, "Good job, Naiman... "He probably had a heart attack in the parking lot. And you are basically going to kill people." And they told me under no circumstances could I recommend this diet and this was just a bad idea. So that was the spark, you now, and then in residency we are required to do a research paper and I started researching basically macronutrients and health.

And that was about 20 years ago and you know back then it was a lot harder to do research but I found all this evidence that people are eating way more carbohydrates than they probably should. And I've been doing this low-carb thing now for 20 years.

Bret: So was it that residency experience that made you change personally? They may have tried to prevent you from helping your patients that way, but you did you help yourself that way right away in residency?

Ted: Yeah definitely I mean I personally had a massive health transformation from going on a low-carb diet. I was definitely skinny fat, I was never really fat-fat, but I definitely lost about 20 pounds and my body composition improvements were huge and my before-and-afters were not that dramatic but it felt dramatic to me.

Bret: Well, that's important, I mean how you feel there's one thing. We do a lot of, you know, look at the difference visually, but how you feel is even more important than that the difference visually. So once you got out of residency and got into practice, did you just hit the ground running as a low-carb doctor, using that as an intervention right away in people?

Ted: Yeah, I've basically been recommending carb restriction for my whole 20 year career now and initially it was really under the radar because I was worried about this total cholesterol. I mean who knew what was going to happen... this has got to be bad, right? But, you know, thankfully, as time goes on thanks to things like Diet Doctor, the legitimacy is definitely increasing and it's a lot easier to practice low-carb medicine.

Bret: Yeah, great to hear. Now you used the words "low-carb" in "low-carb medicine" and that frequently is used interchangeably with ketosis in ketogenic medicine I guess you could say. But they're not always the same. So do you draw a line in differentiating them in when you would use one or the other or the benefits of one of the other? Just give us an idea of how you see the difference between low-carb and keto.

Ted: Right... I don't really use the word keto because I'm not telling anyone to track ketone levels. It doesn't seem to be super necessary. And I know that anyone who is restricting carbs even below about 100 g a day is going to be at least in a light ketosis, you know, off and on. And so I don't really-- I see it on a spectrum or continuum and

for me just plain old low-carb is good enough because it does imply a significant amount of ketosis and so...

For me... the popular keto diet for me has kind of evolved into something where you're just going out of your way to eat a ton of fat and drive you ketone levels up as high as possible and I think that at a certain point that becomes more bad than good. And so I don't really focus on ketone levels or make sure you eat enough fat to be in extreme ketosis all the time. So I just like the carbohydrate restrictions side of keto.

Bret: It's a fascinating discussion because it seems like there are some people who need to get into ketosis to break down barriers and move forward and some people are going to thrive on a lower carb not worrying about ketosis and trying to find who is in what camp can just happen with self-experimentation, but it sounds like for most people or pretty much everybody you're not even really that concerned about it. You say just cut the carbs down about 100 g and you're going to improve.

Ted: Right, right, and the reality is that everyone thinks of ketosis as some sort of binary switch, but it's just a slow gradual continuum from making tiny amounts of ketones to making a whole bunch of ketones and all these biological processes are happening at all times in everyone.

So everyone's generating a tiny amount of ketones at all times. And then as you restrict more and more carbohydrate or expend more energy your ketone levels go up and it's because it's on a spectrum. I don't really say right now you're in ketosis and then, you know, an hour later, oh now you're not in ketosis. It's just I don't like thinking about it in this binary fashion.

Bret: How about the adaptation process? I mean it seems like for some people they really have to make a jump to help their body kind of flip a switch like you said and then they can sort of back off and go in and out of ketosis, but to get into it for a first time and train your body to get off of all that glucose and sugar that you've been burning for so long, that maybe it takes a little bit more of an extreme step than just 100 g of low-carb.

Have you found that to be the case at all?

Ted: Well I think yes fat adaptation is a huge big deal and that's very real and you really have to upregulate the ability to run your whole metabolism off of fat and I think that's a slow and gradual process and you'll find a lot of people who tell you that they can't perform athletically as well as they could for months after adopting a low-carb diet, just because you are slowly up-regulating the ability to generate a bunch of ATP from fat at a high enough rate.

And actually I feel like this is unrelated to just making ketones. So like I could take anyone off the street and just tell them to not eat carbs for 16, 18, 20, 24 hours and they are going to be fully generating ketones.

