Diet Doctor Podcast

with Dr. Andreas Eenfeldt, Adele Hite, PhD, RD and Franziska Spritzler RD

Episode 69

Dr. Bret Scher: Welcome back to the Diet Doctor Podcast. I'm your host, Dr. Bret Scher. Today we're talking about protein. All things protein related, specifically, though, how protein fits into people's lifestyles for healthy weight loss, for metabolic health, for body composition and also for health span versus longevity.

And we have a real treat because we're joined by three of our experts here at Diet Doctor, Adele Hite, Franziska Spritzler, and the man himself, Dr. Andreas Eenfeldt, to talk about what the science says and what their personal experience says and their clinical experience says about the importance of protein. And it's surprising that protein is pretty controversial in some spheres. I mean, how much is too much? How much is too little?

Are there dangers to eating too much protein? Because there certainly can be dangerous to eating too little. And how does protein fit into a low carb or a keto diet or any diet for that matter to help us find sustainable, healthy, long-term weight loss and metabolic health because that's what it's about. It's not just about any type of weight loss.

And it's not about weight loss for tomorrow, next week or next month. It's about for a lifetime and protein plays a critical role. So let's get into these interviews with these three experts to go through this master class on protein and how you can use protein to help you on your health journey. Let's hear from Adele Hite.

Now Adele is a senior writer at Diet Doctor, but she's been involved in low-carb nutrition since 2006 when she started working with Dr. Eric Westman at Duke University, and she's kept up her involvement in low-carb nutrition for well over a decade. She's a registered dietitian. She has a master's degree in public health and a PhD in rhetoric and communication with a big focus on the dietary guidelines. So she is very well qualified to talk about low-carb protein and fat both from a science and a practical standpoint.

She has some very good views about the role of the macronutrients, about the balance of a well-formulated keto diet and about the words we use - making sure that we're saying what we mean and we mean what we say, which can be very important so that the communication is accurate and we don't get lost or make the wrong assumptions about what we're talking about or what our goals are. So let's hear what Adele has to say about all this.

So, Adele, I want to talk to you about protein, and specifically, protein as it fits into a low-carb diet. Because so often low-carb or keto diets are called low-carb, high-fat diets. Well, what's missing in that equation is protein. So give us your thoughts about the role of protein in what we call, you

know, appropriately manufactured or well-designed keto diet.

Adele Hite, PhD: I think protein is the most important thing after carbohydrate reduction. Obviously, with low carb, it's gotta be low carb, right? So, and certainly, we are driven to consume protein. So I don't think that this idea that somehow we are walking around protein deficient makes a lot of sense.

And we certainly over consume carbohydrates. So in a low-carb diet, yes, first, you reduce the carbs. But then jumping over protein to focus on fat leaves out the most important macronutrient that we have. When I say that people are probably not protein-deficient, that's not to say that I think that most people are walking around getting the amount of protein that's actually most beneficial for them.

So I do think that people undereat protein relative to carbohydrate in a standard American diet and relative to fat. So we have high consumption of carbs, high consumption of fat and barely adequate consumption of protein, enough protein to get us through the day, to keep us from being, you know, starving. But I do think that when people start to worry about their weight and focus on diets that, yeah, there's this sort of struggle between, you know, high carb, low fat or low carb, high fat and then protein gets left out of the equation all together.

Bret: Yeah, so you made a good point about being protein deficient versus sort of the adequate amount of protein for health. And those are two different things.

Adele: Yes.

Bret: So if you look at the RDA, the 0.8 grams per kilogram of protein.

That's like to prevent protein deficiencies.

Adele: Right.

Bret: So when you see that, what does your brain say, "Okay, but this is where we want to go for adequate protein"?

Adele: For adequate protein... I'd immediately just double that number. If you read through the macronutrient report that they put out back in 2005 - was at the Food and Nutrition Board at the Institute of Medicine, they know that there's no good way to calculate what's optimal, right? And of course, optimal always brings the problematic 'optimal for what'.

So when we're talking about protein needs, we're just talking about preventing deficiencies - just like a vitamin C deficiency or vitamin D deficiency - that tells you how essential protein is to our diet. It's central to our diet in the way that vitamins and minerals are. And that when it goes too low, you do have a disease of deficiency which you're not going to have with carbohydrates and which would take you a long time to get with fat. We do have requirements for essential fatty acids, but they're very small and it would take you a really long time to get there. But protein is not that way.

And so the whole idea, and you know, your listeners may or may not be familiar with the protein leverage hypothesis, but the protein leverage hypothesis says that creatures - mammals, and humans are included - will eat enough protein to get what they need, even if it means overeating calories.

So if your diet has a low-protein density, in other words, there's a low amount of protein per calorie, that you'll just keep eating calories until you get the protein you need, which means that very few of us are going to walk around undereating protein, right? Because we're surrounded by food that has protein in it and we just keep eating it till we get the protein we need.

So when people say, "Oh, Americans get plenty of protein, they get more than enough protein", that's not the point. Yes, of course we get enough protein. We've driven to eat protein. Do we get the protein that we need without exceeding our calorie limit dramatically? That's the question. And the answer is no, we don't.

Bret: Yeah, that's a good point. Because when you talk about sort of percentage of calories or you talk about absolute grams, if you're eating, you know, 3000 calories instead of the 2000 calories that your body needs, your percentage of protein might seem low, but you're still getting enough absolute protein. But what you really want, as what you're saying, is reduce those calories by maintaining the same amount of protein so your percentage of protein goes up, but you get it in fewer calories basically.

Adele: Exactly. And I have some good friends in agriculture, and this is a well-known phenomenon when you're raising cattle. If you want to fatten your cattle, you reduce the percentage of protein in the feed, and then they will eat more because - they'll eat more calories, because they want to get that protein. And they'll automatically do it. You don't have to do anything else but lower the percentage of protein in the feed. And vice versa.

If you need them to lean out, you increase the protein. They'll eat fewer calories. Ta-da. You've got it. And humans are not that different at least in terms of our desire to get this incredibly important nutrient in our diet.

Bret: Yeah, protein's important for so many reasons that we've talked about on the podcast many times before. For maintaining lean muscle mass, for satiety, which we'll talk more about, and it's just an essential nutrient. We need the amino acids and so many other functions. But what about fat?

And so does fat also play a role in a low-carb diet? I mean, it's a low-carb, high-fat diet is sort of what it's usually called, so it must play a role and we can't discount the experience of people who have lowered their carbs and increased their fat and had tremendous success. So what is the role of fat in a low-carb diet and what are some of the pitfalls we get into with that?

Adele: Well, so the idea that a diet is low carb and high fat, those are relative terms, relative, you know, to what? So we all know that when people go from 300 grams of carbohydrate a day to 20 grams of carbohydrate a day, that's a big switch for them. But do we really know what's going on with the fat? We don't. The fact of the matter is we don't.

People may feel like they're eating more fat because that fat doesn't come with the carbohydrates. Or maybe they were truly limiting their fat before. But instead of giving yourself the mental permission to eat things like bacon or full-fat sour cream or cream in your coffee, it may change your mindset about fat, but we really don't know how much it changes your absolute intake of fat.

And when we look at some of the studies that are... that we rely on to show people that a low-carb diet works for weight loss like the Gardner A TO Z study, the Shai study that compared low fat, Mediterranean and low carb, what we find is that while intake of fat in absolute amounts goes up a little bit at the very, very beginning of the diet, it comes back down again quite quickly. And this

is how people end up eating fewer calories over time.

