Longevity, Energy, and Sexual Health

We have spent our careers We have spent our careers studying the science of longevity. But what we were learning at the same But what we were learning at the same time was the importance of the art time was the importance of the art of this longevity.

If you don't feel that you have If you don't feel that you have no energy, you don't want to no energy, you don't want to do anything, and even less so make love.

do anything, and even less so make love. This can therefore simply help to This can therefore simply help to increase the metabolic rate. increase the metabolic rate.

Therefore, vaginal cream Therefore, vaginal cream will not be the answer that will will not be the answer that will truly solve the reason truly solve the reason why your labia hurt in the why your labia hurt in the first place.

first place.

Muscle as a Metabolic Organ

Accompany my patients. I do it Accompany my patients. I do it because it's the most polite thing because it's the most polite thing to do. But also, you know, I'm to do. But also, you know, I'm often sitting down, so I get up often sitting down, so I get up and move around. Do you have and move around. Do you have sexual relations?

sexual relations? And here's how you do it. What if And here's how you do it. What if the most important organs for the most important organs for longevity were not your heart, longevity were not your heart, your brain or your liver, but your your brain or your liver, but your muscles? Most of us muscles? Most of us think that muscles make us think that muscles make us stronger, help us move, and stronger, help us move, and change the appearance of our bodies, change the appearance of our bodies, but this greatly underestimates but this greatly underestimates what muscle actually is. It is what muscle actually is. It is in fact a major metabolic, in fact a major metabolic, endocrine and protective organ. It endocrine and protective organ. It regulates glucose and insulin. It regulates glucose and insulin. It communicates with the brain, bones, communicates with the brain, bones, liver, fat, liver, fat, blood vessels and the immune system, and blood vessels and the immune system, and it releases it releases signaling molecules called myokines. It signaling molecules called myokines. It also helps maintain also helps maintain bones and provides a reserve of bones and provides a reserve of amino acids in case of illness or amino acids in case of illness or injury. When we lose injury. When we lose muscle mass with age, we don't just muscle mass with age, we don't just lose strength. We lose strength. We also lose also lose physiological reserves. Today, we physiological reserves. Today, we therefore examine muscle differently therefore examine muscle differently as an organ. We will be discussing as an organ.

Women, Menopause, and Body Composition

We will be discussing myokines, bones, sarcopenia, body composition, and, body composition, and creatinine hormones. Because the real creatinine hormones. Because the real question is not simply question is not simply how much muscle you can how much muscle you can develop, but what develop, but what physical reserve you can maintain during physical reserve you can maintain during the last decades of your life, the last decades of your life, and what kind of life that reserve will and what kind of life that reserve will actually allow you to continue actually allow you to continue living. Muscle.

living. Muscle. I am strong. I am strong. Yes, you are very strong. You have a Yes, you are very strong. You have a lot, a lot, a lot of muscles. I mean, it certainly. I mean, it certainly became your priority as you got older became your priority as you got older and you really saw the importance and you really saw the importance of it when you

entered of it when you entered that perimenopausal phase of your that perimenopausal phase of your life, you life, you focused on it a lot more.

focused on it a lot more. Yeah. I mean, I had a good Yeah. I mean, I had a good dose of strength delusions. I always dose of strength delusions. I always thought I was like thought I was like Buffy, yeah.

And it turns out that this is not the case. And it turns out that this is not the case. Remember when I started Remember when I started training with Alana, who is training with Alana, who is the trainer I have often mentioned.

the trainer I have often mentioned. Um, she gave me these dumbbells and Um, she gave me these dumbbells and I couldn't lift them. I I couldn't lift them. I ended up taking the 2.3 kg roses and ended up taking the 2.3 kg roses and I thought to myself, " I thought to myself, " Yeah, the ones with the color, Yeah, the ones with the color, right?" Yeah.

right?" Yeah. So dismayed. So dismayed. But you started, and you're But you started, and you're certainly no longer with those certainly no longer with those little roses.

little roses. Not. Not. Not. That's for sure. That's for sure. No, the fact is that this should be No, the fact is that this should be a priority, shouldn't it? Not a priority, shouldn't it? Not just for the appearance it just for the appearance it gives us. And above all, as gives us. And above all, as women get older, you know, women get older, you know, they trade the beauty of they trade the beauty of round cheeks for the sexy look of round cheeks for the sexy look of stubbly arms, I think. Well, stubbly arms, I think. Well, some do. I think that's what some do. I think that's what inevitably happens and we inevitably happens and we 'll certainly be talking about it 'll certainly be talking about it today and we've already today and we've already talked about it many times, like talked about it many times, like with this whole GLP-1 thing, with this whole GLP-1 thing, which they're really just swapping.

which they're really just swapping. They are always focused and They are always focused and obsessed with the scale and they do not obsessed with the scale and they do not concentrate enough on concentrate enough on body composition which could body composition which could give them more muscle to give them more muscle to make them slimmer, as you make them slimmer, as you say. There is always such an say. There is always such an obsession with body balance obsession with body balance instead of body composition, and instead of body composition, and that is changing. I mean, you know, that is changing. I mean, you know, the fact that we're having this the fact that we're having this conversation and that there are a lot of people conversation and that there are a lot of people talking about it. Um, I think that's talking about it. Um, I think that's starting to change. Women are starting to change. Women are starting to realize this, and I'm starting to realize this, and I'm focusing on women here because focusing on women here because men will naturally have more men will naturally have more muscle. If men start muscle. If men start doing physical exercises, they doing physical exercises, they will gain muscle relatively will gain muscle relatively faster than women, and especially faster than women, and especially very short women, say 1.58 m very short women, say 1.58 m or less, which can be even more or less, which can be even more difficult.

difficult. difficult. Yeah. It's good that you say that about Yeah. It's good that you say that about men, because I think a large men, because I think a large part of our audience is made up part of our audience is made up of older, of older, professionally established men. I find professionally established men.

Myokines and Exercise Benefits

I find that men who continue their that men who continue their careers at 50 have often careers at 50 have often let their bodies go much more than they let their bodies go much more than they should. It's should. It's true.

true. And this atrophy of lower And this atrophy of lower body strength, etc., contributes greatly to the body strength, etc., contributes greatly to the chronic inflammatory diseases chronic inflammatory diseases suffered by men, you know, suffered by men, you know, white-collar workers.

Yeah. Yeah. And they shouldn't. This is And they shouldn't. This is largely because they largely because they

simply don't move enough. simply don't move enough.

And they end up gaining a lot of And they end up gaining a lot of fat. fat. fat. Yeah. Yeah. Yeah. Uh, and in many cases it's just a lack of Uh, and in many cases it's just a lack of movement.

movement. And this thing with short women, And this thing with short women, I've really, in the last few months, made I've really, in the last few months, made a point of listening and a point of listening and reading about this idea of ??how reading about this idea of ??how short women can change their short women can change their bodies because, as you said, bodies because, as you said, I've really been trying to focus I've really been trying to focus on getting stronger. And that's a on getting stronger. And that's a whole different category. I don't whole different category. I don't think so… No, excuse me. I know think so… No, excuse me. I know that I have never been as respectful of that I have never been as respectful of differences in my suggestions to differences in my suggestions to patients as I should have been.

patients as I should have been. Like my nuanced recommendations Like my nuanced recommendations for petite women… for petite women… Mhm. I should have Mhm. I should have started a very, very long time ago. So, you know, I'm learning for. So, you know, I'm learning for myself how myself how different it is when we talk about different it is when we talk about different body types. As you different body types. As you said, men build muscle more said, men build muscle more easily.

easily. easily. Yeah. Yeah. Yeah. The 20-year-old woman who works The 20-year-old woman who works in our practice and who gained 2 kg in our practice and who gained 2 kg in a week just because she in a week just because she started eating, must be started eating, must be treated differently from women who are treated differently from women who are 1.63 m and shorter in perimenopause.

1.63 m and shorter in perimenopause. Mhm. Mhm. Mhm. SO. SO. Yeah, I mean, if you're Yeah, I mean, if you're 5'4" or shorter, or 5'3", 5'2", and 5'4" or shorter, or 5'3", 5'2", and you gain 5 lbs, and you you gain 5 lbs, and you weigh 110 lbs, I mean, that's, you weigh 110 lbs, I mean, that's, you know, that's almost, you know, 5% of know, that's almost, you know, 5% of your body weight. That is, you know, it would be a significant increase or, it would be a significant increase or decrease.

decrease. decrease. And it's a matter of grasping and holding. And it's a matter of grasping and holding. Because that's what Because that's what muscle building is all about. I mean, we're talking about muscle building is all about. I mean, we're talking about the importance of muscle here, because it's not the importance of muscle here, because it's not just about how you just about how you look and how strong you are. It is a look and how strong you are. It is a true endocrine tissue. He is a true endocrine tissue. He is a messenger. So, when you start messenger. So, when you start to experience an increase in to experience an increase in metabolism and vitality because metabolism and vitality because you've gained more muscle, you you've gained more muscle, you then need to work on changing your then need to work on changing your life to retain that muscle and make it something life to retain that muscle and make it something you you you truly own.

truly own. Of course. And metabolically, you Of course. And metabolically, you possess it. I see what you mean possess it. I see what you mean. Once it's there, your. Once it's there, your body will begin to depend on that body will begin to depend on that muscle in a positive way. And it muscle in a positive way. And it probably does a lot more for probably does a lot more for your body metabolically and your body metabolically and simply internally than you simply internally than you think; contrary to what you think; contrary to what you think, having muscle is a good think, having muscle is a good thing. And one of these key elements thing. And one of these key elements is definitely myokines. This is one of the is definitely myokines. This is one of the topics I like to discuss with my topics I like to discuss with my patients: when we contract a patients: when we contract a muscle, when you are muscle, when you are exercising, it secretes something exercising, it secretes something called myokines. It's a called myokines. It's a signaling molecule, basically like a signaling molecule, basically like a hormone. They are commonly hormone. They are commonly called molecules of hope. It's called molecules of hope. It's true.

true. true. Because they do so much Because they do so much for mental and for mental and emotional reserve, resilience to stress. But there are many things he. But there are many things he does and I wanted to make a list of

them.

does and I wanted to make a list of them. More specifically, what More specifically, what myokines mean. myokines mean. What myokines actually do What myokines actually do is also part of that other, is also part of that other, larger set of signals called larger set of signals called exerkines. All these things that are exerkines. All these things that are actually secreted, many actually secreted, many different things that are different things that are secreted when you secreted when you exercise. Only one of these things is exercise. Only one of these things is called myokines.

called myokines. It is therefore true that people It is therefore true that people feel better when they feel better when they exercise. exercise. exercise.