But they're going to feel awful and they're going to be starving and their exercise performance is going to nosedive and now you're talking about the process of fat adaptation which to me is totally different than just making ketones which honestly anyone on any high carb diet could just not eat carbs for 16 to 24 hours, and they're in ketosis. So to me it's not about... it's not so much about the ketones. It's more about fat adaptation and doing better, running your whole metabolism off of fat.

Bret: And so much of this has to do with our insulin levels and our glucagon levels and that ratio and being able to train our body to have lower insulin levels, which is required for ketosis. And not putting words in your mouth, but it seems like of the two, lower insulin and higher ketones, you would be much more interested in just focusing on the insulin and forgetting about the ketones... would that be accurate?

Ted: Correct, I mean for me I think the ketones come along for the ride.

Bret: Yeah, so when it comes to a low-carb diet or a ketogenic diet, how to formulate it, in what percentages can certainly vary from person-to-person. And one of the biggest areas of controversy is protein. We sort of all agree you limit the fat... Sorry, we all agree you limit the carbohydrates and then you eat the proper amount of protein and you can fill in the rest with fat. So the discussion comes around what is the proper amount of protein.

And it's in such an interesting discussion and going back to the RDA, you know, the recommended daily allowance of protein, you see ranges out there from 10% of your calories to 0.8 g per kilogram, to 0.3 g per pound, which is really a small amount of protein, but somehow that's the recommended daily allowance. So help us understand what this RDA of protein means and how it can be so small compared to what we were used to.

Ted: Right, so the RDA is just a bare absolute minimum where below which you're going to be just abjectly deficient. And the RDA in no way suggests how much protein you should eat. It's just how much protein you should never ever, ever, ever go below. So that's a really important concept. It's almost impossible to eat "too much protein".

You basically can't do it. So it's very, very possible to not eat enough protein and have protein deficiencies which is horrible and very severe and you will actually die. So the RDA is just there to tell you what to not go below. In no way does that suggest how much you should be eating.

Bret: Yeah, and I think that's such an important point because when we talk about the RDA for vitamin A or vitamin D or Omega threes or whatever, the calcium and vitamin C, it's sort of accepted that it's a minimum. But somehow when we talk about protein certain nutritional sex have turned that into a maximum; you shouldn't go above it. But it was never intended that way.

Ted: It was never intended that way and I really don't even know where that comes from.

Bret: So then there is some legitimate concern about what if we are eating too much protein. So I guess it can come from three different perspectives. One is longevity - the concern that too much protein harms longevity, lower proteins improves longevity. Two is this almost mythical stimulation of mTOR and how is that affected with protein.

And three is ketogenesis, you know, with gluconeogenesis and kicking you out of ketosis. So let's take each one of those individually starting with the last one - gluconeogenesis. It's a big word, basically creating new glucose in your body from something else, and frequently from protein. Is it real? Does it happen?

Ted: Gluconeogenesis is constantly occurring and your liver is making every bit of glucose you ever need all the time, 100% of the time whether you're eating carbs or not. And gluconeogenesis is demand driven. If you need more glucose you'll do more gluconeogenesis. But it's not supply driven, so eating extra protein does not increase gluconeogenesis.

Bret: But then you see all these reports of people who are following a ketogenic diet and they increase their protein intake and their ketones disappear or decrease. So what's the explanation there?

Ted: Yeah I mean I think you will suppress ketones if you eat more protein, that's absolutely true.

Bret: So I guess your point would be then, since I'm not concerned about a ketogenic diet, I don't care if gluconeogenesis is happening and ketones are going down. As long as you're still following carb restriction you're still be healthy and health trumps ketosis. Would that be an adequate statement for--?

Ted: Absolutely.

Bret: Okay. So people who are on carnivore diets and eating much higher levels of protein, any concerns there with getting too much?

Ted: Not really, I mean, you know, basically even in even in medical circles up to 35% protein seems to be fine. Nobody's seen any problems with protein levels that high. And hunter gatherers were eating at least 19 to 35% protein in their diet and so I don't really see any problem from carnivore diets. Usually an average person on a carnivore diet is eating about 30% protein and in no way do I think that's too much.

Bret: And what about this concept of mTOR? mTOR being very important nutrient sensor and growth stimulator in our body. Without it being stimulated we would not grow we would not develop muscles, but with it being stimulated too much, there's concern that it's going to cause abnormal cell growth, so cancer cell growth. How do you wrap your head around the concerns of mTOR with too much protein?

Ted: I think that there is definitely this sort of Yin and Yang to anabolism and catabolism and you have to go back and forth and you have to have some of each and you have to have feasting and you have to have fasting.