So the two levers at work in a low-carb diet are both lowering of the carbs, but for most people over time, there's a lowering of calories as well for a number of reasons, and you'll get into that, I think, with Franziska, and satiety and things like that about why this happens. When we're told you can eat as much as you want of these foods as long as they're not carbohydrate, why it is that people actually eat less and feel more full? Because that's one of the little paradoxes of low-carb diets.

Bret: Yeah.

Adele: So the permission to eat fat, I think, is really important. So that people don't feel like they're stuck with virtually nothing to eat, except, you know, chicken breasts and steamed broccoli. It's important for flavoring our food. Food tastes better when it has fat in it. And it does provide calories. And I know that we don't talk about calories a lot, but you do have to have calories.

Calories matter on both ends of the spectrum. You can have too many, but you can also have too few. And if you're dieting, we know that you don't want chronic caloric restriction past the point where your metabolism is going, "I can't do this anymore, I need to start shutting things down." But keeping the protein intake up and having enough calories so that your body isn't struggling for them is important when you're trying to lose weight.

Bret: So what sort of pitfalls though that we run into with fat if we start saying just, you know, eat more fat, add more fat because you need to on this diet?

Adele: There's a couple of pitfalls. One is magical thinking around fat. So we transfer this idea that we had in low fat days that carbs can't make you fat. You can eat as much as you want out of them. You know, the bottom of the period, they can't possibly make you fat. We take that magical thinking and we put it on fat. Fat can't make you fat. Doesn't matter how much you eat as long as your insulin is low because you're not eating carbs, then fat can't possibly cause you any ill health effects.

And that's just simply not true. Calories can be overeaten. Your body has to figure out what to do with those calories. You never are at zero insulin levels. That would be a bad thing. So there's always insulin working in the background and insulin will help you store extra energy, even if that energy comes from fat and even if you're not getting glucose or insulin spikes from eating carbohydrate.

So it's easy to overeat fat because it tastes good and because there's a lot of calories per gram. So there's a lot of energy in a little bit of fat. And when we start thinking of fat as a free food and that it can't possibly really add to a weight problem or an insulin resistance problem, it's easy to begin to think that it doesn't matter how much butter I put on my broccoli or how much cream I add to my coffee, and especially if you're not a big person, if you're not 6'7" like Andreas. But calories can add up quickly.

And if you're older, if you're female, if you've lost muscle mass over the years from dieting, yo-yo dieting, especially, you may find that you, while you lose weight at first because you've lowered your carbs, so your body can access fat and you've lowered your calories somewhat because of other satiety factors involved in a low-carb diet, over time you're adding fat and those calories are going up and you're not losing weight anymore.

Bret: Yeah, so it's really an interesting concept about the role of fat. And like you said, it may not be such a tremendous absolute increase in fat, but sort of change in how we eat the fat. Like we don't get it from the pizza and the chips and the donuts, but now we added oils and butter and cream so it feels different because it's more of like an active process rather than just having it passive with our foods.

And it's important to talk about that it's okay to eat the fat. You're allowed to eat the fat. But if you take that too far then you're adding extra calories, and any caloric excess, even if it's fat, can cause weight gain like you said. So I think that that's sort of a good summary of that. But can there still be a rule for people to put butter in their coffee? Or to eat fat bombs? Or to purposely go out of their way to get fat? I mean, can there still be a rule for that in a low-carb diet?

Adele: I think that if that's what you need to do to make the transition, that it's important, but it can't be at the expense of protein. I think that's the real problem is that if you're filling up on fat or you're focused on 'Am I getting enough fat?' before you worry about 'Are you getting enough protein?' then that's actually going to undermine your efforts in your path to success in the long run. Because of all of those reasons that we've talked about that you need protein.

Fat, actually, you know, I don't want to be negative about fat. I love fat. But it doesn't add much nutritionally. When we talk about empty calories of sugars and starches, well, fat is empty calories too, and it's a lot of empty calories. It's a lot of empty calories in a small package. Although there are some fats like butter which do contribute, you know vitamin A to your nutritional profile. But other than that, there's just not a lot of nutrition in most fat.

Bret: Yes, like a lot of things, it seems like maybe the pendulum just swung a little too much. You know, saying you can eat low fat, high carb, the pendulum swung way too much to the high carbs. And saying eating low carb, high fat, maybe the pendulum has swung too far to the high fat side for some people. And saying instead of eating 80% fat diet, eat a 60% fat diet, it's still relatively high-fat diet, but lower than maybe what some people are doing.

So I think that that's sort of just a different way to sort of thinking about it, sort of how you're saying. So let's get back to protein, though, for a second. So there's also a concern that on a low-carb diet you can eat too much protein. This concept of gluconeogenesis.

Protein can be converted to glucose and protein can cause a rise in insulin, whereas fat doesn't. So because of that role of insulin, fats sort of got in the past where there's been a little concerned of protein that we need to dial it down to make sure we're not interfering with ketosis. So how do you address those concerns?

Adele: Well, I think you have to go back and look at what ketosis really is. And I think that there's a little bit of magical thinking around the idea of ketosis too, which is that ketosis creates a state in your body that allows all of these other things to happen, whereas really the ketone production is at the end, it's the outcome of all of the good things.

So when you reduce your carbohydrates, you reduce your glucose that's coming in, that reduces your insulin levels that allows your body to now burn fat, access stored fat, and that's what produces ketones. It's not the ketones driving the process, but the ketones are the outcome of the process. So when you eat protein, again, you're not eating protein against a zero insulin level background. You've already got some insulin in there and that's a good thing because that protein that you need to help build muscle, to help build bone, is driven to some degree by the hormonal effects of the insulin-glucagon balance.

So if your insulin goes up a little bit when you eat protein, we consider that a good thing. It's not going up the way that carbs would make it go up. It's not going to go up and stay up for an extended period of time. It's going to go up enough to let your body access those amino acids and let them put them to use. And this idea that you're somehow in some sort of weird, nebulous energy state where you're in ketosis, but now you've eaten protein and so you're out of ketosis and now your body doesn't know where to get its energy from, your body is not that stupid.

If you're making - you got protein, half of those amino acids are ketogenic, half of them are glucogenic, your body is going to figure out where it gets its energy from. The biggest problem that you put your body in is when chronic hyperinsulinemia keeps your body from accessing fat stores, but you're trying to diet. So you're not putting any food in and you're not getting fat out. Yeah, that's when your body is in trouble. But protein isn't going to do that to you.

Bret: Yeah, great differentiation. A normal physiologic slight rise in insulin from protein is far different from the chronic hyperinsulinemia that we see in the standard American diet - high carbohydrate diets or high-carb and fat diets combined. So that's a great point. Now, what about this concept though of optimal ketosis that you want your ketones at a certain level?

You know, nutritional ketosis is defined as 0.5 millimoles per liter, but some, and actually at Diet Doctor, we used to have this on our website that optimal ketosis is between 1.5 and 3 for some people. At Diet Doctor, we've sort of backed away and taken that away, but tell us about your thoughts about why that matters or doesn't matter your level of ketones.

Adele: So anytime you hear the word "optimal", means that everyone out there, you should ask yourself optimal for what? Because you're always optimizing for an end. So, is there an optimal level of ketosis for weight loss? Well, no, because that's the outcome, that ketone production is the outcome of your body burning fat. So it's not the ketone level that's driving the fat loss; it's the fact that you're losing fat that allows you to end up with ketones.