Without a doubt. And not just in Without a doubt. And not just in the moment, but also in the long term. What it does for your brain. It. What it does for your brain. It helps the brain-derived neurotrophic factor helps the brain-derived neurotrophic factor, BDNF. It helps with, BDNF. It helps with neuroplasticity, memory, and neuroplasticity, memory, and of course, mood. It helps with of course, mood. It helps with glucose and insulin. This is glucose and insulin. This is probably one of the most important.

probably one of the most important. It's a glucose well. Well, if we It's a glucose well. Well, if we have more muscle, then when you have more muscle, then when you eat, and if you eat less well from time to time eat, and if you eat less well from time to time, having all that, having all that extra muscle prevents you from getting extra muscle prevents you from getting diabetes. Uh, it's a well diabetes. Uh, it's a well that allows it to go there that allows it to go there instead of accumulating as instead of accumulating as fat going into the liver and fat going into the liver and causing, you know, causing, you know, insulin resistance and diabetes.

insulin resistance and diabetes. Fat and inflammation, of course, Fat and inflammation, of course, these myokines will reduce these myokines will reduce inflammatory markers in the body.

inflammatory markers in the body. Uh, of course, it helps the bones. These Uh, of course, it helps the bones. These myokines help signal myokines help signal bone remodeling pathways. We bone remodeling pathways. We always say that where the muscle goes, always say that where the muscle goes, the bone goes. Um, blood vessels and the bone goes. Um, blood vessels and mitochondria, everyone's been talking about mitochondria, everyone's been talking about mitochondria lately in mitochondria lately in terms of energy and what they terms of energy and what they do for aging and do for aging and improving all that. That's improving all that. That's also what these myokines do.

also what these myokines do. Muscles and metabolism themselves, therefore Muscles and metabolism themselves, therefore myokines, communicate in some myokines, communicate in some way with another way with another hormonal regulator called myostatin, which hormonal regulator called myostatin, which also regulates also regulates muscle growth. And then cancer. That's muscle growth. And then cancer. That's the other thing I don't think the other thing I don't think people really appreciate.

people really appreciate. Exercise is undoubtedly Exercise is undoubtedly associated with a reduction in associated with a reduction in cancer incidence and cancer incidence and mortality, and myokines, and the entire mortality, and myokines, and the entire overall process of exercise, are overall process of exercise, are part of that. So, incredibly important molecules of hope part of that. So, incredibly important molecules of hope.

.. Yeah. And I just want to draw Yeah.

Walking, Brain Health, and Angiogenesis

And I just want to draw attention to a few of them, the ones attention to a few of them, the ones I find most interesting, I find most interesting, that I didn't know as well that I didn't know as well before we started before we started researching them a few researching them a few years ago. Neuroplasticity is years ago. Neuroplasticity is something I don't think something I don't think people fully understand people fully understand the importance of

exercise and the importance of exercise and brain function. This idea, brain function. This idea, that when you move your body, that when you move your body, we always use the word " we always use the word " exercise" because in our exercise" because in our culture we don't really move culture we don't really move unless we exercise, but unless we exercise, but you can think of the blue zones you can think of the blue zones with the little old man climbing with the little old man climbing the mountain with his crane; But he does that the mountain with his crane; But he does that five times a day. You know, five times a day. You know, it's a question of movement. It's about it's a question of movement. It's about expending energy expending energy through your muscles. When we talk about through your muscles. When we talk about exercise and exercise and brain function, we really keep the brain function, we really keep the brain young. When we have brain young. When we have neuroplasticity, we imagine that the neuroplasticity, we imagine that the brain sets up new brain sets up new neural pathways to, for example, learn neural pathways to, for example, learn a new language or improve at a new language or improve at golf. When you move your body, you golf. When you move your body, you rejuvenate your brain, which is rejuvenate your brain, which is really cool.

And when we say move, it doesn't And when we say move, it doesn't necessarily mean just lifting necessarily mean just lifting weights and doing something. In fact, weights and doing something. In fact, walking is probably one of the walking is probably one of the best things you can do best things you can do for your brain. One of the key areas for your brain. One of the key areas of the brain that is affected is of the brain that is affected is the hippocampus. And that's just the part the hippocampus. And that's just the part of the brain that helps with memory and of the brain that helps with memory and memorization. And they memorization. And they discovered that even though we lose about 1% of our hippocampus we lose about 1% of our hippocampus each year as we age, we can actually each year as we age, we can actually recover it just by walking recover it just by walking three to four times a day. Three to three to four times a day. Three to four times a week.

four times a week. Yeah. I love walking. And then the other one……. Dogs love to go for walks too. Dogs love to go for walks too. Thank God for that.

Thank God for that. And the other thing that seems really And the other thing that seems really important to me is this idea important to me is this idea of ??angiogenesis. When we think of of ??angiogenesis. When we think of chronic inflammatory diseases and chronic inflammatory diseases and cardiovascular diseases, we cardiovascular diseases, we generally think of men when generally think of men when we think of cardiovascular diseases, but we are really reaching a stage, but we are really reaching a stage where the statistics are just as where the statistics are just as bad for women as for bad for women as for men. When we have this angiogenesis, men. When we have this angiogenesis, we allow the body to continue we allow the body to continue repairing and rebuilding repairing and rebuilding blood vessels. So, it's much blood vessels. So, it's much easier to reduce easier to reduce cardiovascular inflammation, but cardiovascular inflammation, but it also helps to be beautiful. One of the it also helps to be beautiful. One of the things that makes the skin look so things that makes the skin look so old is that it literally starts to be suffocated by literally starts to be suffocated by nutrients, and it starts to nutrients, and it starts to accumulate blood reserves, and accumulate blood reserves, and this happens because the this happens because the cardiovascular system is so weakened. I always tell my patients that. I always tell my patients that if the body has to choose between if the body has to choose between looking good and living, it will looking good and living, it will choose to live. So, he will do everything choose to live. So, he will do everything in his power to in his power to keep you alive even though on keep you alive even though on the outside you look like a nobody. So, when you move your body, you, when you move your body, you are not only beautiful because are not only beautiful because your muscles are getting toned, you your muscles are getting toned, you are also beautiful because you are also beautiful because you literally have more radiance.

literally have more radiance. You know, that's an excellent point. You know, that's an excellent point. You know, we always want to You know, we always want to try to find what will motivate the try to find what will motivate the patient to do something. So, patient to do something.

Sarcopenia, Independence, and Risk

So, in this case, exercise, which is the in this case, exercise, which is the most important activity or thing most important activity or thing for longevity that you for longevity that you can do, is exercise. So, can do, is exercise.

So, you're talking about… So, for women, you're talking about… So, for women, we would say: "Well, this will we would say: "Well, this will help increase blood flow to the help increase blood flow to the face, which will help reduce face, which will help reduce fine lines, wrinkles, and ensure fine lines, wrinkles, and ensure healthy skin." "For men, healthy skin." "For men, it's a question of penis size." Because it's a question of penis size." Because the the the cardiovascular system, these cardiovascular system, these blood vessels, are like a weather vane, and these are blood vessels, are like a weather vane, and these are smaller blood vessels on an appendix, smaller blood vessels on an appendix, so it will choose. It's going to be: " so it will choose. It's going to be: " Well, I can't, I don't have Well, I can't, I don't have enough capacity to bring enough capacity to bring new, good-quality blood vessels out new, good-quality blood vessels out to that penis thing over there." We're going to keep everything." We're going to keep everything internal because we don't have enough internal because we don't have enough energy to do it, because there isn't energy to do it, because there isn't enough stimulus during enough stimulus during the exercise. "So, yeah." So, for the exercise. "So, yeah." So, for men, do it for your penis. For women, do it for your. For women, do it for your beauty, I suppose.

beauty, I suppose. Uh, I have some breaking news. Like breaking news.. Like breaking news. You heard it here first. You heard it here first. This is the organic tip that has not yet This is the organic tip that has not yet been published or commercialized.

been published or commercialized. Yes, tell me. I want to hear it. Yes, tell me. I want to hear it. To walk. To walk. To walk. I've never heard of it.

Yeah. It's so good. We Yeah. It's so good. We talk about it all the time. I mean, talk about it all the time. I mean, how the walk finds its way. how the walk finds its way.

