Could Insulin Resistance Be Weakening Your Bones? With Dr. Brian Mowll Transcript

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Introduction

Hey, Margie here. Today we're talking Hey, Margie here. Today we're talking about a hidden root cause of about a hidden root cause of osteoporosis that doesn't get nearly osteoporosis that doesn't get nearly enough attention. Insulin resistance and enough attention. Insulin resistance and blood sugar. Most people don't think blood sugar. Most people don't think about this until they're diagnosed with about this until they're diagnosed with type 2 diabetes. Yet, this can have a type 2 diabetes. Yet, this can have a profound effect upon their bones and profound effect upon their bones and overall health. So, this was such an overall health. So, this was such an outstanding interview that I originally outstanding interview that I originally recorded for one of my more natural recorded for one of my more natural approaches to osteoporosis and bone approaches to osteoporosis and bone health summits that I wanted to share health summits that I wanted to share with you here on the podcast. Joining me with you here on the podcast. Joining me is Dr. Brian Mole, who's the founder and is Dr. Brian Mole, who's the founder and medical director of Sweet Life Diabetes medical director of Sweet Life Diabetes Health Centers. For more than 20 years, Health Centers. For more than 20 years, he has helped people optimize their he has helped people optimize their metabolism, improve blood sugar control, metabolism, improve blood sugar control, reverse type 2 diabetes through a reverse type 2 diabetes through a personalized lifestyle approach. He also personalized lifestyle approach. He also hosts a podcast and is the best-selling hosts a podcast and is the best-selling author of the ProFast diet. So, in this author of the ProFast diet. So, in this episode, you'll learn why insulin episode, you'll learn why insulin resistance is a hidden risk factor for resistance is a hidden risk factor for osteoporosis, how to know what test will osteoporosis, how to know what test will tell you if you have insulin resistance, tell you if you have insulin resistance, and what it's the most effective way to and what it's the most effective way to improve blood sugar and improve insulin improve blood sugar and improve insulin sensitivity. So, this is full of so much sensitivity. So, this is full of so much >> Margie, thank you so much. uh always >> Margie, thank you so much. uh always love [music] our conversations and I'm love [music] our conversations and I'm excited to be back here for part two of excited to be back here for part two of this great event. So, thanks for having this great event. So, thanks for having me.

me. me. >> Oh, well, this is such an important >> Oh, well, this is such an important topic and I so many people don't even topic and I so many people don't even realize they can be affected by this and realize they can be affected by this and I love the bright side though. There's I love the bright side though. There's so much that can be done. So, everybody so much that can be done.

How insulin resistance affects osteoporosis risk

So, everybody listening, these tips are just, you listening, these tips are just, you know, really life-changing. So, let's know, really life-changing. So, let's just start off with the connection. You just start off with the connection. You know, why does it matter? Why? If we know, why does it matter? Why? If we have insulin resistance or issues with have insulin resistance or issues with our blood sugar, does this affect our our blood sugar, does this affect our bones? Like how does it, you know, what bones? Like how does it, you know, what does it do?

does it do? >> Yeah, really great question. And so for >> Yeah, really great question. And so for people listening to this, obviously, uh, people listening to this, obviously, uh, you're here because you're interested in you're here because you're interested in bone health, good bone health. And you bone health, good bone health. And you may not necessarily think about blood may not necessarily think about blood sugar when you think about bone health, sugar when you think about bone health, but there are a lot of connections. And but there are a lot of connections. And it's really more about what lies it's really more about what lies underneath underneath underneath high blood sugar or diabetes, which is a high blood sugar or diabetes, which is a condition called insulin resistance.

condition called insulin resistance. And uh if you're not sure if you know And uh if you're not sure if you know what