So the idea that you want to drive your ketone level up by eating more dietary fat so that you can burn fat, but then you're bypassing your body stores of fat, it just doesn't make a lot of sense. However, there may be other reasons, other conditions, epilepsy is the classic one, where you do want a high level of ketone circulating the blood because it's an alternate fuel for your brain. So there are situations where production of ketones is the outcome that you're looking for.

In which case, yeah, maybe adding dietary fat is important to the level where you're burning dietary fat as well as body fat to get a level of ketones that's optimal for the treatment of epilepsy. But if the health goal that you're looking at is weight loss, you want two things. You want to be able to access the body fat and then you want to burn it. You access the body fat by lowering carbs and lowering insulin levels, not by raising ketone levels. And then you burn the body fat and that's where your ketones come from.

Bret: Yeah, I think that's such a great statement. Anytime you hear the word optimal, optimal for what? And that's such a good take home message right there. And when it comes to weight loss, great description about how ketones are part of the process but not the driver in the process. That's good.

So when people hear the advice that, you know, they've been doing a keto diet or low-carb diet for a while and seeing some good success with it. And then they hear this advice that maybe they should raise their proteins and lower their fat. how do you think - what roadblocks do you think people will come across and what challenges will they have in following that advice?

Adele: First of all, they're happy doing what they're doing because it's been successful for them. So if people are happy doing what they're doing and they're still experiencing success, then they should just keep doing what they're doing. And this was the problem that we ran into the dietary guidelines 50 years ago. People were not metabolically ill or obese at that point and then we told them to change their diets and then that didn't work.

So if you're experiencing success with the way that you do low carb or keto then keep doing it. I would check in and make sure that you're getting adequate amounts of protein. But you could probably figure that out just from if you're active, you know, do you have the strength that you've always had? Do you have the stamina that you've always had? If you're an older female, are your bones still in good shape or your joints still in good shape? This is how you'll know that you're not getting adequate protein over time.

But the other way that you'll know that you might need to shift your focus is if you have an extended stall that you can't break by, you know, being more conscious of carb creep or calorie creep or other things like that, then that may be a problem of too many calories coming in from fat and not enough attention paid to protein.

So I think that if you're enjoying what you're doing and you're enjoying your diet, keep doing what you're doing, but remember that bodies change over time. Your body is going to adjust to accommodate to the environment that you give it, which includes diet, and your body may change to the point where you need to now think about something a little differently.

Bret: Yeah, that's actually a good point about bodies changing because protein requirements also change. You know, from a kid and an adolescent to a 20, 30, 40-year old to 50, 60, 70-year old, protein needs change as well. So do you see that people sort of getting ret with the amount of protein they eat and maybe don't adjust it based on their needs and how their body changes?

Adele: Yeah, I think this is actually a real problem for women, especially older women. I think that older women think if they eat two eggs for breakfast, they have just consumed gobs of protein food, and they're, you know, probably good for that meal if not for the entire day. And I would say you've probably eaten about half as much protein as you need to eat for that meal. So four eggs rather than two eggs is probably going to be a better way to start your day.

And that seems like an enormous amount of protein to people, if not just an enormous amount of food. But I think this is, again, because protein food and fat are often attached, this is a lingering symptom of our low fat mentality is that, well, I can't eat all that protein because that has egg yolks and other fatty things with it.

And so we've limited our fat intake by limiting our protein intake and the other, you know, sort of truth of the matter is, is that protein is not as exciting as fat and carbs. You know, you don't get a pork chop with sprinkles on it. When we combine fat and a keto-friendly sweetener, you get tasty things, right? And protein isn't as much fun as that.

So, yeah, you do... I do think we have problems focusing on protein intake because it isn't as tasty and also there's just a mindset that Americans eat too much protein and all of the rest of the baggage that comes with that.

Bret: Next, let's hear from Franziska Spritzler. Now, Franziska is a registered dietitian and a certified diabetes educator and a senior writer here at Diet Doctor and you can find her on Twitter @LowCarbRD. She has a lot of professional and personal experience when it comes to higher

protein diets for weight loss and she's got some interesting perspectives on this. Let's see what Franziska has to say.

So, Franziska, we hear this term "satiety" pretty frequently. You feel full, you feel satiated. Tell us what satiety means to you and how you describe it to people.

Franziska Spritzler, RD: Satiety is feeling full and satisfied after you eat. You're not stuffed. You're no longer hungry. You just feel full, pleasantly full. And that's how I explain it to people. That's what you're aiming for. After you finish a meal, you want to feel full and satisfied, but not like you've eaten too much and definitely not like you're still hungry. So different people feel satiated by different things.

But overall, we find that eating protein tends to increase your satiety. And that's because protein triggers the release of hormones from your gut that tell your brain that you're full, and it happens about maybe 15 minutes after you start eating, with these hormones. At the same time, protein has a greater effect on lowering hunger hormones like ghrelin than either fat or carbohydrates. So both together help you to feel full and satisfied shortly after you start eating. So that you can actually end up eating less in a meal and feeling more satisfied.

Bret: I think that's a good point about satiety in relationship to the food you're eating. Because you could say, well, sure, I feel full. I just eat a ton of food and gorge myself and I'm going to feel full, but that's not what we're getting at. And you describe that well, that it's satiety, sort of for the calories that you're eating. You want to minimize the calories to get the most satiety. And you mentioned protein as being number one.

So it's interesting that you can measure satiety by these hormones, these hormones releases, but then studies also can measure it by how someone subjectively says whether they feel full or whether they feel hungry or how much they eat the rest of the day. And does protein sort of hit all three of those markers of satiety?

Franziska: You know, it really does. When they ask people how full do you feel, how do you feel after eating, you know, an egg breakfast versus a bagel breakfast? They feel fuller and those satiety hormones are higher. So they correlate very well. And something like fat can make you feel full. Eating fat can make you feel full, but you need to eat a lot of calories. Fat is very dense and high in calories. Nothing wrong with that. It's just in order to feel full, you need to take in a lot more calories than to feel full with the same amount of protein.

Bret: Yeah, and that's another great point because I'm sure there are so many people who have started a low-carb diet, who've been doing a low carb diet for years, and say look, I feel so satisfied and full with my meals. I've been able to reduce the amount I eat and the frequency I eat. And from that concept, people think fat is very satiating.

And like you said, it can be, but at what calorie costs? So if you are trying to reduce your calories and we have to admit not everybody is, but if you are trying to reduce your calories, it sounds like protein's the better way to go for satiety per calorie. Is that a fair statement?

Franziska: Absolutely.

Bret: Yeah.

Franziska: You're exactly right.

Bret: And then what about fiber? We hear a lot about fiber being a satiating nutrient. So how does that factor into this as well?

Franziska: Yes, fiber is definitely satiating for completely other reason. It stretches your stomach. And when it stretches your stomach, and some fibers actually hold water, which increases the volume in your stomach, it delays the rate at which your stomach empties, it can keep you full longer. So fiber helps in all of those ways aside from protein. So if you get a meal, we've got protein and fiber and a little bit of fat.

Because the one thing about protein and fiber is they don't have a lot of calories, really. And if you don't eat enough calories at a meal, you'll be very full for a short period of time, but then maybe a few hours later, you'll be hungry. So you do need to fill in some of the calories with fat. So, no. They all work together.

Bret: Yeah, it's an interesting concept because as we talk more about protein, it almost leaves the impression that we're recommending sort of low fat, higher protein, low fat because you want to lower the fat as you increase the protein. But it's not quite true. I mean, these terms, high, low, it's like hard to imagine what they really mean.