Walking and penises find their Walking and penises find their way into our topics almost every way into our topics almost every week. Uh, but anyway, and week. Uh, but anyway, and the other thing I wanted to the other thing I wanted to talk about with this idea of ??myokines talk about with this idea of ??myokines is, once again, when we think is, once again, when we think of exercise, we think of of exercise, we think of bodybuilding. What you're not thinking about bodybuilding. What you're not thinking about is what you wrote here, is what you wrote here, namely that when we develop namely that when we develop muscle and have more muscle and have more myokine activity, we myokine activity, we also improve overall musculature in also improve overall musculature in this chicken-and-egg process this chicken-and-egg process where you send more information to the where you send more information to the liver, adipose tissue, etc. So, that's what liver, adipose tissue, etc. So, that's what comes first? You look comes first? You look good because you've good because you've gained more muscle, but you gained more muscle, but you still have that fat still have that fat on top, or the fat disappears on top, or the fat disappears and you can then see more of the and you can then see more of the muscle. Well, no, what you muscle. Well, no, what you want is to develop muscle and want is to develop muscle and allow the extra muscle allow the extra muscle to help use that fat as an to help use that fat as an energy source. So I often tell energy source. So I often tell patients who have between 2 and 4.5 kg to patients who have between 2 and 4.5 kg to lose: "Don't worry about lose: "Don't worry about fat loss. Focus fat loss. Focus on building muscle. " on building muscle. " Yes, it's easier said than Yes, it's easier said than done in terms of recovery, done in terms of recovery, most women accept that." So, most women accept that." So, I'm going to keep saying it. We I'm going to keep saying it. We were, I would say I stand on my were, I would say I stand on my head like a monkey about this head like a monkey about this concept of the importance of muscle, concept of the importance of muscle, especially for women. So, we're especially for women. So, we're going to keep saying it. We say it here.

going to keep saying it. We say it here. Now, focus on the Now, focus on the muscle. Don't worry about the muscle. Don't worry about the fat. Now, it depends on the fat. Now, it depends on the situation, but you're right. In situation, but you're right. In these last 5 to 10 days, generally, these last 5 to 10 days, generally, we just say to gain weight.

we just say to gain weight. Gaining weight is in the sense Gaining weight is in the sense that muscle increases metabolism that muscle increases metabolism and then they will just burn and then they will just burn fat.

fat. fat. And I smile because when you say, And I smile because when you say, "I'm going to keep saying it." " "I'm going to keep saying it." " I thought to myself, 'Yeah, like every I thought to myself, 'Yeah, like every hour. "Because

I keep asking hour. "Because I keep asking the question." I thought to myself: " the question." I thought to myself: " Ah, it's so hard for me to Ah, it's so hard for me to gain muscle like I said, gain muscle like I said, 1.62 m and under. 1.62 m, thank you 1.62 m and under. 1.62 m, thank you very much. Uh, it's a chore. It's very much. Uh, it's a chore. It's a real concern until a real concern until one day it truly becomes my way one day it truly becomes my way of life. So, for our patients, I of life. So, for our patients, I think we need to choose one or two think we need to choose one or two things that we can things that we can focus on daily and focus on daily and master instead of saying, "Here is master instead of saying, "Here is my list of 20 new things I am my list of 20 new things I am going to do." "So, for me, you need to going to do." "So, for me, you need to make sure you take at least 5,000 steps make sure you take at least 5,000 steps a day, with a target of 10, a day, with a target of 10, okay?" If I focus on that and make sure I consume and make sure I consume at least 90g of protein per day, at least 90g of protein per day, I haven't managed to perfect I haven't managed to perfect my skills. I haven't been able my skills. I haven't been able to do these two things to do these two things consistently for 3 months. That's what I'm focusing on. Let me I'm focusing on. Let me master this, maintain it, master this, maintain it, preserve it, and then move on to the next level preserve it, and then move on to the next level of improvement.

of improvement. I will support you throughout this I will support you throughout this process, my dear. Do it, process, my dear. Do it, baby. THANKS. baby. THANKS.

Where the muscles go, the bones will follow. Where the muscles go, the bones will follow. Um, one of my Um, one of my favorite quotes is about trying to help favorite quotes is about trying to help people understand how people understand how important bones are for health, important bones are for health, and certainly during menopause.

and certainly during menopause. We always think about We always think about bone health, osteoporosis and bone health, osteoporosis and osteopenia, but muscles osteopenia, but muscles end up being the key element to end up being the key element to focus on. To focus on. To put things into perspective, an put things into perspective, an analysis of 56 analysis of 56 different studies involving nearly different studies involving nearly 800,000 people revealed that 800,000 people revealed that sarcopenia was associated with about sarcopenia was associated with about three times the risk three times the risk of osteoporosis or total bone loss of osteoporosis or total bone loss. So, basically, each. So, basically, each increase in the standard deviation of increase in the standard deviation of relative skeletal muscle mass loss relative skeletal muscle mass loss was associated with a was associated with a 35% decrease in the risk 35% decrease in the risk of osteoporosis. Well, no, I of osteoporosis. Well, no, I should say muscle gain, yes, should say muscle gain, yes, muscle gain, muscle mass gain, muscle gain, muscle mass gain, would decrease the risk of osteoporosis by 35% would decrease the risk of osteoporosis by 35%. Okay then. That's where. Okay then. That's where the muscle goes.

the muscle goes. More time. As the study More time. As the study clearly showed with a large study clearly showed with a large study, the greater, the greater, the greater the muscle mass, the, the lower the risk of osteoporosis.

lower the risk of osteoporosis. That's That's That's correct. Yes. correct. Yes. Uh, okay. Yeah. Go for it. Uh, okay. Yeah. Go for it. And you know, I mentioned the word And you know, I mentioned the word sarcopenia, which is just a kind of sarcopenia, which is just a kind of fancy word for a certain level fancy word for a certain level of limited muscle, but not just of limited muscle, but not just muscular. It is also a muscular. It is also a kind of… If you are really kind of… If you are really thin, with very, very low muscle mass thin, with very, very low muscle mass, but you also have functional problems. Grip strength, functional problems. Grip strength, to help you stand up and get out of your to help you stand up and get out of your seat, etc. All of this is associated with seat, etc. All of this is associated with what is clinically called what is clinically called sarcopenia. And we certainly have sarcopenia. And we certainly have patients who meet the patients who meet the requirements. Certainly from the requirements. Certainly from the point of view of muscle mass, point of view of muscle mass, they are so thin that they are sort of they are so thin that they are sort of at a at a sarcopenic level, which represents a sarcopenic level, which represents a huge risk of osteoporosis.

huge risk of osteoporosis. And we also know that we And we also know that we have observed sarcopenia, not have observed sarcopenia, not only in frail women, only in frail women, but also in older men but also in older men who may still have a belly.

who may still have a belly. Mhm. Mhm. Mhm. But their legs have atrophied, But their legs have atrophied, their upper body strength has their upper body strength has decreased, and they struggle to do decreased, and they struggle to do simple things like getting up from their simple things like getting up from their chair.

chair. chair. Yes. It is therefore Yes. It is therefore important that you see it. It is important that you see it. It is important that we comment on this, important that we comment on this, because you may be observing it in your own home because you may be observing it in your own home. You are a. You are a fully-fledged and very effective breadwinner for your family, and fully-fledged and very effective breadwinner for your family, and you are 65 or 70 years old. You are you are 65 or 70 years old. You are not old.

not old. Mhm. Mhm. Mhm. And you function well, and you And you function well, and you would assess yourself by saying, "Well, I would assess yourself by saying, "Well, I am perfectly intact." I'm functioning am perfectly intact." I'm functioning well. "But when you get up well. "But when you get up from your chair, when you have from your chair, when you have finished a long meeting, you have to get up again finished a long meeting, you have to get up again." These are the little." These are the little signs that the body sends you, that signs that the body sends you, that flashing yellow light that says, " flashing yellow light that says, " Listen, this isn't focused on Listen, this isn't focused on longevity." " longevity." " Yeah. I mean, if that's not a Yeah. I mean, if that's not a big sign, because it all big sign, because it all comes down to independence. I think comes down to independence. I think when we talk about longevity, I mean, that's really the, I mean, that's really the thing. It's like, "Okay, I'm 90 thing. It's like, "Okay, I'm 90 years old, but are you 90 years old and years old, but are you 90 years old and infirm, and can't infirm, and can't really move?" You are really move?" You are completely and totally dependent completely and totally dependent on someone else to on someone else to allow you to walk, to function.

function. And that you have the functionality. I And that you have the functionality. I think you know, can you think you know, can you really get up from a chair really get up from a chair without using your hands? Can you get without using your hands? Can you get up from the ground without using your up from the ground without using your hands? It's one of the best hands? It's one of the best functional markers, let's say, of functional markers, let's say, of independence as you get independence as you get older.

older. older. Mhm. Mhm. Mhm. Grip strength, all these things are Grip strength, all these things are part of it. Walking speed, part of it. Walking speed, that is, the speed at which that is, the speed at which you are able to move. All you are able to move. All these things can be measured these things can be measured when we examine sarcopenia.

Mhm. Mhm. What else? Uh, yes, I think there was What else? Uh, yes, I think there was a pretty big study here a pretty big study here on sarcopenia. In a on sarcopenia. In a prospective study of 770 prospective study of 770 hospitalized elderly adults, in- hospitalized elderly adults, in- hospital mortality was approximately 6% in hospital mortality was approximately 6% in patients with sarcopenia versus patients with sarcopenia versus 2% in patients without the condition.

2% in patients without the condition. What does that mean? This What does that mean? This means that if, God forbid, you have to go to the hospital, if, you have to go to the hospital, if you go in already sarcopenic, that is, you go in already sarcopenic, that is, with with with very, very low muscle mass and low very, very low muscle mass and low functionality, the chances are three functionality, the chances are three times higher that you will not make it times higher that you will not make it compared to someone compared to someone who goes into the hospital already. And it's not even who goes into the hospital already. And it's not even, I would even say, it's not even just, I would even say, it's not even just a question a question of muscle, having a little fat is of muscle, having a little fat is part of the reserve. If you are part of the reserve. If you are incredibly thin and incredibly thin and have little muscle, this is not a have little muscle, this is not a good combination. I was just good combination.