And my advice is just keep insulin pulsatile, you know, by just not eating all the time and I think you'll probably be fine. I'm not convinced that eating more fat and less protein is going to be longevity benefit to anyone... You know what I mean? And I know this is controversial and I am a big fan of Dr. Rosedale and a lot of people other think, you know, if you can just squeak by with the very lowest amount of protein you're going to live longer.

But I don't think we have any data in humans to support that at all. And honestly, you know, look at elderly people in America. American adults age 70 to 79 eat 66 g of protein a day and 247 g of carbohydrate. So I really don't think protein restriction is that beneficial because those people are restricting a hell lot of protein and their outcomes are not necessarily that great on average.

Bret: Yeah, frequently we talk about protein from eating too much standpoint, but what's not talked about enough is how the requirements probably go up even higher as we age and the risk of sarcopenia and not having enough muscle mass and falls and fractures. Do you think that can be almost completely abolished with increase protein intake?

Ted: Absolutely, I mean the reality is the stronger you are the longer you're going to live, the lot more muscle mass you have, the longer you're going to live. Falls are one of the biggest killers of elderly people and if you're restricting protein for some sort of theoretical longevity benefit that's never been demonstrated in humans.

You're basically risking some very real osteoporosis and sarcopenia for some theoretical longevity benefits that just haven't been demonstrated. So I think it's a horrible idea. You know, Valter Longo, all of his data is from mice and we have zero

human data to support protein restriction. So until I see some sort of data in humans I'm probably not going to restrict protein.

Bret: Yeah, longevity data is such a minefield because you know you need 30, 40, 50 years studies to really prove it. So it's trying to draw best conclusions from the data that's there and a lot of times that can come from overstating the quality of the evidence and the support that you have for your opinions.

Ted: Right, it's bad.

Bret: It's bad... good summary. And then there's the issue of how our bodies respond to protein depending on our insulin sensitivity. And I had a great talk with Prof. Ben Bikman who likes to talk about research from Dr. Cahill and others showing that our insulin and glucagon ratio and our insulin response to protein is very different depending on our baseline metabolic health and insulin sensitivity.

So do you see any concerns in someone who is fairly insulin resistance at baseline, fighting with metabolic syndrome, who hasn't really gotten a handle on it yet, eating too much protein then because of the insulinogenic response from it?

Ted: No, I actually have bigger concerns about that person eating unrestricted amounts of fat, because they've clearly run out of adipocyte storage and that's why they are insulin resistant. So you really don't have any place to put fat if you're severely insulin resistant and what we often do in the hospital as you know prior to bariatric surgery for example, we put someone on a protein sparing modified fast, where they are eating nothing but protein and just restricting nonprotein energy.

And these people typically lose a ton of weight really rapidly and their insulin sensitivity dramatically improves even though they are just eating a bunch of protein. So I actually think that's optimal. I think if you're insulin resistant you are clearly internally over fat and you don't have a lot of room to store any kind of energy glucose or fat and in that setting you might want to just eat protein a la the medical protein sparing modified fast.

I've seen patients do that and have pretty good results. So I don't think-- I'm not saying is optimal to just eat protein but I'm saying that I don't think it's actively bad. I would have no concerns about that.

Bret: The definition of insulin resistance can get so complicated especially differentiating insulin resistance and hyperinsulinemia. But I think there's clear there's a physiological state where you're insulin resistant in the muscle cells in the liver, but not in the fat cells; you're still storing plenty of fat. Insulin is working there, you are

preventing lipolysis, increasing fat storage, but you're sort of peripherally insulin resistant.

And I wonder if that would be different, because you said when you are insulin resistant you have nowhere else to put fat but clearly people are getting fatter and insulin resistant. So I wonder if there's a differentiation we need to draw there about defining insulin resistance better rather than just using one blanket term of insulin resistance.

Ted: Absolutely and the reality is that your other tissues get insulin resistant before your fat cells do and the reality is that insulin resistance is this worst-case scenario where anything bad you could get from insulin you are getting and nothing good. And so yeah, I agree with that but even in that setting I don't see eating protein as being a problem. I would still be more concerned about non-protein energy.

Bret: Interesting. Now some of the other benefits about protein, we talked about preventing sarcopenia and maintaining lean muscle mass, but people have this concept that as long as I'm eating protein, I'm going to gain muscle. Is it that simple?