But if you're reducing your fat from 80% of your calories to 60% calories, that's still not necessarily a low-fat diet by any means. So when you say sort of high protein or high fat, what are some of the numbers that circulate in your brain that people can sort of help understand what it means to be high in those macronutrients?

Franziska: Yeah, it's hard when we go for percentages because percentages are based on calories. So someone who's eating very few calories will have a different percentage. But I would say a high-protein diet would be a diet where you're eating more than 2 grams per kilogram of your ideal body weight or your goal body weight if you are overweight or if you're at the weight you want to be, it's 2 grams per kilogram of your current weight. So that would be considered a high-protein diet.

And anything between 1.2 and 2 grams, we consider kind of a moderate diet. Sure, on the higher side as you get those upper levels, but then as far as fat goes the percentage, again, will be based on calories. Because if you're trying to lose weight, your percentage of fat... some of that will be coming from your body fat, right? You're going to be getting some fat from your body fat so you won't be eating necessarily a super high-fat diet. You'll be eating, you know, higher protein than the typical.

The average person probably eats maybe 15 to 20% of their calories from protein and maybe a gram per kilogram, perhaps. Everyone is different. So on a higher-protein diet, you'd be eating more protein than that and then filling in the rest with carbs and fat depending on how many carbs you tolerate and how much fat you like and what your weight loss goals are.

Bret: Yes, so you made the differentiation between a moderate-protein and a high-protein diet with a cutoff being that 2 grams per kilogram per day. And there's no firm and absolute definition, but that's the definition we use at Diet Doctor. But I think the implication is important. So does that mean above 2 milligrams is too high and... sorry, above 2 grams per day is too high and sort of like dangerous? Or is that still acceptable, just a different definition?

Franziska: That's a great question. You'll probably get some different answers from depending who you ask. But I think over 2 grams is still fine. If you have functioning kidneys, it's fine to go

more than 2 grams. Bodybuilders eat much more than that for years and are just fine. But you know, you don't have to go that high.

You can get good results around 2 or a little less depending who you are and what your goals are. So I don't think that higher protein is bad and harmful unless you have a kidney issue or perhaps another medical condition that your doctor says you need to watch your protein, but that's pretty rare. Most people can tolerate pretty high amounts of protein. What your body doesn't need, it just gets rid of.

Bret: Yeah. And that's a hard-- that's what makes it sort of hard to make general recommendations, right? Because everybody is different with their level of physical activity and what their goals are. Whether their goal is body composition or weight loss or improving diabetes or metabolic disease, which more protein can be beneficial for all of those depending on where you start.

So if someone starting it, you know, 15% of their calories and they go to 25% of their calories, that's a high-protein diet for them, maybe. So when someone is making a change like that, what do you think some of the barriers or some of the struggles they might have in increasing their protein intake?

Franziska: Yeah. Just it depends where they're coming from. Like maybe people who've already been like on a keto or low-carb, high-fat diet have some misconceptions about protein and it might be dangerous or it might kick them out of ketosis or raise their insulin levels. So I just tried to reassure them that that really isn't going to happen, and especially as you-- if you do this very gradually and don't go from, let's say you're eating 60 grams of protein to 130 grams.

No. You do it incrementally and really notice how you feel. And if you - if it makes you feel better, test your blood sugar. Because I think a lot of people are under the impression that I eat protein, it's going to turn to sugar up, I don't need it. But that really doesn't happen. Your body will make protein - I'm sorry... Your body will make glucose if it needs to from protein and from other sources.

But your body also can use those amino acids from protein for other things. So it's not going to raise your blood sugar. There's a lot of - I don't want to get into too much technical, but there's a lot of balance that's going on within your body at all times to prevent that. So I would say just incrementally increase, maybe by, you know 10 grams, 20 grams a day. And then kind of just see how you feel and you can find the level that's right for you.

We have a big range 1.2 to 2 grams is a large range and you can be anywhere in there. And you can, you know, change from one day to the next. It's very flexible. You don't have to stick... I think carb intake maybe is a little... for people who have diabetes, they have to be a little more within a certain range, that they don't go above. With protein, you know, it's really up to you.

Bret: Yeah. So when someone is trying to increase their protein intake, what are some of your favorite tips, go-to foods, meals, ways to include it? What are your tips to help people increase their protein intake?

Franziska: I'd say start with breakfast. Breakfast is really important. I think a lot of people are only eating a couple of eggs for breakfast and thinking that's enough protein. I say at least three eggs for breakfast. Or if three eggs are too much for you, how about two eggs and sausage? Or two eggs and, I don't know, smoked salmon or whatever you like to eat in the morning. Yogurt.

Making your breakfast, that first meal of the day, have enough protein is where it starts, I think. And then maybe just eating a little more protein at your other meals. Whether that means, you know, choosing leaner meats, which are higher in protein for the most part, than fattier meats. Or just really focusing on the protein and then maybe adding the fats afterwards and really concentrating on protein, I would say, and in a way that works for you. If you're not a meat eater, let's say if you're vegetarian, then dairy is excellent.

Dairy, I already mentioned eggs, but yogurt, cottage cheese, Greek yogurt, are great ways to increase your protein intake. But if you like meat, meat is one of the best sources of protein. Meat and seafood. Seafood is actually very high and gives you a lot of protein in a relatively small amount. So just increasing your protein portions a little bit at a time, I think, is a way that you could bump up your protein intake pretty quickly.

Bret: Yeah. Now, I actually haven't done this, but my guess is if you were to google, how do I increase my protein intake, you're going to get all these ads about whey protein shakes and protein powders.

And some people would say, "Ooh, you should totally stay away from those. Just get it from real food." And some people would say, "Oh no, you can totally use those powders, you know, in the right situation if it works for you." How do you sort of advice people about the use of protein powders?

Franziska: Yeah, it's very individual and I think they can be very helpful for some people occasionally who have problems meeting their protein needs. If you really get too full and you're unable to meet your protein needs, then having a whey shake now and then is fine. Or if you're trying to build a lot of muscle mass and you're working out a lot, then whey protein is very quickly absorbed, then it's great for replenishing amino acids.

But day to day, really just focusing on real food, whole food rather than whey protein is better. You also get a lot more nutrients. Whey protein is very high in protein and very low in everything else. But when you eat high-protein foods, you get a lot of vitamins and minerals, and let's face it, whey protein by itself doesn't taste so good.

It is very - I would say very satiating initially because it's so high in protein, but it doesn't make you feel as though you've had a true meal. So I would say use it, you know, occasionally if you need to, but for as the day to day thing, I would say just focus on getting your protein from food.

Bret: Yeah, and you mentioned the satiety impact of whey protein versus food, and I think that we should go back to that for a second. Because there is a difference between sort of short-term satiety, I'm full from my meal, and long-term satiety, I can go, you know, six, 10 whatever, however many hours until my next meal. So how does that differentiate do you think from whether it's fiber or fat or protein or what's making up the majority of your meal and your satiating nutrients?

Franziska: The whey protein is going to give you an immediate sense of satiety. Very quickly you'll feel very full, but it's not going to last that long because it is pure protein. There's nothing else that comes along with it that can help you to feel full like fiber, like a little bit of fat, the vitamins minerals. Everything work together to help you feel full and satisfied.

That's what food does. That's why we eat food. Not the whey protein is bad, but it doesn't have those components. So if you do have whey protein and that's a whey protein shake, you're probably hungry very soon after. And that's what bodybuilders do.