Protein Quality and Digestive Support

I was just talking about this the other day, talking about this the other day, weren't I? We were saying that weren't I? We were saying that hospital staff could predict hospital staff could predict the the the results. These results. These are exactly the types of studies that are exactly the types of studies that confirm this.

confirm this. And that was one of those And that was one of those main things that if you are, say, main things that if you are, say, an older woman, say over an older woman, say over 65, I would say. Um, and if you 65, I would say. Um, and if you have this situation of being underweight and have this situation of being underweight and overweight, you are living dangerously.

overweight, you are living dangerously. Yes. Yes. Yes. A bad fall, and it's not even A bad fall, and it's not even necessarily a necessarily a hip injury. A single fall to the foot hip injury. A single fall to the foot suddenly renders you immobile. The lack suddenly renders you immobile. The lack of reserves, which we've talked about a little of reserves, which we've talked about a little here, is here, is slight, then you contract an slight, then you contract an infection that requires you to stay in infection that requires you to stay in the hospital for two to four the hospital for two to four weeks.

weeks. weeks. Or you catch a very bad cold Or you catch a very bad cold that turns into bronchitis, then that turns into bronchitis, then pneumonia. I mean, how pneumonia. I mean, how often do we see this? And we often do we see this? And we will see this more in will see this more in thin women and I would really say that thin women and I would really say that it does not depend on age, because if it does not depend on age, because if you do not have reserves, you are you do not have reserves, you are more likely not to survive more likely not to survive a simple disease.

a simple disease. When you said we were going to When you said we were going to see this more often, were you see this more often, were you thinking of something?

thinking of something? I don't remember what I was I don't remember what I was saying. saying. saying. Well, when you said that, it made me Well, when you said that, it made me think that with GLP-1, if think that with GLP-1, if people get thinner and they just people get thinner and they just chew their muscles, and chew their muscles, and because GLP-1 is so widespread right now because GLP-1 is so widespread right now, we might see, we might see even more of it. But yes, at this stage, a even more of it. But yes, at this stage, a meta-analysis of 3,249 meta-analysis of 3,249 intensive care patients revealed that intensive care patients revealed that sarcopenia was associated with about sarcopenia was associated with about twice the risk of dying in twice the risk of dying in hospital hospital hospital and more than three times the and more than three times the risk of dying within a year.

risk of dying within a year. Yeah. So it's not just about what's Yeah. So it's not just about what's happening there. That was happening there. That was after you became ill.

after you became ill. Yeah, healing. Yeah, yeah. Yeah, healing. Yeah, yeah. Yeah, it's not curable. Yeah, it's not curable. Yeah. You know, we don't talk about it at Yeah. You know, we don't talk about it at all, but just as an aside, it's all, but just as an aside, it's very relevant for children too.

very relevant for children too. I remember I had a I remember I had a Cuban pediatrician who said that this child Cuban pediatrician who said that this child had no reserves, you know, had no reserves, you know, he always said, "They have no he always said, "They have no reserves." " reserves." " Yeah.

Yeah. Yeah. And I notice that a lot when And I notice that a lot when dancing with girls. Well, we've dancing with girls. Well, we've always had very fit, always had very fit, very slim children. But there are children very slim children. But there are children in these dance classes who are in these dance classes who are so thin. They are so thin so thin. They are so thin that they look like ears and a that they look like ears and a jaw.

jaw. jaw. Yeah. Yeah. Yeah. And then they are active, and they never stop And then they are active, and they never stop moving, and some moving, and some of them have this beautiful grace, and of them have this beautiful grace, and they move their bodies so well, and I they move their bodies so well, and I wonder what it's like to wonder what it's like to be that thin? This is be that thin? This is simply not activity. It's a simply not activity. It's a lack of adequate food. And the lack of adequate food. And the reason this is so important is that the more muscle you can build…

And I'm talking about women, although I'm And I'm talking about women, although I'm sure for boys, I sure for

boys, I think it's a bit later in think it's a bit later in life, but let's say that for women life, but let's say that for women who are in their pre-teens, the more who are in their pre-teens, the more they can focus on they can focus on developing those muscles as they developing those muscles as they approach their period, the approach their period, the easier it is for them to develop and easier it is for them to develop and maintain their muscle mass maintain their muscle mass into their forties.

into their forties. Yes. Well, I think patients often Yes. Well, I think patients often ask, "How can I ask, "How can I build my muscles?" "I mean build my muscles?" "I mean, what is it, you know,, what is it, you know, we're going to direct them to another we're going to direct them to another coach." Of course, we coach." Of course, we always encourage people to have a coach.

always encourage people to have a coach. You have a fantastic coach You have a fantastic coach you've been working with for years. But there are some fundamental things you need to But there are some fundamental things you need to know. So, what do I need to do to know. So, what do I need to do to develop my muscles? Well, if we're only develop my muscles? Well, if we're only talking about the talking about the training aspect, first of all, it's training aspect, first of all, it's not that much. That's about 90 to not that much. That's about 90 to 120 minutes per week. Which 120 minutes per week. Which roughly equates to three to four roughly equates to three to four times a week. That's not times a week. That's not necessary. This could even be necessary. This could even be two to four times a week. I don't two to four times a week. I don't think it should exceed think it should exceed four times, and three is probably four times, and three is probably the ideal frequency. So, about three times the ideal frequency. So, about three times a week, you commit a week, you commit to a sort of progressive overload, to a sort of progressive overload, which simply means you're which simply means you're going to push beyond your…

slightly beyond your… capacity. If you did 100 pounds capacity. If you did 100 pounds for eight repetitions, for eight repetitions, next time you'll try to do 100 next time you'll try to do 100 pounds for 12 repetitions, and even pounds for 12 repetitions, and even if it's only nine repetitions, if it's only nine repetitions, you'll just try to you'll just try to gradually overload. That's really the key gradually overload. That's really the key and it doesn't even need to be and it doesn't even need to be much. It just needs to be a much. It just needs to be a slight stimulus beyond what you slight stimulus beyond what you 've done before. Uh, it's really 've done before. Uh, it's really not that complicated and it shouldn't not that complicated and it shouldn't be any harder than that. I mean, be any harder than that. I mean, more difficult than that because I more difficult than that because I think that's when think that's when patients potentially start patients potentially start to have injury problems.

to have injury problems. Injuries, of course. And we are talking Injuries, of course. And we are talking very specifically about resistance very specifically about resistance to weight. We're not talking about to weight. We're not talking about beloved Pilates, which, I repeat, is weight resistance, but, is weight resistance, but we're talking about something very we're talking about something very basic, I mean, 30 minutes basic, I mean, 30 minutes spent with targeted weights. Because one of the spent with targeted weights. Because one of the things that these formulas things that these formulas we often give are for this we often give are for this beginner concept. But if you have beginner concept. But if you have a woman who is active, who is already a woman who is active, who is already used to training, but does not do but does not do weight resistance, especially if she is small, I weight resistance, especially if she is small, I think she will get much more think she will get much more benefit from the load if she pushes, using a little more weight and, using a little more weight and doing fewer repetitions. Of doing fewer repetitions. Of course. Of course.

course. Of course. And regardless of what that implies in And regardless of what that implies in terms of injury assistance, I terms of injury assistance, I think that sometimes what happens with think that sometimes what happens with multiple repetitions is that multiple repetitions is that form starts to break down. So, form starts to break down. So, if you are now, you can if you are now, you can limit yourself to about six or eight limit yourself to about six or eight repetitions, you can also repetitions, you can also keep the form tighter. But keep the form tighter. But again, there must be either again, there must be either a progressive overload in the a progressive overload in the number of repetitions, or a number of repetitions, or a progressive overload in the amount progressive overload in the amount of weight, one way or another.

.. But I think what matters is what But I think what matters is what you pointed out, which is you pointed out, which

is having a coach. I mean, having a coach. I mean, go for walks, which we love, and go for walks, which we love, and keep up with your Pilates and yoga classes.

keep up with your Pilates and yoga classes. I always talk about the variety of I always talk about the variety of training. I don't think that training. I don't think that matters that much to you. And then I matters that much to you. And then I think that doing weight training with think that doing weight training with a coach you a coach you trust, who really knows what he's doing. What trust, who really knows what he's doing. What they are talking about is that this will be the they are talking about is that this will be the best way to ensure that best way to ensure that muscles and bones are built.

muscles and bones are built. Well, look, I mean, when Well, look, I mean, when you say that I'm not interested, you say that I'm not interested, I may not care, but I may not care, but if I talk to my patients, I say do what if I talk to my patients, I say do what you love, do what you love, do what will be fun. And will be fun. And then, you know, we're going to have these then, you know, we're going to have these conversations about conversations about progressive overload to some extent.

progressive overload to some extent. And some patients will do it and And some patients will do it and others won't. Well, that's the others won't. Well, that's the reality. We need something that will reality. We need something that will gradually overload gradually overload to some extent. So, to some extent. So, how much protein do how much protein do we need? There's something else we need? There's something else. So, obviously, there is the. So, obviously, there is the stimulus, and if there is not enough stimulus, and if there is not enough protein and you do this type protein and you do this type of stimulus, patients often actually of stimulus, patients often actually lose muscle. And you lose muscle. And you know, when I use this know, when I use this very sophisticated scale and we very sophisticated scale and we show them where their muscles were show them where their muscles were last time and where they are last time and where they are now, they'll say, "Oh, yeah, now, they'll say, "Oh, yeah, I just, you know, lost a little bit of I just, you know, lost a little bit of muscle." I haven't been training. " And that might be the case, but it's And that might be the case, but it's usually not. What usually not. What usually happens is that they usually happens is that they might be exercising less, so might be exercising less, so inevitably their inevitably their protein intake has decreased because they weren't as protein intake has decreased because they weren't as hungry or whatever. They hungry or whatever. They weren't as focused on it, and then they lost muscle.