that is or if you know anybody with what that is or if you know anybody with it, you probably do because over half it, you probably do because over half the US population has insulin the US population has insulin resistance. There are some studies that resistance. There are some studies that show as many as nine out of 10 US adults show as many as nine out of 10 US adults have some degree of metabolic have some degree of metabolic dysfunction which again is driven by dysfunction which again is driven by this condition insulin resistance. And this condition insulin resistance. And basically what it is is basically what it is is the there's a hormone called insulin. Uh the there's a hormone called insulin. Uh it's a it's a peptide hormone. It's not it's a it's a peptide hormone. It's not a steroid hormone. So a little different a steroid hormone. So a little different than uh like estrogen and and our sex than uh like estrogen and and our sex hormones. But uh it's got a very hormones. But uh it's got a very important function in the body and one important function in the body and one of the things it does is helps us to use of the things it does is helps us to use and store energy. So when we eat food and store energy. So when we eat food for example particularly energy richch for example particularly energy richch foods uh like carbohydrates foods uh like carbohydrates our pancreas which is an organ kind of our pancreas which is an organ kind of sits behind the stomach senses that it's sits behind the stomach senses that it's like a it's like a sensor. It's sort of like a it's like a sensor. It's sort of like checking the chlorine in a pool. It like checking the chlorine in a pool. It checks the blood and if it sees glucose checks the blood and if it sees glucose floating around, it releases insulin and floating around, it releases insulin and then our body does something with that then our body does something with that insulin. So most of it goes into our insulin. So most of it goes into our muscles and we use it for uh everything muscles and we use it for uh everything that we do during the day to walk around that we do during the day to walk around and exercise and get up out of a chair and exercise and get up out of a chair and all those things. So we need that and all those things. So we need that glucose as a fuel there and insulin is glucose as a fuel there and insulin is what helps drive it into the muscles or what helps drive it into the muscles or if we have excess drive it into the fat if we have excess drive it into the fat cells to get stored for later use. So cells to get stored for later use. So insulin is really important and it's uh insulin is really important and it's uh you know from an evolutionary you know from an evolutionary perspective it's one of the oldest perspective it's one of the oldest hormones or yeah it's it's uh you know hormones or yeah it's it's uh you know we find insulin for example in almost we find insulin for example in almost every animal and uh so it's been with us every animal and uh so it's been with us for a long time and it has many for a long time and it has many different functions. In fact every cell different functions. In fact every cell in the body has insulin receptors. So in the body has insulin receptors. So insulin acts on every single cell in the insulin acts on every single cell in the body in some way. It does different body in some way. It does different things different places. So important things different places. So important hormone. But one of the problems when hormone. But one of the problems when our bodies are uh inundated with high our bodies are uh inundated with high energy foods like snacks and processed energy foods like snacks and processed refined sugar and flour and oils and you refined sugar and flour and oils and you know these hyper palatable foods that we know these hyper palatable foods that we uh unfortunately eat probably too much uh unfortunately eat probably too much of is we get uh an overrelease of of is we get uh an overrelease of insulin and we become insulin resistant.

insulin and we become insulin resistant. And when we become insulin resistant, And when we become insulin resistant, our blood insulin levels rise. our blood insulin levels rise.

So we get high levels of blood insulin So we get high levels of blood insulin and that then in turn causes a wide and that then in turn causes a wide variety of problems including affecting variety of problems including affecting bone health. Uh there are several ways bone health. Uh there are several ways that it does this. One of the simple that it does this. One of the simple ways is when you have high levels of ways is when you have high levels of insulin in the blood, which again is a insulin in the blood, which again is a compensation for this condition called compensation for this condition called insulin resistance, you lose important insulin resistance, you lose important minerals like calcium and magnesium, minerals like calcium and magnesium, which I'm sure if you're listening to which I'm sure if you're listening to this, you know how important those are this, you know how important those are for the bone matrix and bone health. and for the bone matrix and bone health. and uh we uh release too many of those uh we uh release too many of those through the kidneys under the effects of through the kidneys under the effects of having too much insulin in the blood. So having too much insulin in the blood. So we uh so we overrelease these hormones we uh so we overrelease these hormones or these uh excuse me these minerals and or these uh excuse me these minerals and so we don't have enough in the body to so we don't have enough in the body to uh do the a lot of the important uh do the a lot of the important functions that we need. Um there are functions that we need. Um there are many other ways that high insulin or many other ways that high insulin or

insulin resistance is associated with uh insulin resistance is associated with uh bone loss or with osteoporosis.

bone loss or with osteoporosis. Another key connection is through the Another key connection is through the hormone estrogen. And we can dive into hormone estrogen. And we can dive into you know some of these as we go along you know some of these as we go along but I just want to kind of give an but I just want to kind of give an overview of all the different ways these overview of all the different ways these are connected so people start to realize are connected so people start to realize how important this conversation is for how important this conversation is for them. But uh estrogen them. But uh estrogen of course is very important for bone of course is very important for bone health and you know as especially as health and you know as especially as women go through menopause sometimes women go through menopause sometimes estrogen drops and they can be at higher estrogen drops and they can be at higher risk for bone loss and because the risk for bone loss and because the important effect that estrogen has on important effect that estrogen has on bone formation and bone protection.