They're hungry pretty much all day. If they're not just having whey protein, but after whey protein shake, that gives an immediate sense of satiety, but they'll be hungry shortly after. So I think having all the components together, a mixed meal. Doesn't have to be really high in fat or carbohydrate, and protein is still something you want to focus on. But all of those things together can help you feel satisfied long term and help you eat less overall during the course of the day.

Bret: Yeah, that's a good point. You know, I fall into the trap that I hate and I say we shouldn't do and we talk about protein and fat and carbs and fiber, but we don't eat that. We eat food, and it's a combination of all of them with different percentages in the food. So I think that was a good point that you made, that protein isolate, just protein isolate is very different than the protein in a steak or protein in chicken or even protein in tofu or legumes or something because it comes with other nutrients.

Yeah, so that's a critical point. So you recently wrote a guide about top protein foods that we have at Diet Doctor. Was there anything you were surprised about? Or you think some people would be surprised about learning the different protein percentages and content in the different foods you reviewed?

Franziska: So it was very interesting to see that sometimes foods will have about the same amount of protein, you know, in a serving, but they will have a lower protein percentage, meaning there's a lot more calories. You get the same amount of protein, let's say 25, 26 grams in one cut of steak, and a very fatty cut of steak or bacon or something. It might have almost the same amount of protein, but it's got less protein per calorie because there's so much fat that comes with it.

So that was interesting. And learning about, you know, chicken skin doesn't really add a whole lot of calories. Chicken skin actually keeps the protein percentage pretty high. There's actually a little bit of protein in the chicken skin in addition to fat. So if you like chicken skin, I would say continue eating it. You're still going to get a great amount of protein, and I think it's just tastes better for a lot of people.

Maybe not everyone loves chicken skin, but for those who do, definitely we're not saying go the leanest protein as possible. We're saying enjoy food. These are the amounts of protein that you'll get. And just try to make good choices and try not to get anything that's just really, really low in protein or has a lot of additives, like in the processed meats.

Bret: Such a great point though about needing to still enjoy your food and enjoy the taste. Because I know when it comes to, you know, a skinless, boneless chicken breast versus a chicken thigh with the skin on, there's no question, I'm going to really enjoy that chicken thigh. And I might eat the chicken breasts because I think it's good for me or something, but I'm not going to enjoy it quite as much. So tell us about sort of how you eat, how you see that in your personal journey with what you eat and your protein intake.

Franziska: Okay. So I've been doing low carb for about 10 years and I started before the keto craze really got popular in 2011. So it was really low carb and pretty moderate to high protein. I wasn't really counting my protein. Never really did. But over the years, I've learned that getting enough protein is really important for me to feel full and to maintain muscle mass and especially as I'm getting older.

I'm in my mid-50s now, and I'm telling you, getting enough protein is key to maintaining your muscles and your bones and just staying strong and functional as you get older. So protein is

really important to me. And I would say there's-- I get over 100 grams a day every day. I wasn't tracking until recently just because we're doing these experiments at Diet Doctor just to see how much we're getting.

And I found that I'm definitely getting over 100 grams a day. And I eat a lot of fish. I actually do quite a bit of canned fish. It's really easy and I want people to understand that wild caught salmon, I mean, canned salmon is always wild caught. It's a great, convenient way to eat. I have it for breakfast sometimes. And I just make sure to prioritize protein in every meal but I still eat fat and a few carbs. So, yeah. But a Cobb salad is fantastic.

You've got everything there that you need. You've got quite a bit of protein. You've got fiber in your avocado, other vegetables. And you've got fat in the meats and the avocado. And that's one of my go-to lunches. Yeah.

Bret: Yeah, so, and another great point that you made about the protein needs increasing as we age. And it seems like the biggest challenge might be for women specifically. It's a little stereotypical, but I had an interview with Lucia Aronica in the past, a professor at Stanford, and she talked about her study on how she investigated the DIETFITS study, and women really had the hardest time increasing their protein and their fat intake, much more so than men.

So I think as the protein requirements increase, and if women have a harder time with that, we really sort of need our direct our message towards that. And that's where so you as a personal example can be really helpful in some of your tips. So what would you say to women who say, "Oh, there's no way I can eat 100 grams of protein. I'm just going to stick with my, you know, 4 ounces of chicken on my salad, and I'm fine with that and my one egg in the morning and that's okay." What's your advice to them?

Franziska: I would tell them, just try it. Really try and see how much fuller you feel and how you end up eating less. I know that some people who are doing the experiments on our team are noticing when they're tracking that they end up eating less calories. They're not, you know, they just can't eat that much anymore. It's effortless. So that is one bonus. And then just, you know, as we get older, we definitely want to maintain our muscle mass.

That helps to keep our metabolism going. As I said, it keeps us strong and functional. And so I would say those are the tradeoffs. And eating higher protein foods can be delicious. I think we get used to how we need lots of fat. You can still have the fat. But just try to get that protein up there. I think Greek yogurt and cottage cheese are great if you tolerate dairy. Those are great ways to get it in for women.

And women, I don't know. I can't say all women like those foods, but a lot of people I know would find that easier to do than to try to get it all through meat. Nothing wrong with meat if you enjoy it, but there's so many different protein sources. And that's why, you know, we have that guide, so you can kind of see how much protein you're getting and you can pick what you like. Even if you're a vegetarian or a vegan, you can find protein sources that are great for you.

Bret: Yeah. So what's your advice to vegetarians and vegans for how they can get adequate protein?

Franziska: Vegetarians is much easier because, again, those same proteins sources I suggested, the dairy and the eggs, vegetarian can do that... Vegan, it's a little trickier... Vegans who eat soy, they have it a lot easier because soy is a complete protein and actually provides quite a bit of

protein for few carbs. Now for people who are a little more liberal low-carb diet, lots of legumes can give you protein.

And then combining the legumes and nuts and seeds can give you a complete protein as well. So, but yeah, it's just really perfect for vegans, prioritizing protein rather than grains and starchy vegetables because those really have very little protein. They're kind of filling for some people, but they don't provide a lot of satiety and definitely not a lot of protein per calorie.

Bret: And next, we have a real treat because the next interview is with Dr. Andreas Eenfeldt. Dr. Eenfeldt is the sweetest physician specializing in family medicine and he's the founder and CEO of Diet Doctor, helping it grow from our local Swedish blog, Kostdoktorn, up to the largest low carb and keto website in the world.

And throughout his time as CEO growing this company and growing the message, he's been hyper focused on helping people make healthy weight loss simple, making low carb and keto easy for people to implement to dramatically change their lives and now helping give other options with higher amounts of protein to see if that's even a better option for them. So let's hear what Dr. Eenfeldt has to say about the role of high protein in this whole concept of healthy weight loss.

Well, Andreas, it's a pleasure to be able to sit down and talk to you on our own Diet Doctor podcast. Now, today, specifically, we're talking about this issue of protein, and Diet Doctor started creating more content geared towards higher protein diets. So I wanted to get your impression. What is sort of the motivation behind this, that inspired you to do this?

Dr. Andreas Eenfeldt: Well, I guess, you know, it's the whole team. But I think that, you know, what we try to do is we're trying to empower people to improve their health. And it's not really about, you know, low carb necessarily, it's about what works, right? And I think the thing that makes me quite interested in higher-protein diets is there's more and more scientific support to say that that may be a powerful intervention that's really helpful for a lot of people.

And then it becomes interesting to explore that, you know, what does the science say? What are people's experiences? What do people enjoy and what are other results that they get? And if this is something really powerful for a lot of people, then can we develop quality content and tools that help people do it in a simple way with a better result, then that's the win for everybody, I think.