But they just think, 'Well, if But they just think, 'Well, if I just do everything I'm I just do everything I'm already doing with my diet and just already doing with my diet and just exercise, I'm going to gain exercise, I'm going to gain muscle.'" “I wish it were that muscle.'" “I wish it were that simple.

simple. simple. Yeah. I mean, I think it is. Yeah. I mean, I think it is. I think after 20 years, it's I think after 20 years, it's easy for me to say that the biggest easy for me to say that the biggest obstacle to success—and I'm speaking obstacle to success—and I'm speaking from personal and from personal and professional experience—isn't the professional experience—isn't the workouts, it's the diet workouts, it's the diet.

.. It's the diet. And in many cases, it's the fact And in many cases, it's the fact that we eat too little and that we eat too little and expect more from our performance. And expect more from our performance. And I always remind the patient that it's not just about what they ate for breakfast the morning ate for breakfast the morning of a workout. It's about what they of a workout. It's about what they ate in the ate in the previous 24 hours.

Or really, the entire week. Or really, the entire week. Yeah. Yeah. Yeah. You might wonder, then, You might wonder, then, how much protein do how much protein do we need? Uh, you know, we need? Uh, you know, ultimately, it's relatively ultimately, it's relatively simple. You could just say that simple. You could just say that if you're trying to gain muscle if you're trying to gain muscle now, not maintain it, you now, not maintain it, you need about one gram of protein need about one gram of protein per kilogram of body weight. So, if you weigh per kilogram of body weight. So, if you weigh 150 pounds, that'll be about 150 pounds.

150 pounds, that'll be about 150 pounds. If you weigh 150 pounds, that'll be If you weigh 150 pounds, that'll be about 150 pounds. If you weigh 150 about 150 pounds. If you weigh 150 pounds, that'll be about 150 pounds.

pounds, that'll be about 150 pounds. You're just trying to maintain your You're just trying to maintain your muscle mass, uh, so it's a muscle mass, uh, so it's a little less than that. It doesn't even little less than that. It doesn't even have to be that amount. But, have to be that amount. But, you know, most of the time, for a you know, most of the time, for a lot of women, we're talking about about lot of women, we're talking about about 100, 110, maybe 120 grams. And when 100, 110, maybe 120 grams. And when you say that, you just see the you say that, you just see the fear in their eyes as soon as you fear in their eyes as soon as you say those kinds of numbers because say those kinds of numbers because it sounds like a lot, because it is a it sounds like a lot, because it is a lot? I think it is a lot lot? I think it is a lot for people who aren't for people who aren't used to eating protein. I don't used to eating protein. I don't think it's think it's necessarily a lot, but we necessarily a lot, but we 're not used to it. So, we 're not used to it. So, we 're kind of not 're kind of not programmed for it. Our bodies programmed for it. Our bodies aren't ready to take it that aren't ready to take it that way.

way. way. Yeah, like I've seen people say that Yeah, like I've seen people say that I spend 45 minutes at the I spend 45 minutes at the gym in 24 hours worrying about what I've gym in 24 hours worrying about what I've eaten, you know, it's eaten, you know, it's actually very true. I think the actually very true. I think the average woman is going to be shocked to average woman is going to be shocked to learn how much she should be learn how much she should be eating. Uh, and it's true. It's not eating. Uh, and it's true. It's not a small thing. It's not a a small thing. It's not a small thing to ingest 100 grams of small thing to ingest 100 grams of protein.

protein. Anyway, that's it. Anyway, that's it. I want to do a little bit of math with that. Okay.. Okay. Because let's say the 100 grams you just Because let's say the 100 grams you just mentioned. One gram of protein mentioned. One gram of protein is associated with four calories.

is associated with four calories. So, if you consume 100 grams of So, if you consume 100 grams of protein, you've just eaten 400 protein, you've just eaten 400 calories. So, what happens in calories. So, what happens in some cases—we're going to talk about some cases—we're going to talk about protein—is that the patient is doing protein—is that the patient is doing pretty well. They get their pretty well. They get their protein level. They hit 100.

protein level. They hit 100. And then they don't eat anything else. And then they don't eat anything else. Yeah. And then they say, "Well, at " Yeah. And then they say, "Well, at " Finally, I want to consume 800 or 1,000 Finally, I want to consume 800 or 1,000 calories a day." "So, calories a day." "So, what happened to all that what happened to all that protein? Did it go protein? Did it go directly to their muscles? No, directly to their muscles? No, it was burned to produce it was burned to produce energy. Okay.

energy. Okay. So you have to So you have to consider your basal metabolic rate, consider your basal metabolic rate, which is your which is your resting metabolic rate, and we provide resting metabolic rate, and we provide figures for that. You can figures for that. You can also do calculations on that also do calculations on that, but our scale gives a, but our scale gives a very accurate estimate. And then very accurate estimate. And then understand how many calories you're understand how many calories you're going to burn because you've been running around during the day, working out, during the day, working out, and and and exercising. So, for many exercising. So, for many patients, it's just the average patient, patients, it's just the average patient, the average female patient for me, it's the average female patient for me, it's about 1,800 calories. 1,800 is what about 1,800 calories. 1,800 is what they actually need, and I'm not they actually need, and I'm not talking about creating this huge talking about creating this huge excess. It's just about creating what excess. It's just about creating what 's sufficient, in many cases, just to maintain, to keep, just to maintain, to keep the metabolism elevated so they the metabolism elevated so they can Actually burn can Actually burn fat. Hmm.

fat. Hmm. But, there's this, they don't burn But, there's this, they don't burn fat, so they keep fat, so they keep cutting calories, cutting cutting calories, cutting calories. But, no, no, no, I've calories. But, no, no, no, I've reached my goal. 100 grams of reached my goal. 100 grams of protein. We protein. We even know that people even know that people intentionally cut calories. I think intentionally cut calories. I think when a person is focused when a person is focused on their health and really on their health and really careful about what they eat, they careful about what they eat, they regularly say to themselves, "I'd rather not regularly say to themselves, "I'd rather not eat than eat eat than eat something that I know doesn't something that I know doesn't serve my goals." Yes, I'm serve my goals." Yes, I'm totally talking about myself, but also about a totally talking about myself, but also about a lot of

people. And how many of our lot of people. And how many of our patients have bowel problems patients have bowel problems? How many of our patients will say, "? How many of our patients will say, " Oh, Oh, Oh, yeah.

yeah. yeah. Everything gives me a stomach ache. Everything gives me a stomach ache. It's steak. It's too much. It's It's steak. It's too much. It's steak.

steak. steak. A lot." Or if I ate that, and there are A lot." Or if I ate that, and there are so many factors involved so many factors involved, like the fact that the, like the fact that the production of digestive enzymes production of digestive enzymes starts to decline, I believe around starts to decline, I believe around the age of 25. You You know, there are the age of 25. You You know, there are some very important considerations.

some very important considerations. But if we're just talking about But if we're just talking about diet, it's not like in diet, it's not like in the '80s, when my aunt was drinking the '80s, when my aunt was drinking grapefruit juice, orange juice, grapefruit juice, orange juice, and Metamucil, like I was saying and Metamucil, like I was saying the other day, and she swore. Look, the lady is 92 years old and she looks amazing.

, the lady is 92 years old and she looks amazing. So, it's not about not So, it's not about not wanting to eat. It's about not wanting to eat. It's about not knowing how to consume knowing how to consume food in the right amount and be food in the right amount and be well-tolerated.

well-tolerated. Unfortunately, protein isn't Unfortunately, protein isn't just protein. So, what have just protein. So, what have we been talking about? We've been talking we been talking about? We've been talking about progressive overload and the about progressive overload and the need to consume it at least a need to consume it at least a few times a week. We've been talking about few times a week. We've been talking about getting enough getting enough protein, but it's not as protein, but it's not as simple as just getting enough simple as just getting enough protein. You have to make sure there's protein. You have to make sure there's a good balance of calories if you're a good balance of calories if you're trying to build muscle.

trying to build muscle. Yes. Yes. Yes. But now we're going to talk about But now we're going to talk about the quality of protein available the quality of protein available on the… market, depending on what on the… market, depending on what we choose to eat or not.

we choose to eat or not. Let me Let me Let me shake my head. It's okay, shake my head. It's okay, because I know where we're going. because I know where we're going.

Very well, go ahead. Very well, go ahead. There's going to be some controversy here. It's There's going to be some controversy here. It's coming. coming.

coming. It's not even really It's not even really controversial. controversial. controversial. Well, it isn't for me, Well, it isn't for me, but I'm going to say I'm going to upset but I'm going to say I'm going to upset someone here.

someone here. No, it's not for me. You're No, it's not for me. You're just wrong, and I'm right, and that's it just wrong, and I'm right, and that's it. Okay. Very well. Very well,. Okay. Very well. Very well, go ahead. Go ahead.

go ahead. Go ahead. I'm going to… I'm going to start talking about I'm going to… I'm going to start talking about facts, then you'll start facts, then you'll start talking about feelings, and then we'll talking about feelings, and then we'll see how it goes.

see how it goes. I win. Well, you have very strong Well, you have very strong feelings, yes. feelings, yes. I do. Go ahead. I do. Go ahead. Um, what's really Um, what's really important about protein for important about protein for it to be anabolic, which is it to be anabolic, which is the fancy word for making the fancy word for making something grow, in this case, something grow, in this case, muscle, muscle, muscle, you want it to be animal protein.

you want it to be animal protein. Yes, Because you need a Yes, Because you need a lot of leucine. So, lot of leucine. So, leucine is a certain type of leucine is a certain type of amino acid that really, really helps amino acid

that really, really helps to stimulate that anabolic response.

to stimulate that anabolic response. Muscle growth. Muscle growth. Muscle growth. That's what Muscle growth. That's what we're talking about here. So, leucine we're talking about here. So, leucine is this really essential element.

is this really essential element. And then there's a particular measure And then there's a particular measure of protein quality. It's of protein quality. It's called the Digestible Essential Amino Acid Score called the Digestible Essential Amino Acid Score, the DIAAS.