Ted: It actually is that simple if you are on a low protein diet. Like there are numerous studies where people were given a higher amount of protein in their diet and literally gained lean mass just sitting on the couch. Like literally you will increase your lean mass by just eating more protein especially initially if you're coming from a lower protein diet, which is very interesting.

Bret: Yeah, that is really interesting. And then there's also the concept of satiety and feeling full and less hungry and a lot of people in the low-carb and keto world talk about fat. You eat your fat to suppress your hunger. But there are actually some studies showing that if you go from 15% to 30% of your calories from protein, you dramatically reduce your appetite and increase your satiety.

So if you are going-- and again I almost hate talking about about macros, because we don't eat protein, we don't eat fat... we eat food and it's a combination of both. But if you're going to put your finger on one macro or one specific area that hits satiety the best... would you pick protein?

Ted: Okay, first of all we know that protein is far more satiating than carbs or fats in everybody, lean and obese; I mean this is basically a medical fact. So protein provides the most satiety and we also have studies in a low-carb setting showing that 30% protein destroys 15% protein for everything: hunger, body composition, satiety, triglycerides, insulin, HDL... anything you can measure, 30% protein is better than 15% protein, even in a very low-carb setting.

So I love like 30% protein diets. I mean this is kind of, you know, Hunter gatherer diet territory and I like to look at every diet through an evolutionary lens. So if I had to pick a percent for everyone to be eating, it would probably be 30% protein. If you're not eating any carbohydrates that's roughly equal grams of protein and fat.

That would be one-to-one grams of protein and fat. Foods that are one-to-one grams of protein and fat would be eggs, would be ribeye steaks. So basically your steak and eggs region is kind of a 30% protein diet and I love that. I love that so much more than some keto diets that are 10% protein and 90% fat. I have just a big problem with those diets.

Bret: And what if some of us are doing well though? Someone feels better, they are reversing their diabetes, they're losing weight and their markers are improving. Do you still have sort of theoretical longer-term concerns or do you think as long as all their markers are improving and they are feeling well, okay, it works for them. I just wouldn't recommend it blanketly for everybody.

Ted: Oh no, I can't argue with success. If someone is doing well, that's great. I have patients who are very successful on extremely high carb low-fat diets as well and if it works for you, I really can't argue with that.

Bret: So again a sort of a bimodal distribution. So with the energy source, if you are having a very low-fat higher carbohydrate diet, there are some reports that those people can be metabolically healthy, which sort of is completely contrary to everything we talk about in the low-carb high-fat world. So how do you explain that?

Ted: It's pretty easy; it's carbs and fats together that are the problem. So if you go low on one or the other, you're going to be fine. Low-carb works great, low-fat works for some people, usually people who started out thin. Low-carb and low-fat and high-protein works spectacularly well for all your bodybuilders and your bikini models and your aesthetic athletes out there.

So you go low in one of those two and you're pretty much okay. And that's how it works. And then we know that the combination of the two is what's really driving the obesity epidemic. It's carbs and fats together, this is a huge dopamine rewarding to your brain so all your obesogenic foods are high in carb and fat together, it's your doughnuts, it's your cookies, it's your muffins, it's your... basically your baked potato with butter and your bagel with cream cheese and your candy bars... it's this combination that's bad.

So if you can get either one really low, you're home free. Of course I prefer a low-carb approach, but that's how these higher carb diets are working.

Bret: Interesting though how the baseline metabolic health is going to have a big impact on who can actually get away with a higher carb low-fat.

Ted: Exactly, so if you're thin to begin with, low-fat is going to work great for you, because most body fat comes from dietary fats. If you're just not eating fat you'll stay thin. On the flipside if you're fat to begin with, you're going to be much better off with a low-carb approach, because carbohydrate displaces fat oxidation so much. So if you have a bunch of fat you want to burn, you really want to get the carbs low. So I agree with you, it kind of depends on your starting point.

Bret: And the quality of carbs as well because if you're following a high carb low-fat diet but still of refined carbs or high fructose I think you're still going to run into trouble, so quality does still matter, it's important to emphasize.

Okay, so let's get back to protein here for a second, the quality of protein, because you see all sorts of arguments about plant protein versus animal protein. So assuming we can agree on the amount of protein we require, how about the quality and the source of protein of where it's coming from? Do you see a big differentiation there?

Ted: I sure do and here's how it works. All of these proteins are broken down into amino acids before they're even absorbed so on some level you're getting the same amino acids either way and so why should it even matter, who cares, right?