Bret: Yeah, I think that's a good way to say it. Now, of course, whenever you talk about high protein, people are going to have different perceptions of what that means. And some people are going to think of bodybuilders in the gym, chugging whey protein shakes, and eating six meals of chicken breasts all day long. So I mean, what do you have in your mind when you think of high protein for the general public to help with metabolic health and weight loss?

Andreas: Yeah, exactly. I mean, it is really interesting and we're working with this now with you and Dr. Ted Naiman and other people. We're trying to make these helpful, these visualizations about what does it mean and what kind of foods are we talking about? Like you said, chicken breasts, skinless and broccoli and whey protein and egg whites, that's at the very extreme end of the ultra-high protein levels.

And I think that is something that mostly interests fitness people who have these sort of... well, maybe they're bodybuilders and they want to win fitness competitions. It's not really, I think, something that most people would want to do long term. So when I'm talking about or when we're talking about high protein, sure, that is an ultra-high protein alternative for people who want

it, but there are many, many options that are more kind of attractive, I think, for normal people.

Bret: Yeah, I think that's right, and I think a lot of the content that we're creating is going to address that in a very user-friendly way.

Andreas: I mean, things like, you know, rib eye or eggs or just vegetables or even beans that are high in protein. You know, dairy, cheese, all kinds of things, certainly fish and sea food. There are many, many great options that, you know, can be made super tasty.

Bret: Right, now before we get too much into the protein, which we'll certainly talk about more, one of the things I really like about working with you is you like to take a step back and see things from the sort of the first-order perspectives, which is really important from either scientific perspective or a business perspective. And one of the things that you brought up was the first-order principle of why we eat, which I thought was so interesting because it's something most people just take for granted.

You just eat. You don't even think about why you eat. So when you did this sort of deeper dive on the first-order principle of why we eat, what did you come up with?

Andreas: Yeah, I think for tricky things, thinking from first principles can be really powerful. I mean, it's quite, you know, time consuming but it's worth it for, you know, when we're talking about these kind of fundamental things. So, why we eat? Yeah. Well, I think there are two reasons why any animal would eat, and that is, you need nutrients to build your body and then you need energy to run it. In a way, you could say it's materials to build the machine or the car, whatever, and then there is the fuel to run it, right?

So I think that's fundamentally why we eat. That's what we need to eat for, those two things. We need the building blocks to build our bodies, repair them, grow them as needed, and then we need the fuel to walk around, to think, to have all these processes in our bodies work, right? And then you can ask, okay, why is that? What is the nutrients or what is the fuel?

And for nutrients, we know it is basically the essential nutrients, that we have protein, which is sort of, the big piece of that. Then you have essential fatty acids, minerals and vitamins. And then for fuel, you have primarily carbs and fats. And sure, you can - to some extent you can use protein as fuel, or alcohol, but most of it is going to be like carbs and fat.

And looking at the nutrient part of it, then the interesting thing is that protein really is the big thing there. If you look at the amounts, probably, three quarters of the essential nutrients you need every day measured in grams is protein. A bit of fatty acids, even less minerals and very tiny amounts of vitamins.

And the really fascinating thing, especially Ted Naiman, Dr. Naiman, who brought this to my attention, but if you focus on eating high protein foods like meat, fish, vegetables, etc, you tend to get all the other minor things in the same package. So if you focus on a high-protein diet and you eat real whole foods, you tend to get all of the essential nutrients that a human needs in the same foods. So I think that's super interesting.

Bret: Yeah. This concept that nature knew what it was doing. Nature knew what to provide for people to get what they needed.

Andreas: There's also these super interesting idea of protein leverage, and you know, the way that our modern food supply, sort of industrial food supply, sort of dilutes the nutrition in the

food by, you know, first of course, agriculture with a lot of carbohydrates, but more recently, refined carbs, refined fats, added in oils, sugar, flour.

This is in a way, as it's often called, you know, empty calories, right? There's no nutrition in sugar. There's no nutrition in soybean oil or flour. Basically, you know, refined white flour is almost all starch, almost nothing else. Okay, a little bit of protein but not a lot, right?

Bret: Right.

Andreas: So you basically dilute the protein and the nutrients by adding that into the processed, sort of ultra-processed food supply. And what happens is that people have to eat more to get the same amount of nutrition. And there's been a lot of studies on this in animals and also in humans saying that, ou know, if you dilute the protein, people eat more energy until they get the protein that they absolutely need. And that's what's called protein leverage, and it could explain part of the obesity epidemic.

And then you look back and say, "Okay, hunter-gatherer, is what, you know, our ancestors, what did they eat?" Whatever they, you know, genetically adapted to. Maybe they had 30% protein on average, and now we're down to, you know, 12, 13, 14%. You basically have to eat two to three times more energy to get the same nutrition as our ancestors got, right? Well, that could explain a lot.

Bret: Right. So that brings us sort of to the modern times and the dilemma that we're in from a worldwide health perspective of this obesity epidemic. So one of the things that higher-protein diets have been shown to do is to help with weight loss, but as we know, not our weight loss is the same.

You can lose fat mass, you can lose lean body mass and you can lose in healthy ways or unhealthy ways. So when it comes to this concept of healthy weight loss, what are the factors that you think are most important? And as a follow up then, and how does protein fit into achieving those concepts of healthy weight loss?

Andreas: One fundamental thing is that in order to achieve weight loss in a sustainable, enjoyable way, you have to feel satiety. You can't be hungry all the time. Nobody wants to be hungry all the time and nobody, I think... well, almost nobody is able to do that. I know I wouldn't be able to do that.

So in order to achieve weight loss, you really have to focus on eating foods that bring you a lot of satiety with not a lot of empty calories, not a lot of-- basically a high satiety value per calorie, if you will. Tying that back to protein, that tends to be high protein foods in general. That is, you know, protein is the most satiating macronutrient, more so than carbohydrates, more so than fat.

And it also comes with all these other nutrients usually. So then you can eat less food and still feel full, still feel happy about it. Another bonus is, which is also important, I think, for sustainable healthy weight loss is you want to lose fat mass, perhaps excess fat mass, but you want to maintain the lean mass, the muscle mass, the bone mass, you need all these nutrients too in your internal organs and everything.

And that's what you get also with a high-protein foods and the high-nutrition foods. I think it fits together quite well. Other aspects of healthy weight loss is you want to be metabolically healthy. You want to have, you know, good health markers - blood pressure, blood sugar, cholesterol

profile, etc, etc. And if you go on a higher-protein diet, that doesn't have excessive amounts of carbohydrates or added fats, then that tends to be helpful for that as well.

Bret: That's a good way to think about it, the sort of the different layers. One is satiety, like you said. Because any diet, even if you're eating, you know, getting adequate protein, if you're overeating carbs, overeating fat, overeating calories, then all of a sudden the high benefits of high-protein diet are basically going to go away because of caloric excess. But because of the satiety, it's more difficult to do. And then you also can get metabolic benefits and studies have shown better insulin sensitivity and glucose regulation.

So there are all these benefits to eating higher-protein diets yet we hear a lot of concerns about higher-protein diets from you could say the longevity community or longevity experts, that too much protein is connected with decreased longevity or lower life spans, shorter lifespans. So how do you sort of combine those two to say, well, on the one hand we see these benefits, but on the other hand these are - there are these longevity concerns?

Andreas: I think that is a super interesting topic to discuss. But first of all, I guess we don't have high quality data, certainly not in humans, to say whether this is actually correct or not. But I guess what people who are really interested in longevity think about is that protein tends to stimulate this nutrient sensor called mTOR in the cells and stimulate cell division.