Yes, essential. I thought that was Yes, essential. I thought that was a pretty cool word, because what a pretty cool word, because what it really means is it really means is digestible. It's like digestible. It's like high-quality digestibility, that's what high-quality digestibility, that's what it really refers to.

it really refers to. Okay. Okay. Okay. But wait, excuse me. I want to But wait, excuse me. I want to pause for a minute and say pause for a minute and say that part of the problem with this that part of the problem with this digestible component is that because a digestible component is that because a lot of people don't eat these lot of people don't eat these foods in the right amounts and foods in the right amounts and regularly enough, their regularly enough, their digestive tract starts to change. So, it digestive tract starts to change. So, it becomes difficult for them to digest becomes difficult for them to digest these Food. Because the body will these Food. Because the body will react… Your tongue, your react… Your tongue, your taste buds will react to what you taste buds will react to what you eat regularly. And the enzymes eat regularly. And the enzymes your body produces will react your body produces will react to better digest the foods to better digest the foods you eat regularly. So, the you eat regularly. So, the reason I'm taking a reason I'm taking a moment to pause here is moment to pause here is because if someone says, "Oh, no. Every time I eat a. Every time I eat a pork chop, I'm flat for pork chop, I'm flat for days," well, that's days," well, that's because you need to because you need to gradually reintroduce your gradually reintroduce your dietary changes to build dietary changes to build muscle and promote digestion.

muscle and promote digestion. Mhm. Well, what would be the Mhm. Well, what would be the elements that would promote elements that would promote digestion when you say…

digestion when you say… Well, I'm always talking about a Well, I'm always talking about a digestive enzyme. I think you need a digestive enzyme. I think you need a complete digestive enzyme, something complete digestive enzyme, something that contains that contains hydrochloric acid and ox bile or some hydrochloric acid and ox bile or some kind of bile derivative to kind of bile derivative to break down fats. That makes a break down fats. That makes a huge difference. In addition to that, huge difference. In addition to that, something super cheap and something super cheap and easy to use would be aloe easy to use would be aloe vera juice, not the gel. And you You don't vera juice, not the gel. And you You don't need to buy a need to buy a fancy product. You don't need fancy product. You don't need to buy aloe vera juice and all that to buy aloe vera juice and all that. No. Just the right. No. Just the right clean source, with no added ingredients, and clean source, with no added ingredients, and you can take doses throughout you can take doses throughout the day. It's the day.

Collagen, Creatine, and Testosterone

It's incredibly restorative and soothing incredibly restorative and soothing for the gut, so when you for the gut, so when you increase your intake of increase your intake of animal protein, you get this " animal protein, you get this " spa" for your intestines that will make it spa" for your intestines that will make it easier to break down easier to break down those foods and keep those foods and keep your enterocyte cells—the cells of your enterocyte cells—the cells of your digestive system—happy your digestive system—happy while your body gets used to while your body gets used to eating larger amounts.

eating larger amounts. It's It's It's a great little trick, I guess. a great little trick, I guess. Is that what they're called Is that what they're called now? Tricks. Uh, I think it's now? Tricks. Uh, I think it's really good.

really good. Digestive enzymes, I think it's just Digestive enzymes, I think it's just a no-brainer. So important. a no-

brainer. So important. Anyone over 40 Anyone over 40 should really be thinking about it, especially should really be thinking about it, especially when it comes to protein. But when it comes to protein. But some proteins are more digestible some proteins are more digestible and more anabolic than others.

and more anabolic than others. So, going back to that. According to the DIAAS score, So, going back to that. According to the DIAAS score, anything above 100 is considered anything above 100 is considered excellent. Between 75 and excellent. Between 75 and 99, we would call that a 99, we would call that a high-quality protein. And below 75 high-quality protein. And below 75 would be a would be a low-quality protein source, to get to the point.

low-quality protein source, to get to the point. So let's go over So let's go over some of these things and what's some of these things and what's actually considered an actually considered an excellent source, and that's something excellent source, and that's something that will help you more that will help you more easily. So, understand that this is what easily. So, understand that this is what we're talking about here, we're talking about here, gram for gram. So, one gram of gram for gram. So, one gram of protein from one type of source doesn't have protein from one type of source doesn't have exactly the same benefit as one exactly the same benefit as one gram of protein from another source.

gram of protein from another source. That's what we're talking about here. That's what we're talking about here. So, it's as much about quality as it is about So, it's as much about quality as it is about quantity. We've mostly been talking about quantity. We've mostly been talking about quantity. I would say that most of the quantity. I would say that most of the time, when I'm talking to patients, I just talk about quantity because, I just talk about quantity because I'm just trying to get a number I'm just trying to get a number somewhere. And then I worry about somewhere. And then I worry about things after that. But let me things after that. But let me go through the chart here. Okay.

go through the chart here. Okay. So, So, So, whey protein has always whey protein has always been known for decades, and whey protein isolate is probably the whey protein isolate is probably the best source from an best source from an anabolic standpoint. That's one of the reasons anabolic standpoint. That's one of the reasons bodybuilders bodybuilders bodybuilders use whey protein, use whey protein, based on what we know about milk.

based on what we know about milk. So, whey protein isolate is So, whey protein isolate is 125. Remember, I said anything 125. Remember, I said anything above 100. So, this is above 100. So, this is really at the 125 level. High. There really at the 125 level. High. There really isn't anything more potent than really isn't anything more potent than whey protein.

whey protein. And therefore, very effective. It's very… I mean, that's the other thing I mean, that's the other thing about the fact that the more about the fact that the more ideal or essential the protein is, the more ideal or essential the protein is, the more effective it is. And since we were talking about how effective it is. And since we were talking about how difficult it is for the difficult it is for the average person to get the amount they average person to get the amount they should be getting, you really want to should be getting, you really want to steer them toward sources that are going to be steer them toward sources that are going to be more, you know, more potent.

.. Yeah. Yeah. More potent. Yeah. Yeah. More potent. Yeah. Yeah. Yeah. Milk, dairy products, it's Milk, dairy products, it's between 114 and 123. between 114 and 123.

And it's a food with a very bad And it's a food with a very bad reputation, milk and reputation, milk and dairy products. dairy products. And it also depends a lot on the And it also depends a lot on the quality. And we could quality. And we could certainly talk about the raw milk certainly talk about the raw milk we drink all the time at home.

Uh, and no, I don't think it's Uh, and no, I don't think it's whey protein. whey protein. It's… It's almost like I'm It's… It's almost like I'm getting a little off-topic. It's kind of like the getting a little off-topic. It's kind of like the discussion about gluten, it's discussion about gluten, it's not really gluten, it's not really gluten, it's glyphosate and other pesticides that glyphosate and other pesticides that come with it. To say that bread is just come with it. To say that bread is

just a bad thing.

a bad thing. Uh, that doesn't make any sense. Uh, that doesn't make any sense. Generally, we don't talk about Generally, we don't talk about celiac disease. It's the same with celiac disease. It's the same with dairy products. It's just dairy products. It's just that generally, the problem is the that generally, the problem is the quality.

quality. quality. And that's what we've associated with the And that's what we've associated with the truth about this whole truth about this whole food category, not Because it was food category, not Because it was the fault of the food category, the fault of the food category, but because it was the way but because it was the way they were processed and all that.

they were processed and all that. But anyway, eggs, uh, But anyway, eggs, uh, from 101 to 122, beef, from 99 to 121. from 101 to 122, beef, from 99 to 121.

And then it goes down from there. Pork, from And then it goes down from there. Pork, from 117 to 139. All of these foods are 117 to 139. All of these foods are considered excellent considered excellent sources. Then, from there, it sources. Then, from there, it goes down.

goes down. John. We can assume without being too far off the mark John. We can assume without being too far off the mark that animal meat sources that animal meat sources are almost always are almost always excellent. All I just said was I just said was all… Yes, all of these foods were all… Yes, all of these foods were versions of animal meat, which are versions of animal meat, which are all going to be classified as all going to be classified as excellent excellent excellent muscle-building foods.