But the reality is that plant foods are different than animal foods and they have a different composition of amino acids and they are less complete for animal health, you know what I mean? So like leucine, lysine, methionine, tryptophan, some of these crucial amino acids that your body really needs and is really looking for from your diet are much lower in plant foods than in animal foods.

So it's just a medical fact that you have to eat more of a plant protein to get the same amount of-- a full amino acid profile that you get from animal foods. And this is a really-- if you're a bodybuilder for example and you are getting protein from P protein or rice price or hemp protein, or one of these plant-based sources everybody knows you have to eat about 30% or 40% more to get all the amino acids you need to build muscle that you get from whey protein or egg white protein or some sort of animal-based protein.

So there's definitely a higher quality to animal proteins. And that's, if you're looking at just the pure protein, then there's also absorbability, so a lot of the plant proteins are locked up in this fiber matrix and some of it is not getting absorbed. And so you've got bioavailability in the G.I. tract and then you've got incomplete profile of amino acid. So the animal foods are crushing the plant foods.

Bret: So obviously people survive as vegans and there are plenty of vegan athletes who are doing very well, so it's not that they can't get it. They're going to have to work harder, eat more calories and not have as bioavailable protein to get the same amount. So they're going to have to just increase more carbs and more calories that go along for the ride to get the same amount of protein.

Ted: Correct and actually not very many people know this, but a super, super low-protein diet will actually give you a whole new level of leanness, just because the cost of weight gain goes up exponentially as protein goes down. So if you can get your protein intake down below maybe 5% today, you're very, very lean because your body can't afford to build any kind of mass at all. Unfortunately and this is how like the 30 bananas a day diet work, your fruitarian diet might be 5% protein, your potato hack is very low in protein.

You're going to actually lose weight and get thinner, but a lot of what you're losing is lean mass. And so you're literally going to have lighter organs, your brain's going to be lighter, your bone and muscles will be way lighter, so there is this like extreme low-protein approach that you typically see in the vegan world like the McDougall starch solution and this is you know extremely high carb, but it's very low-fat, it's very low-protein, and it "works" for just weight loss, but I don't know if you really want the osteopenia and the sarcopenia that is definitely going to come with along that.

Bret: Yeah, perfect example of what the scale says and weight loss is not necessarily the same as health. And interestingly there are some prominent vegans who have said, yeah, you can lose weight with heroin and cocaine, but I am not going to recommend that to my patients. And they do that, they say, in reference to low-carb diets, but it seems like they should probably be saying that in reference to this very low-protein diet.

Ted: Yes, exactly, I totally agree.

Bret: And then of course the nutrients that come along with the different sources of protein. You know, higher nutrient availability in the animal proteins compared to the plant proteins... again not that you can't get them, but things like vitamin D and B12 and even heme iron and zinc and of course DHA, I mean all those are really fairly deficient in plant proteins.

Ted: Absolutely and the reality is you need you know at least 25 elements and minerals to run your body and be healthy and plants are absorbing these minerals from the soil but they are limited as to how far their roots can reach. So they will absorb a certain amount of minerals, but animals go around and eat a bunch of

different plants and they bioaccumulate minerals, they bioaccumulate and bio-magnify nitrogen and minerals.

So as you go up the food chain, as you go up the trophic levels from plants to herbivores, to carnivores, you see higher and higher bioaccumulation and concentration of micronutrients like minerals and nitrogen and protein. And the reality is the higher you go up the food chain, the higher the nutrient density of the food you're eating, it's just a scientific fact. That's why animal foods are always higher in protein and micronutrient density than plant foods... period.

Bret: Yeah, it makes sense. So another thing that's gotten popular lately talking about protein is collagen. Sort of like a certain specific, very specific type of protein. So much so that people are recommending collagen pills and collagen supplements. Where do you stand on the subject of collagen and how that fits into a healthy nutritional pattern?

Ted: You know, I love nose to tail eating, because it makes sense to me from an evolutionary perspective and I do think that that's a good way to look at anything when it comes to diet, is through an evolutionary lens and so it would make sense to eat collagen and connective tissue and the whole animal nose to tail.

On the flipside every bit of protein you eat is just broken down into amino acids before you even absorb it into your body. So I'm never telling anyone, "oh my gosh, you have to go out and eat X pounds of collagen a day just to get enough glycine", because basically if you're eating, you know, ground beef or an egg, or if you're eating any kind of roughly whole animal food source, you're going to get plenty in my opinion.