bone formation and bone protection. Estrogen also is very important for Estrogen also is very important for insulin sensitivity. Estrogen uh insulin sensitivity. Estrogen uh sensitizes our cells like our muscle sensitizes our cells like our muscle cells and fat cells to insulin. So as we cells and fat cells to insulin. So as we lose estrogen oftent times we become lose estrogen oftent times we become insulin resistant. The other thing that insulin resistant. The other thing that starts happening is we store fat in starts happening is we store fat in different places. So many women notice, different places. So many women notice, for example, as they get older, for example, as they get older, especially go through menopause, that especially go through menopause, that they start storing fat in different they start storing fat in different places and instead of storing fat in places and instead of storing fat in their uh breasts and buttocks and their uh breasts and buttocks and backside and thighs, they'll often start backside and thighs, they'll often start storing fat in their stomach and in storing fat in their stomach and in their abdominal region. And that is uh their abdominal region. And that is uh largely due to the effects of estrogen largely due to the effects of estrogen of low estrogen.

of low estrogen. And that in turn can drive this insulin And that in turn can drive this insulin resistance syndrome which can lead to resistance syndrome which can lead to more uh bone loss. So uh I know I'm I'm more uh bone loss. So uh I know I'm I'm getting a little long here but I pulled getting a little long here but I pulled up a few other uh studies that I just up a few other uh studies that I just wanted to mention. There was a study wanted to mention. There was a study published in the journal of clinical published in the journal of clinical endocrinology and metabolism that found endocrinology and metabolism that found that women with insulin resistance had that women with insulin resistance had lower bone density and a higher risk of lower bone density and a higher risk of osteoporosis compared to women without osteoporosis compared to women without insulin resistance. There was a study in insulin resistance. There was a study in the same journal that showed that men the same journal that showed that men with insulin resistance had lower bone with insulin resistance had lower bone density and a higher risk of density and a higher risk of osteoporosis compared to men without osteoporosis compared to men without insulin resistance. So this goes for insulin resistance. So this goes for both sexes.

both sexes. And um there was a study in Journal of And um there was a study in Journal of Diabetes Research that showed some of Diabetes Research that showed some of the connections here between insulin the connections here between insulin resistance and bone loss. And some of resistance and bone loss. And some of the most important drivers the most important drivers are increased inflammation, which we are increased inflammation, which we probably should talk more about, probably should talk more about, increased oxidative stress, increased oxidative stress, and decreased bone formation, all due to and decreased bone formation, all due to insulin resistance. So, this is a strong insulin resistance. So, this is a strong connection. And there's many other connection. And there's many other studies. I don't want to go through a studies. I don't want to go through a dozen of them, but that gives you a good dozen of them, but that gives you a good idea of that there is an established idea of that there is an established connection and some of the mechanisms.

connection and some of the mechanisms. So, [clears throat] we can dive deeper So, [clears throat] we can dive deeper into those, but um just uh you know, one into those, but um just uh you know, one thing I want to sort of put on thing I want to sort of put on everybody's radar everybody's radar is when you think about bone loss, it's is when you think about bone loss, it's it's not all about, you know, acid alpha it's not all about, you know, acid alpha balance or minerals. Those are important balance or minerals. Those are important factors but we have to look at

what's factors but we have to look at what's driving that some of the underlying root driving that some of the underlying root causes and one of those is uh metabolic causes and one of those is uh metabolic dysfunction and insulin resistance.

dysfunction and insulin resistance. >> Yes and thank you. No that's the >> Yes and thank you. No that's the important piece that you know we're important piece that you know we're trying to look at all areas in the trying to look at all areas in the summit and what may be one of the summit and what may be one of the underlying root causes so that we can underlying root causes so that we can deal with this really from the source.

deal with this really from the source.

Why insulin resistance is often overlooked

But the interesting thing to me about is But the interesting thing to me about is that a lot of people, you know, said that a lot of people, you know, said like one day they just go to the doctor like one day they just go to the doctor and they're like, "Ah, I have diabetes." and they're like, "Ah, I have diabetes." You know, people don't even think about You know, people don't even think about it until they hear that. You know, they it until they hear that. You know, they may have pre-diabetes for three years, may have pre-diabetes for three years, but no one really makes a big deal about but no one really makes a big deal about it. And I think that's such a problem it. And I think that's such a problem because, as you know, this is so because, as you know, this is so preventative. And the minute, you know, preventative. And the minute, you know, there's just so many things we can do.