Yeah. Yeah. Then, from there, it makes a nice Then, from there, it makes a nice little change and it goes down. little change and it goes down. Soy and pea protein. They're Soy and pea protein. They're considered a considered a good quality form of protein. We're good quality form of protein. We're talking about anabolics. I'm sure there's some talking about anabolics. I'm sure there's some truth to that truth to that, but I would certainly say, but I would certainly say at what cost. So now we have highly processed soy or pea protein, which I highly processed soy or pea protein, which I think is unfortunately really think is unfortunately really bastardized and has its own bastardized and has its own problems, certainly with problems, certainly with the gut.

the gut. But not soy products But not soy products that aren't highly processed that aren't highly processed and of poor quality, like and of poor quality, like edamame or edamame or tempeh or even tofu, which is a tempeh or even tofu, which is a highly processed food but highly processed food but remains very close to its remains very close to its original form nutritionally.

original form nutritionally. So it's a higher-quality food. So it's a higher-quality food. And it's really… Thank you for saying that, And it's really… Thank you for saying that, because that's what I'm trying to say. We… It's soy protein. We… It's soy protein or pea protein, and then the or pea protein, and then the patient turns the bottle over and when patient turns the bottle over and when it says here 'soy protein isolate it says here 'soy protein isolate,' it's good for me, or because,' it's good for me, or because it's going to help my muscles. And I it's going to help my muscles. And I 'm… There are so many other 'm… There are so many other problems that are on the list here, problems that are on the list here, and I think it's important to and I think it's important to say that, but I think it's going to say that, but I think it's going to depend on the source, especially with depend on the source, especially with soy.

soy. soy. Like with milk. It's the quality. Like with milk. It's the quality. Then there's oat milk and Then there's oat milk and all that, and those things are between 57 all that, and those things are between 57 and 68. So remember, we and 68. So remember, we were in the 120 range up to about were in the 120 range up to about halfway in terms of power. And halfway in terms of power. And then all the way down there's collagen.

I love collagen. I love collagen. Collagen is the worst Collagen is the worst protein source for helping build protein source for helping build muscle. I'm sorry to muscle. I'm sorry to say it, but it's absolutely rubbish. It doesn't do what say it, but it's absolutely rubbish. It doesn't do what you think it you think it does. I'm looking at the camera now, does. I'm looking at the camera now, right? I'm telling you it doesn't do what right? I'm telling you it doesn't do what

you think it does.

you think it does. In terms of muscle. What do you think In terms of muscle. What do you think??? In terms of muscle. In terms of muscle. Yes. Yes.

Yes. I love collagen. Okay. I love collagen. Okay. Now we're… Now we're… I'm going to count that toward my I'm going to count that toward my protein goals for the day. Yes.

protein goals for the day. Yes. I've finally, after several years, I've finally, after several years, accepted that it only counts as accepted that it only counts as a pinch. So if I pick up my a pinch. So if I pick up my spoon and it says 10g of spoon and it says 10g of collagen, I don't really think that I gained my extra 20 grams that I gained my extra 20 grams just because I took my just because I took my collagen in the morning and afternoon.

collagen in the morning and afternoon. That's it. That's it. Good, good. Good, good. But it took me years to get there But it took me years to get there. Now, I still love. Now, I still love collagen.

collagen. collagen. Now let's talk about what Now let's talk about what else collagen can do. Well, else collagen can do. Well, collagen is wonderful for collagen is wonderful for tissues that contain collagen. It's tissues that contain collagen. It's really good for the skin. It's really good for the skin. It's really good for nails. It's really good for nails. It's very good for hair. I think it's very good for hair. I think it's for ligaments. It's for ligaments. It's good for tendons. That's right. It good for tendons. That's right. It 's good for soft tissue repair 's good for soft tissue repair. We use it with Regen. So. We use it with Regen. So the point is, collagen isn't the point is, collagen isn't bad. The point is, if you're bad. The point is, if you're using collagen as your using collagen as your primary protein source for primary protein source for muscle building, you're wrong. That's right. And if you think it's. That's right. And if you think it's for ligaments, it's good for ligaments, it's good for tendons. That's right. It's for tendons. That's right. It's good for soft tissue repair. We use it. We use it with Regen. So the The fact is, with Regen. So the The fact is, collagen isn't bad. The fact collagen isn't bad. The fact is, if you're using collagen is, if you're using collagen as your primary protein source as your primary protein source for muscle building, you for muscle building, you 're wrong. That's 're wrong. That's true. And if you think that's for true. And if you think that's for muscles, it adds up to your muscles, it adds up to your numbers, I wouldn't add that to numbers, I wouldn't add that to your numbers. If you do, your numbers. If you do, it represents… That's it represents… That's correct. Even if it says, "Yeah, correct. Even if it says, "Yeah, for each scoop, that gives me 9 or for each scoop, that gives me 9 or 10 grams." "Don't 10 grams." "Don't play a psychological game with play a psychological game with me, which has no me, which has no scientific validity, but I'm giving it to you scientific validity, but I'm giving it to you because it might help. If it's because it might help. If it's a 10-gram spoonful, I say a 10-gram spoonful, I say five. We're going to cut it in half.

five. We're going to cut it in half. Oh, that's your scientific study that Oh, that's your scientific study that you did on that. So, you you did on that. So, you just put five. This is not just put five. This is not scientific. This is my scientific. This is my emotional study. My emotional study. My feelings.

feelings. feelings. If I'm on 90 grams a day, and If I'm on 90 grams a day, and I drink my tea in the evening before going to I drink my tea in the evening before going to bed, I'll be putting in 95.

Tea, really? Oh my God. Tea, really? Oh my God. And then, and then I'm so And then, and then I'm so proud of myself. proud of myself. Well, and it's not… I mean, it's…

, it's… This pride made my This pride made my muscles grow. muscles grow. Absolutely. I mean, listen, Absolutely. I mean, listen, part of that is important.

part of that is important. Again, we are working with Again, we are working with patients, we are working with patients, we are working with human beings, and we are trying human beings, and we are trying to encourage people throughout the to encourage people throughout the process. As much as I used to say what I process. As much as I used to say what I said about collagen, said about collagen, I'm not too much of an activist when I'm I'm not too much of an activist when I'm sitting down. I am here with my sitting down. I am here with my wonderful patients, and they are trying wonderful patients, and they are trying to be proud of what they do. So, to be proud of

what they do. So, we are slowly moving in that we are slowly moving in that direction.

direction. direction. And here's the thing, actually, because And here's the thing, actually, because you can really insert the you can really insert the variable X. For example, collagen variable X. For example, collagen may not be great for may not be great for muscle building, but it does muscle building, but it does all these other things. Perhaps all these other things. Perhaps tofu is not ideal compared tofu is not ideal compared to steak for to steak for muscle building, but tofu does other muscle building, but tofu does other things. I don't know. Because you things. I don't know. Because you and I always say, "Be a and I always say, "Be a vegetarian and eat meat." " " vegetarian and eat meat." " " Yeah.

Yeah. Be vegetarians. We think about Be vegetarians. We think about variety, eat according to the variety, eat according to the seasons, lots of colours, be seasons, lots of colours, be bold in what you eat. But bold in what you eat. But we always say to eat we always say to eat meat. There will be patients who meat. There will be patients who come to us and who will come to us and who will not eat meat.

not eat meat. I have a fantastic patient whom I I have a fantastic patient whom I met recently, maybe a month or two ago. She has a month or two ago. She has alpha-gal. And not when alpha-gal. And not when everyone was talking about this alpha-gal thing here everyone was talking about this alpha-gal thing here recently, you know, this disease recently, you know, this disease that's happening. It is a that's happening. It is a tick-borne disease that tick-borne disease that literally alters your literally alters your genetic makeup to the point that you genetic makeup to the point that you cannot eat beef. I mean, cannot eat beef. I mean, it's just… What a damn thing to it's just… What a damn thing to deal with. But anyway, she had it deal with. But anyway, she had it in 2015 and I have never in 2015 and I have never met a patient who was met a patient who was actually affected by alpha-gal. Even actually affected by alpha-gal. Even though she would love to sit down and eat though she would love to sit down and eat a steak, she would be hospitalized if a steak, she would be hospitalized if she did.

And that's why it's important to And that's why it's important to remember that we make these remember that we make these very black and white statements, very black and white statements, but as with everything else, you but as with everything else, you said we're dealing with said we're dealing with humans, so you have…to find humans, so you have…to find a personalized approach and a personalized approach and learn what works for you learn what works for you and what doesn't.

and what doesn't. Collagen works perfectly Collagen works perfectly for me. And what about creatine? It works And what about creatine? It works for you too, doesn't it?

for you too, doesn't it? Yes, that's true. I also add it to Yes, that's true. I also add it to my evening milk. And creatine, of all the And creatine, of all the available dietary supplements, available dietary supplements, is probably one of the most is probably one of the most studied, if not the most studied of studied, if not the most studied of all. It has existed since the all. It has existed since the 90s. There is so much information about it 90s. There is so much information about it. I think everyone. I think everyone should take it. It's just one of should take it. It's just one of those basic dietary supplements those basic dietary supplements that we typically give to our that we typically give to our patients. For me, creatine is patients. For me, creatine is definitely at the top of the list in definitely at the top of the list in this conversation about muscles, this conversation about muscles, but it does much more than just but it does much more than just build muscle. But muscles build muscle. But muscles are really essential and you don't are really essential and you don't need many of them. It's not expensive. That's need many of them. It's not expensive. That's about 5g, or a small about 5g, or a small spoonful. You can add it to spoonful. You can add it to tea, your protein drink, and tea, your protein drink, and even mix a little with water. I know you're saying it's a bit. I know you're saying it's a bit disgusting. I mean, I disgusting. I mean, I can do it, but the problem is that can do it, but the problem is that creatine is a creatine is a basic dietary supplement. The fact is, it's basic dietary supplement. The fact is, it's easy to do. Do it.

easy to do. Do it. You know, my best friend Eva You know, my best friend Eva sent me an excerpt from one of our sent me an excerpt from one of our previous podcasts and she said, " Why don't I take this?" I Why don't I take this?" I laughed and thought to myself, "Well, you laughed and thought to myself, "Well, you see, if you can influence one see, if you can influence one person, especially one you care about person, especially one you care

about." She was right.