So I never tell anyone to take supplements, I think it's not really-- If you have the extra money for collagen supplements, I would say just go out and buy some high-quality animal sources, like you know, just try to eat the whole cow, you know what I mean?

Bret: Yeah, now the nose to tail, we say it a lot, but a lot of people have a hard time doing it. Either psychologically they're hesitant to do it or they have a hard time finding organ meats or, you know, true nose to tail type foods. What are some practical tips you can give people on how to incorporate more of the concept of nose to tail eating?

Ted: Sure, first of all anytime you're ingesting an entire organism you're getting this nose to tail type phenomenon. So like eating an egg for example would be spectacular, because you're eating the entire organism. Or eating small fish, or eating the whole thing - mussels, clams, oysters, shellfish, small fish like sardines, you are

eating the entire organism, you're getting all the connective tissue, you're eating all the cartilage and the bones.

Ground beef, not only it's the very cheapest protein you can get, but there's tons of connective tissue and stuff thrown in there. So I like eggs, I like ground beef, I like ingesting seafood in its entirety, like clams and oysters and mussels and that sort of thing.

Bret: That's an interesting perspective because most people when they think nose to tail, they think I need to eat liver, I need to eat kidney, and brain and heart, but you are saying, no, let's focus on other organisms, but the whole organism. That's a good perspective.

Ted: Yeah, I mean honestly I never eat liver, I never eat any organ meats, but I'm eating the heck out of-- can I say "heck" on this podcast?

Bret: You can say--

Ted: I eat the heck out of eggs and sardines and oysters, I eat that stuff all the time.

Bret: I think keto and low-carb is very ruminant in meat focus, so it's a good perspective that there is a lot of other sources out there that are really good sources that we could still focus on. Now what about protein supplements?

You briefly touched on P protein supplements versus whey, versus egg white supplements and protein shakes and we hear a lot about people, you know, taking extra protein, those shakes. I know you are a protein proponent, but do you see a difference in again the quality, in the need of real food protein versus protein shakes and supplements?

Ted: Absolutely, honestly I don't like protein supplements, I'm not a huge fan of whey powder. Whey is actually this byproduct to the cheese-making process. It's just a cast-off, it's an unwanted cast-off of cheese-making. They used it to just feed it to pigs or they just used it to fertilize soil with it or throw it away literally. And then someone figured out you could evaporate and dry it and sell it to bodybuilders for like 50 bucks a tub.

So I'm not a huge fan. You get way more satiety with real food than drinking food. So you basically never want to drink your calories. You also-- the speed at which the protein is delivered to your system is probably better if you're eating a steak instead of drinking whey protein.

So I typically don't tell anyone to ever by protein solvents. I usually don't recommend them. And for me it's more like an emergency level thing, like if you just don't have time to eat, you might want to grab something like that. But it's not my first choice.

Bret: Got it. So transitioning a little bit away from protein now to what you are also known for, is the exercise guy, but not just any exercise; you are known as like the 15 minute get fit, get ripped, exercise guy. And I've heard lots of people say, I'm so upset with you, that you can have the physique, you have... and be as fit as you are and only 15 minutes. And I think is important to realize not everybody will have that response.

Not everybody is going to be able to be you with 15 minutes of exercise. But tell us your general concept when you approach patients of how to implement exercise, the importance of exercise and specifically what types of exercise translate to maximal health.

Ted: Got you, okay, so there is really basically two types of exercises. There's resistance exercise and then there's cardio exercise. And you are getting specific benefits from these. When you're doing resistance exercise you're trying to get more lean mass, you are trying to get more muscle and it's phenomenal for health.

Like the more muscle you have, the higher your glucose tolerance or carbohydrate tolerance, the longer you're going to live literally. And the same thing with cardio you're basically putting a stress on your body, a hormetic stressor that's going to make it better later. Also a cardio you're depleting muscle glycogen and after you deplete muscle glycogen your fat oxidation goes through the roof and your insulin sensitivity goes through the roof.

Your glucose disposal goes way up and so you get all these massive health benefits. Depleting glycogen from your whole body is a massive like metabolic reset. I like people to do two forms of exercise, cardio and resistance, and I like high-intensity exercise because it's more time efficient. You can always trade intensity for duration when it comes to exercise.

In other words you could do a minute of all that 20 second sprint intervals and you're basically going to get the same benefits you get from just walking for an hour or two. So the idea is you always can trade intensity for time.