And you know, if you sort of - which makes sense, you know, because it's building blocks for building cells. And if you stimulate that too much, you get more cell division and that would theoretically perhaps speed up aging and the risk of cancer and other things you certainly don't want. I think one thing that points in the other direction is, well, this nutrient sensor, this mTOR, and this sort of cell division is also very much affected by the available energy.

So if you eat a higher-protein diet but at least to eating less energy, then you get the opposite effect from that factor, right? You eat less energy, you have less stimulation through that pathway. So those things kind of pull in in opposite directions. And what's the end result? Well, it's very hard to tease out. Another factor is that depends on what you eat high-protein diet for.

Let's say you go on a higher-protein diet because you want to lose weight. You want to reverse perhaps type 2 diabetes, etc. We know that those health conditions lead to accelerated aging. Like if you have type 2 diabetes or obesity then you have quite a lot of increased risk of cancer, of heart disease, of Alzheimer's, etc. In a way, it's like it's an accelerated aging because all of these common sort of diseases of aging comes sooner.

And what you have is sort of situation where you have too much energy, you're taking in too much energy into the body, too much stimulation for these pathways. So in one way, you're reversing that. If you go on a high protein diet, you eat less. Now you're losing weight. Now you're reducing your blood sugar. Now you're getting away from this situation where you're over stimulating these nutrient sensors.

So, yeah, it's hard to know what the end result is, but it seems to me that at least if you're fixing things like you're losing weight, you're normalizing your blood pressure, or you're normalizing your blood sugar, now you're getting away from a sort of a state where you have an increased risk of many diseases, in a way, it's an accelerated aging, then that's that should be a good thing.

Another thing is that if you look at what humans are genetically adapted to, might be a protein level of somewhere between 20 and 50% from hunter-gatherer data. They're probably averaging

somewhere around 30%. And today, we eat far, far, far less. And that's a little bit of a risky thing. And then, of course, we have this obesity and diabetes epidemics. I think in a way you're playing it a bit more safe if you're at least within the sort of evolutionary range.

Bret: Yeah.

Andreas: Maybe you don't want to go to the high end, but you should at least be above the bottom of the evolutionary range. Otherwise, you know, that might be risky. For example, we know that if people eat less protein than what is sort of normal for humans to do, then you end up with low muscle mass. You end up with low bone mass. You end up, especially as your age, with the risk of frailty or any risk of actually not being able to look after yourself in a good way.

You might end up in an assisted-living facility or, you know, fall and break your hip or something that could really, really impact the quality of your life towards the final decades of your life. And, yeah, I don't think that that is what anybody wants. So, also a third thing is that we don't really have... I mean, this whole longevity thing is sort of theoretical and we don't have data from anything else than lower level animals, if you will, fruit flies worms, maybe some lower primates.

We don't have data, to my knowledge, from any sort of predator level animal that habitually eats or during evolution, habitually eats a higher-protein diet. So, will the same thing, holds true for an animal like that, or like humans? It's, I think, unclear. And since there are so many drawbacks from eating a low-protein diet, I'm not sure personally that I would want to risk it for that very, very theoretical possible benefit.

Bret: Yeah, such a good answer with so many different components to it. But one point like you were mentioning is how do you extrapolate fruit fly and mouse data to humans when they're not adapted to maybe the higher-protein diet like we are? And that's such an important point, that that's a big leap to take that so many people are taking. So then you say, "Okay. But what about the human data?"

And again, it goes down to sort of nutritional epidemiology observational studies where people who are eating more protein were also exercising less and smoking more and drinking more alcohol and other unhealthy habits which just doesn't help us, doesn't help inform us what we should eat. So that's such an important concept. And then the other point you mentioned about the frailty as we age, about the importance of muscle mass, the concept of health span versus longevity. And again, fruit flies and mice don't have to worry so much about health span compared to longevity like we do as people.

So I like how really pointed out those important nuances that sort of get lost in this whole concept of protein stimulates growth and is therefore bad, so don't eat it. And that's, you know, that's the simple message that we hear, but it's far more detailed and nuanced. So I think those are very important answers.

Andreas: Yeah, I think there's a lot of nuance here. For example, I mean, if you take it too far, I think if you're only too far - if you're only interested in longevity and nothing else, maybe you want to keep protein or low end, maybe. But there are drawbacks to that for sure. Like you're not going be feel that full, you're not going to have the same muscle mass, you're not going to have the same bone mass. It might be risky if you fall. It might turn ugly if you're on the older side. And yeah, freaky.

Bret: Yeah.

Andreas: But I think from my perspective at least, a smart way to think of it is at least to be safe... and unless you have very specific goals with what you're doing, I think it's safe to at least stay in the evolutionary range, you know, in the range that humans are adapted to eat, and that would be sort of 20 to 50% protein, I think, from the data we have. I wouldn't want to go lower than that unless you really have some specific goals with what you're doing.

Bret: So now if someone is eating a ketogenic diet or a low-carb diet and doing very well, losing weight, health markers are improving and their protein is around sort of 18, 20%, but they're perfectly happy with their progress, would you say to that person that they should increase their protein? In general.

Andreas: Well, if people are healthy and happy, you know, I don't have objections. That sounds great to me. But maybe they want to try it to see. Maybe they will feel even better. I don't know. It'll be worth the test. Have you got to 25? See what happens.

Bret: Yeah, that's a good point. It'll be an interesting experiment. Just like people probably experimented with lower carb and to see how they felt and adjusted their fat intake to see how they felt. The same can be true for protein - to adjust it to see how you feel. But now you had a personal experience recently of dramatically increasing your protein intake. So I'm curious what you noticed, both, you know, good and bad.

And what you think the average person will encounter as they start to increase their protein, whether it's for weight loss or metabolic health, whatever the case may be, what they may experience from a good perspective or a challenge perspective?

Andreas: I mean, I think I've always had a decent protein intake. But yeah, I'm testing as an experiment, just to go way higher to see what happens. So maybe, usually I might have eaten, you know, 100 or 120 grams or something. I'm a big guy. I'm 6'7". And now I'm eating more than 200, you know, 250 grams. So quite a lot. It's been an interesting experiment. I think that certainly notice more satiety with higher protein and effortlessly losing more body fat than I'm used to.

So I'm probably at my lowest body fat now compared to before, even eating a little bit more carbohydrates than I usually do. I trend towards a lower body fat. And also, interestingly, measured a bunch of health markers including insulin levels. Actually, the lowest insulin, fasting insulin levels I've ever had, even though, you know, instead of 20 grams of carbs, I might eat, you know, 70. So that's pretty interesting.

Bret: Do you that's from pure caloric reduction?

Andreas: Yeah. And a lower fat mass. So I think you... if you lower your fat mass, you tend to lower your insulin resistance. Or in my case, maybe you'd call it become even more insulin sensitive than you don't need as high. Or you can get by with an even lower fasting insulin level because you're so insulin sensitive. That's my best explanation, I think.

That's my guess. Yeah. And I also think that, you know, it's an interesting experiment. It's more flexible in the way you have more foods to choose from. More flexible with carbohydrates, you know, better-- and I don't eat, you know, refined carbohydrates, but I eat even more vegetables, berries, some fruit, et cetera.

Bret: Yeah.

Andreas: So that's a... I enjoy that. It's been a good experiment, but I think I will probably end up

with something in between long term.