." She was right. Why doesn't she take any? Well, Why doesn't she take any? Well, now she does. now she does. Yes. I spoke to her yesterday and she's doing Yes. I spoke to her yesterday and she's doing very well too. In any case very well too. In any case, creatine for, creatine for everyone.

everyone. everyone. Creatine for everyone, not Creatine for everyone, not just for your muscles, but you just for your muscles, but you can also use it for your can also use it for your brain. And I really think this is brain. And I really think this is important with regard to important with regard to sleep deprivation, because they've done sleep deprivation, because they've done studies on it and here are the studies on it and here are the figures. There is a randomized study, participants underwent 21 hours, participants underwent 21 hours of sleep deprivation and they of sleep deprivation and they received 0.35 g of creatine per received 0.35 g of creatine per kilogram of body weight. And this kilogram of body weight. And this altered their brain energy, altered their brain energy, their energy in their brain, and their energy in their brain, and improved cognitive performance, improved cognitive performance, processing speed, etc. And they processing speed, etc. And they compared it to a placebo. So compared it to a placebo. So basically, let's say I weigh 93 kg. I don't basically, let's say I weigh 93 kg. I don't know, it's about 30g or something know, it's about 30g or something like that.

Excuse me, Excuse me, how much protein is that, creatine? So it's how much protein is that, creatine? So it's several scoops, but it's not several scoops, but it's not something you would take all something you would take all the time, but you think, yeah, I the time, but you think, yeah, I really slept badly and I need to really slept badly and I need to perform, taking more perform, taking more creatine can help overcome that.

creatine can help overcome that. So 5g go to the muscle after that, the So 5g go to the muscle after that, the muscles are kind of filled. muscles are kind of filled.

That's all it takes for the That's all it takes for the muscles, but then the rest, the muscles, but then the rest, the brain, the kidneys, other organs brain, the kidneys, other organs start to benefit, but start to benefit, but especially the brain.

especially the brain. I mean, we use that a lot I mean, we use that a lot when we make these when we make these transatlantic voyages. We have a few tips transatlantic voyages. We have a few tips to really do our to really do our bodies good.

bodies good. Electrolytes, creatine, yes. Electrolytes, creatine, yes. And I think that's a great And I think that's a great thing. This is excellent advice for all of thing. This is excellent advice for all of us; when you're on long us; when you're on long journeys and crossing multiple journeys and crossing multiple time zones, one of the time zones, one of the quickest ways to reset your system quickest ways to reset your system is to use your creatine.

is to use your creatine. Yes. We've spent most of Yes. We've spent most of our time here on our time here on protein. I was so excited to be protein. I was so excited to be able to talk about collagen.

able to talk about collagen. That was my thing, I couldn't wait to get there That was my thing, I couldn't wait to get there.. And besides, all of that was intentional.

And besides, all of that was intentional. Of course, the most important thing we have Of course, the most important thing we have n't talked about here is n't talked about here is testosterone.

testosterone. testosterone. Yes. Once again, Yes. Once again, I wanted to focus more on I wanted to focus more on protein. We don't need to go there. protein. We don't need to go there.

We have talked about We have talked about testosterone several times and testosterone several times and we will do so again. But for the we will do so again. But for the sake of the day, testosterone sake of the day, testosterone helps you develop your muscles, both men helps you develop your muscles, both men and women.

and women. Yes. This is Yes. This is incredibly important. You must incredibly important. You must ensure that you have ensure that you have enough of it, administered in the right enough of it, administered in the right way, and monitored by someone who way, and monitored by someone who knows what is going on; And knows what is going on; And testosterone will absolutely do that. I testosterone will absolutely do that. I mean, I tell the patients, if they mean, I tell the patients, if they come. And when I see you, it's a brand come. And when I see you, it's a brand new patient, and I run a test. I new patient, and I run a test. I say, "I'm going to correct your say, "I'm going to correct your testosterone because it's testosterone because it's consistently low. I'm correcting the consistently low. I'm correcting the testosterone. Here's your testosterone. Here's your protein intake. Meet your protein intake. Meet your protein goals. Do this type protein goals. Do this type of basic exercise. I guarantee of basic exercise. I guarantee you'll win, I guarantee it.

you'll win, I guarantee it. If you play the game, if you do If you play the game, if you do everything we've planned, and I everything we've planned, and I know the testosterone is in place, know the testosterone is in place, we're going to succeed." we're going to succeed." No, I totally agree with No, I totally agree with you, and I always refer to you, and I always refer to myself because this is one of my myself because this is one of my biggest challenges in life.

biggest challenges in life. Thank God all my problems are Thank God all my problems are like this. You're right. But you have to like this. You're right.

Podcast Wrap-Up and Resources

But you have to consistently play the game. It can't consistently play the game. It can't be like this, you know, be like this, you know, I go to the baseball game once in a I go to the baseball game once in a while, you know, it's like this.

while, you know, it's like this. That's why I say it That's why I say it becomes your way of life. When becomes your way of life. When you've adopted a healthy habit so you've adopted a healthy habit so consistently that you no longer consistently that you no longer think about it. Like a think about it. Like a treatment plan, it's just a lifestyle.

treatment plan, it's just a lifestyle. It's just who you are. It's your It's just who you are. It's your way of life. So, of course, those way of life. So, of course, those results are guaranteed. Now, results are guaranteed. Now, and this is a wonderful segue and this is a wonderful segue here, ultimately, I mean, here, ultimately, I mean, you're wondering what the point of you're wondering what the point of all this is. Why are we doing all all this is. Why are we doing all this? Why do we have this whole this? Why do we have this whole podcast? Why are we doing everything podcast? Why are we doing everything we do in our own lives we do in our own lives from a health perspective and from what from a health perspective and from what we promote for our patients?

we promote for our patients? It's so they can have their It's so they can have their version of a life well-lived. version of a life well-lived. Yes. Yes.

Yes. And muscle ends up not And muscle ends up not really being the main thing. It's really being the main thing. It's just the means to achieve what just the means to achieve what people want and need.

people want and need. They want to be free. They want to They want to be free. They want to have relationships, and what better have relationships, and what better way to have that muscle that's going to way to have that muscle that's going to help them manage their metabolism, help them manage their metabolism, feel good, and be able to interact feel good, and be able to interact with their children, with their children, grandchildren, and grandchildren, and great-grandchildren? It's about great-grandchildren? It's about capability.

capability. capability. Mhm. Yeah. Yeah, that's the legacy, Mhm. Yeah. Yeah, that's the legacy, for sure. I think that, in short, when it comes to for sure. I think that, in short, when it comes to well-being, one of the well-being, one of the things we're really things we're really proud of is sifting through the proud of is sifting through the noise of what's out there and saying, " noise of what's out there and saying, " Look, you already know clearly Look, you already know clearly that you want to live a good, that you want to live a good, long, and beautiful life. How can you

long, and beautiful life. How can you actually achieve that without wasting time, actually achieve that without wasting time, money, and energy?" Isn't that money, and energy?" Isn't that right?

right? right? Yeah. Yeah. Yeah. We really want to help We really want to help identify the things that identify the things that everyone has access to in one way or everyone has access to in one way or another. And what you did another. And what you did with this presentation was with this presentation was really highlight the importance of really highlight the importance of focusing on focusing on muscle development in order to have the ability to muscle development in order to have the ability to live a long and beautiful life.

live a long and beautiful life. Excellent. So, the Excellent. So, the longevity protocol is not limited to just once a week, is it? We have a week, is it? We have different things. So, on Tuesday, different things. So, on Tuesday, we're going to talk with our guests, we're going to talk with our guests, all sorts of all sorts of interesting people. Wednesday is interesting people. Wednesday is the main show, long and the main show, long and long. The long. The podcast podcast podcast itself, the art and science of living itself, the art and science of living a life well lived. Thursday is the a life well lived. Thursday is the longevity briefing. I like it. It's a bit short, but it deals with a. It's a bit short, but it deals with a lot of embarrassing health issues lot of embarrassing health issues. People can follow us. People can follow us and connect with us.

and connect with us. Yeah. Yeah. Yeah. You can follow us on Spotify, You can follow us on Spotify, you can follow us on Apple you can follow us on Apple Podcasts. Don't forget to subscribe Podcasts. Don't forget to subscribe to our YouTube channel.

to our YouTube channel. Uh, Substack. Uh, Substack. I would add a lot more to that. I would add a lot more to that. And don't forget to follow us. And don't forget to follow us.

on Instagram at longevityprotocol.life, @thesextalks and, @thesextalks and @Dr. Robinson NMD. Everything is also @Dr. Robinson NMD. Everything is also on Linktree, longevityprotocol.life on Linktree, longevityprotocol.life on Linktree, longevityprotocol.life.

on Linktree, longevityprotocol.life. You can even come and work with You can even come and work with us, see us in person here in us, see us in person here in Scottsdale.

Scottsdale. Scottsdale. in Scottsdale. And, uh, there's a in Scottsdale. And, uh, there's a free telephone consultation. free telephone consultation. We offer it to curious patients We offer it to curious patients who wonder if they liked what they who wonder if they liked what they heard today.

heard today. And you can also obtain And you can also obtain consultation information for the consultation information for the longevity protocol. longevity protocol.

Yes. So be sure to share Yes. So be sure to share the show with someone who the show with someone who you think would really like what we you think would really like what we talked about today, and then what talked about today, and then what we do with our podcast.

we do with our podcast. Enjoy the conversation, then Enjoy the conversation, then share it with your friends so you share it with your friends so you can talk about it a little more.

can talk about it a little more. Yes. We also make Yes. We also make media appearances if media appearances if people are curious about it, we people are curious about it, we can do that too.

can do that too. We are very busy. We are We are very busy. We are very busy here sharing very busy here sharing our philosophies on how to our philosophies on how to