So I like people to do the highest intensity they can generate on some sort of cardio that could be just jump squats, jumping up and down, that could be doing jumping jacks, it could be jumping rope, that could be just sprinting, that could be running up flights of stairs. You're trying to maximize your energy output to deplete glycogen and ramp up your fat oxidation and it's really, really good for metabolism.

On the muscle resistant side the goal is to generate the highest tension you can possibly get in your muscles for as long as possible and it only takes maybe 30 to 60 seconds to max out on a set of pull-ups or push-ups or any kind of pushing or pulling or leg type exercise. So I have this really, really, really tiny protocol where you're basically doing a pushing resistance exercise, like a push-up, a pulling resistance exercise, like a rower or pull-up, a leg resistance exercise like a squat and you're doing them all to failure basically which might only take 30 to 90 seconds.

And the goal is you send a signal to your muscles that they are inadequate the way they are and they have to be stronger or you're going to die. So you did a super high-intensity failure type work out which might take just a few minutes and you actually get this adaptation where you have more muscle the next day.

And I just think everyone should be doing this; it's so important to put tension in your muscles this way and increase the headroom of how much work you're capable of--you're just going to live longer. I mean look at people in the ICU who are in bed for two weeks and then they can't even walk. You now, we have to send people to physical therapy to walk up a flight of stairs after just lying in bed for two weeks.

And as important as diet is, you really start realizing how important generating tension your muscles is if you've ever had your leg in a cast or you've been in bed for two weeks or something... I mean your body just falls apart so rapidly. In a way it's just as important as diet in my opinion.

Bret: That's a great perspective on that. It's not all about athletic performance, it's not all about how much you can benchpress or squat, but it's about being able to regain your function after a severe setback like that and the better starting point you have, the easier it's going to be to regain function. So it sounds like the key to your exercise program then is to failure.

Ted: Intensity, yes absolutely.

Bret: Now what about someone who can't even do a push-up or you know, can't even do a pull-up, like how do they even get started when they are starting from such a sedentary baseline?

Ted: Right, it's all on a spectrum. So you start with something that's easier like a wall push-up. If you can't do a push-up, you start with a wall push-up. You do all push-ups to failure. A week later now you can do a push-up on the back of the couch or on a kitchen countertop.

Once you've done that long enough you can do push-ups on a... off of a bench and then pretty soon you're doing knee push-ups and then you're doing regular push-ups

and then you're doing diamond push-ups and then you are doing one arm push-ups and then you're just the strongest person anybody knows. And this is just slow gradual progression from just oh my gosh, I can't even do one wall push-up to as high as you want to go.

Bret: Yeah, that's a good point about adapting it to the person and getting--

Ted: Progression... it's progression. You start super easy, just you know, get in the door with one wall push-up and then just take it from there.

Bret: Now about rest periods? Is this something that you do or you recommend your patients do every day or do you think since you're going to failure you need a day or two for rest and recovery before going again? What does your timeframe look like?

Ted: So there's kind of three variables when it comes to exercise: there's intensity, there's frequency and then there's volume. I like maxing out intensity because it's the most time efficient. Then when it comes to frequency and volume I also like frequency because it's more time efficient as well.

So I like high frequency maybe daily, maybe every other day, so I'm typically recommending people do these sorts of exercise if not daily maybe every other day, but the volume is so low that you're just not going to be over-trained, you know what I mean? It might take you two minutes to hit absolute failure multiple times on a pulling exercise and you are definitely going to be able to recover from that in a day or two.

Bret: And what about the concept that people are sometimes afraid of exercise because it makes them hungry? It sort of gives them an excuse to eat more and sort of the psychological side of things that exercise can then sort of harpoon weight loss, sticking to a nutritional program.

Ted: Well, the interesting thing here is that if you're doing low intensity steady-state cardio, let's say you're just lightly jogging for an hour or two, yeah you're probably going to be hungrier after that and you might overshoot and eat more.

But for anybody out there who's done a high-intensity exercise protocol, where you do Tabata sprints, you know, sprint as hard as you can for 30 seconds, rest for 30 seconds, one thing you'll notice after that is you are just absolutely not hungry because your blood sugar goes up a fair amount, you get this release of glycogen, glucose from the liver, and a lot of people notice that they are actually less hungry after they do this.

And I encourage people to try this... if you're hungry try doing a 30 second jump squat Tabatas: jump up and down as many times as you can in 30 seconds, rest for 30 seconds, do it again for 30 seconds, rest again for 30 seconds.

Do a couple of cycles of that and see how hungry you are afterwards. A lot of people are just really not hungry. So I'm not convinced that high-intensity exercise is going to automatically make people hungrier and make them eat more. I think it's the exact opposite.