Bret: And what do you think the challenge will be for a lot of people as they start to embark on this and say, "Oh, it sounds good. I'm going to increase my protein and see what effects it will have on my health"? What do you think some people are going to encounter that may be a stumbling block?

Andreas: That's a good question. I think many people will find it enjoyable. Some people might, you know, if they eat more protein and lower fat, you might feel hungry more often, especially if you're losing a lot of body fat and you get down to a lower body fat percentage than... I think as you get leaner, you tend to need to or want to eat more often. And if you have a slightly bigger store of body fat, at least that's my experience, and I think that of other people, it becomes harder to do longer fasts, for example. I mean, I'm still doing 16/8 many days, but...

Bret: Yeah.

Andreas: Yeah. I think I had an easier time with it... even easier at least before than I do now. Now I enjoy my lunch a lot after 16 hours.

Bret: So it's interesting that we're talking about how people can increase their protein, eat more protein, the benefits of more protein but Diet Doctor is sort of known as a low carb and keto website. So does this change the structure of who Diet Doctor is?

Andreas: I think it broadens it a bit. Certainly, we aim to be the best source in the world for low-carb and keto diets still. And I think they clearly have a good role. There's a lot of good scientific support that they are helpful for a lot of situations like losing weight, like improving your metabolic health, epilepsy, PCOS, etc. And a lot of people like that way of eating. So I think what we're doing is just broadening and offering another option for people who might be interested.

Also, I think actually that even though many of the studies on low-carb or keto nutrition, they actually tend to be a bit higher in protein so it gets a little bit hard to tease out what causes it, if it's the lowering of carbohydrates or raising the protein. What is causing the positive effects?

But there are also some studies showing that maybe a high-protein ketogenic diet could actually be the most effective approach. At least slightly more. I mean, you can go on a higher-protein diet and be quite flexible between fat and carbs that seems to work relatively well for a lot of people or most people.

But maybe tending towards the lower end could still be more effective when it comes to reducing hunger and get the maximum satiety per calorie and then just get your absolute leanest if that's what you want or top metabolic health, sort of. But I found it quite interesting that maybe there's still an edge or a sort of a keto high-protein approach might be the very most effective one that we know of so far.

Bret: Yeah. That's a great point. When you go back and you look at the majority of the randomized controlled trials for low-carb interventions, comparing it to some other diet, the focus has been on reducing the carbs produces all these great benefits for weight loss and metabolic health, blood, sugar control, etc.

But when we look at them, like you said, most of them reduce the carbs and increase the protein so it's really a dual intervention. So like you're saying, maybe that dual intervention is the most beneficial for people. And the other thing you mentioned was maybe a lot of people enjoy eat-

ing a keto diet, and that's so important because that's something that I think we don't focus on enough.

If you don't enjoy the foods you're eating, if you don't enjoy your meals, the chances of sticking with it long term are much slimmer than if you do enjoy it. So as people increase their protein, do you think maybe some of that enjoyment may go down as they try and focus on increasing protein and reducing fat? Or do you think a lot of people are going to find it equally as appealing?

Andreas: I think that's an excellent point that, you know, fat is very flavorful and high-fat foods can be very enjoyable. And if you reduce both carbs and fat and you end up with, you know, skinless chicken breasts and broccoli, it's not a very, you know, exciting diet to be on. It's actually pretty much the opposite of it. In the way, you can say that, you know, humans were drawn to high-energy diets.

We're drawn to high-fat and high-carb diets. You could think of pizza or ice cream or doughnuts or potato chips, these are the sort of-- chocolates, you know, the really, really craveable foods that a lot of people struggle, perhaps, with, you know, avoiding even if they want to or for some health goal. And they're so tasty and so attractive, right?

So the way humans are kind of hardwired to search for these high-calorie foods because probably that's, you know, back in the days would be great to load up on calories and survive the next famine. Of course today, that famine never comes and those foods are available 24/7 anywhere and we end up with a wholly different sort of problems.

But back to what you were asking, yes, I think if you go on a very, very high-protein kind of fitness diet, that is low in carbs, low in fat, it tends to be quite boring for a lot of people. And it's great to have different options, I think. You can have a different levels of carb reduction depending on people's needs and preferences.

And you can have different protein levels. And people who just experiment with, what they enjoy and what leads to their goals that they have and what is most enjoyable to them, and them at Diet Doctor, we can try to supply a range of options that, you know, can be great for the majority of people. So that the majority of people can find something that suits their tastes and preferences and achieve their goals.

Bret: Yes, I think this has been a really good discussion about higher protein and where it fits into people's goals and people's lifestyles. So what are you most excited about, about how Diet Doctor can help people achieve their health goals? What do we have and what is coming that you think is going to be most impactful for people?

Andreas: I'm really excited about this sort of broadening out of our arsenal in a way to maybe help some people, empower some people who've been doing low carb and keto for a long time and, you know, they had good results but not quite getting the results they want and they might have been struggling, you know, to lose the final... I don't know, 10, 20, 30, 40 pounds, whatever it might be.

Maybe go to a kind of super keto diet in a way that is higher in protein and that can be for some people really helpful to kickstart that progress again and reach those goals. And maybe some people will also enjoy it more somewhat higher even, you know, you may not have to go crazy to achieve what you want. But then also some people may want to take it to the extreme and see what kind of extreme results they get.

And I mean, I think that's interesting too for some people Then I think we have a lot of tools that were developing now. We have these personalized meal plans, personalized food recommendations coming up more and more. And also, I'm super excited about something that we're developing now where we can kind of visualize how different foods lie on a spectrum of, you know, protein level, carb level, energy density, fiber level, etc., and you can just visualize how different food choices can have different effects for you.

And often it's like you might not even know that different cuts of meat have very different levels of protein percentage in them, for example. Or different kinds of dairy. Like for me, I mean, Greek yogurt. Who knew that there was so much protein in it? I didn't know. And if you choose a version that is not too high in fat, then it's amazing how much protein you can get without much energy and it's delicious.

So I think we can help people find new favorite foods that they will love and that will help them reach their goals in a really enjoyable way. So that is one of the things I'm most excited about now, the sort of an interactive tool that we're going to develop there. I'm pretty sure that it's going to be something I would love to use.

Bret: I think that's a great way to conclude this compilation podcast on higher-protein diets and how they fit into the whole picture of healthy weight loss. As you heard from Dr. Eenfeldt, it's about making it easy, about giving people options and helping them find what is right, helping you find what is right for you.

Not just to lose weight, but to lose weight in a healthy manner that is sustainable and enjoyable for the long term. And as you've heard from a satiety perspective, from a metabolic health perspective, from a science perspective, from a clinical experience perspective, protein plays a critical role for that concept of healthy weight loss that's enjoyable and safe for the long term.

So hopefully this was a really helpful tour with three different experts to give you the perspectives on why you should consider eating what we call an adequate protein diet, which is somewhere in the 20 to 35% of calories or the 1.2 to 2.0 grams per kilo per day. There are different ways you can calculate it.

Or by following our recipes and our meal plans at Diet Doctor, we're going to make sure that they include an adequate amount of protein. So by following adequate protein diets and how that can impact healthy weight loss, metabolic health, and help you stay on your course for a lifelong health journey.

Because it's not about losing weight for today, next week, next month, it's about what you do for the rest of your life, improving your health span, improving your quality of life. So I hope this was helpful.

Please give us comments, give us reviews. It really helps us understand how to provide better material for you and it helps other people find our message if it's helpful. All right. Thanks a lot, everybody. Take care and thanks for joining us on the Diet Doctor podcast.