Bret: Yeah, I think that's a great point. I know it from my days training for triathlons, you know, going for long bike rides and long runs I was starving afterwards, but doing a good hard 30 minute session at the gym - completely different--

Ted: Yeah, absolutely.

Bret: And I think a lot of people see that. We've heard a lot about the philosophies of Dr. Naiman and tell us now about Ted... Ted the family man, Ted the day in the life. What does it look like for you? How these health concepts you apply to your everyday life and your family life?

Ted: Right, so I'm married I have a beautiful wife and a beautiful 12-year-old daughter and so we have this wonderful little family and the whole family is really into diet and exercise. My daughter's going to the gym and working out and my wife is really careful with her diet and everybody is healthy and happy. And then I'm a primary care doctor at one of the biggest medical centers in Seattle, so I basically just punch a clock there and see patients and it's very rewarding, I have a really great patient population, so I love my job.

This diet exercise thing is kind of a hobby but I'm lucky enough to be able to incorporate it into my job as well. So I'm really grateful; the hobby and the personal health journey and the job all sort of align in the same direction. And then just on a personal level I'm addicted to Ultimate Frisbee, like I just basically live to play Ultimate, it's one of my favorite things ever. I am a bassist so I've played in a lot of bands and done a lot of local music scenes in Seattle kind of stuff. And that's kind of me on a personal level.

Bret: Multiple levels to Dr. Ted. Now I don't have daughters, I have two boys, but I can imagine a teenage daughter might be a challenge in terms of wanting to instill these healthy habits, especially when she's out on her own social circles and she wants to fit in and she wants to assert her independence... and I guess I shouldn't just say daughter; that can happen with any teenager really.

So are you starting to see any of that creep up with your relationship or you are wanting your daughter to keep up with these healthy habits?

Ted: Oh, you know, my daughter's 12 and of course her real goal is basically-- she's ready to move out and get her own place and she realizes her parents are just insane. So the way we handle it is at home we just surround-- the kids are surrounded with healthy food, like you know, here's our healthy food, we've got tons of steak and eggs, we have tons of meat and we have tons of veggies and we have tons of low sugar fruit and it's just like good food everywhere. Lots of good food.

But then when she goes out, we don't restrict her at all. We just tell her to eat whatever she wants. And it really ends up kind of working out, because, you know, she'll go to a birthday party and eat birthday cake and then she's like, "That was kind of sweet." And she kind of gets to the point where she looks around and she looks at what people are eating and she's like, "Are they really going to eat that?"

So honestly it's just like lead by example. She sees how her parents eat, she sees the food that we have at home, she's free to do whatever she wants and it seems to work out... at least so far.

Bret: You certainly have a laid-back approach that seems to work because you lead by example, and I think that's so important. The other day my son was in a place where there was this big buffet with all these candies and cookies and sweets and he asked if he could have a cookie and we said, sure everybody is having cookies... whatever, we're not going to fight about it here and let you do it.

And then he went back for a second cookie, and then he went back for a third cookie and then later that night he was complaining of how his stomach was bothering him. I was secretly very happy but he said, "Why didn't you stop me from going back for more cookies?" And that was a great opportunity to have this discussion... it's not our job to tell you what to do. It's our job to educate you and show you the way and help you make your own decisions. And sometimes you have to let people fall to learn.

And maybe it was the same thing with the birthday cake, right? She realized, 'that was pretty sweet, maybe I didn't need it', but it's that recognition that, "Wow, look at the way people are eating". Because in our society we don't want to be normal.

Like the normal in society is broken and backwards and so you almost have to be abnormal and stand out which can be hard for kids. So I like your approach, it's a relaxed approach, it seems to be working and hopefully continues to work.

Ted: Yeah I'll keep you posted.

Bret: Keep us posted! Well, it was very good to get a slice of doctor Naiman and also Ted as the person and see how you walk the walk and talk the talk for sure. I know you're very active on social media, on Twitter and Facebook and you have a website so tell us how people can find you to learn more.

Ted: I have a little Facebook group, Burn Fat Not Sugar and a website and I am pretty active on there so it's pretty easy to track me down.

Bret: And if anybody is in the Seattle area and wants a great primary care doctor... They know where to turn, right?

Ted: Absolutely.

Bret: Great, thank you very much, it's been a pleasure having you on the Diet Doctor podcast.

Ted: Thank you for having me, I appreciate it.