there's just so many things we can do. And that's what's so exciting. But so And that's what's so exciting. But so why don't you share a little bit about why don't you share a little bit about that? And I'd also like you to talk that? And I'd also like you to talk about the values like how people can about the values like how people can have any idea because I I really find so have any idea because I I really find so often, you know, unless they're at often, you know, unless they're at diabetes, the doctor really may not even diabetes, the doctor really may not even say anything and those are valuable say anything and those are valuable years and so much where we could have years and so much where we could have really made a big difference, not just really made a big difference, not just wait till, oh yes, you have diabetes and wait till, oh yes, you have diabetes and all of a sudden then you have to be on a all of a sudden then you have to be on a whole regimen. So why don't you talk a whole regimen. So why don't you talk a little bit about this? I'm so glad you little bit about this? I'm so glad you brought that up because uh you know brought that up because uh you know diabetes is diagnosed using using lab diabetes is diagnosed using using lab values. So we can do a hemoglobin A1C values. So we can do a hemoglobin A1C test and if it's uh 6 and a half or test and if it's uh 6 and a half or higher that's diagnostic for type two di higher that's diagnostic for type two di or for any form of diabetes. If you go or for any form of diabetes. If you go in and have a blood test and your in and have a blood test and your fasting blood sugar is over 126 or your fasting blood sugar is over 126 or your blood sugar at any time is over 200 uh blood sugar at any time is over 200 uh that's diagnostic for diabetes. But that's diagnostic for diabetes. But insulin resistance is different. If you insulin resistance is different. If you go in and ask your doctor, uh, do I have go in and ask your doctor, uh, do I have insulin resistance, insulin resistance, likely they're going to make a sort of a likely they're going to make a sort of a a a diagnosis or they won't even really a a diagnosis or they won't even really diagnose it. They might uh indicate that diagnose it. They might uh indicate that you have it based on symptoms, based on you have it based on symptoms, based on weight. Um, there's no accepted hard and weight. Um, there's no accepted hard and fast diagnostic criteria for insulin fast diagnostic criteria for insulin resistance. So, if you're not resistance. So, if you're not overweight, for example, and your blood overweight, for example, and your blood sugar is just slightly high, your doctor sugar is just slightly high, your doctor might say, "No, I don't think so." But might say, "No, I don't think so.

Testing insulin resistance beyond blood sugar

" But they're really not basing that on they're really not basing that on anything other than your appearance and anything other than your appearance and your blood sugar, which is a very late your blood sugar, which is a very late indicator. So, what I recommend doing is indicator. So, what I recommend doing is going a little bit deeper and looking at going a little bit deeper and looking at your your insulin levels. So, you can your your insulin levels. So, you can actually test insulin in the blood. Most actually test insulin in the blood. Most doctors don't do it, but you

can ask for doctors don't do it, but you can ask for it or do it have, you know, kind of it or do it have, you know, kind of circumvent that and do it yourself. But circumvent that and do it yourself. But whatever you need to do, get your whatever you need to do, get your insulin tested and you can test that insulin tested and you can test that fasting or you can test it after a meal fasting or you can test it after a meal or after a glucose challenge, for or after a glucose challenge, for example, kind of like you would do with example, kind of like you would do with an oral glucose tolerance test uh when an oral glucose tolerance test uh when you're pregnant. But um you can check you're pregnant. But um you can check insulin insulin insulin in the blood and that'll tell you way in the blood and that'll tell you way more about if you have insulin more about if you have insulin resistance than your blood sugar will.

resistance than your blood sugar will. So uh what we want to see is fasting. So uh what we want to see is fasting. We do want to see normal blood sugar. So We do want to see normal blood sugar. So you have to do that also. But we also you have to do that also. But we also want to see insulin that is not too want to see insulin that is not too high. So a normal insulin test on a you high. So a normal insulin test on a you know on a a blood test a fasting insulin know on a a blood test a fasting insulin is between two and a half and about six is between two and a half and about six and if it gets too much higher than that and if it gets too much higher than that certainly if it gets over 10 that is uh certainly if it gets over 10 that is uh that is very high it's hyper insulinia that is very high it's hyper insulinia too much insulin in the blood and that too much insulin in the blood and that is a sign of insulin resistance really a is a sign of insulin resistance really a cardinal sign of insulin resistance if cardinal sign of insulin resistance if you do it after a meal or after a you do it after a meal or after a glucose challenge glucose challenge uh you really want your insulin to be uh you really want your insulin to be under 30. If your postmeal insulin gets, under 30. If your postmeal insulin gets, you know, in 50, 60, 80, I've seen them you know, in 50, 60, 80, I've seen them over 100. Uh these are really high over 100. Uh these are really high insulin responses. That means that your insulin responses. That means that your body is having to produce massive body is having to produce massive amounts of insulin to try to correct amounts of insulin to try to correct your blood sugar and that means you're your blood sugar and that means you're insulin resistant. So testing insulin is insulin resistant. So testing insulin is really important. You can also look at really important. You can also look at other tests like triglycerides for other tests like triglycerides for example. Your triglycerides example. Your triglycerides from a cardio from a cardio uh protective perspective like a risk uh protective perspective like a risk perspective. Usually the lab will give perspective. Usually the lab will give you a range up to 150. Uh we like to see you a range up to 150. Uh we like to see them under 100. And I've noticed after them under 100. And I've noticed after 25 years in practice that my the 25 years in practice that my the healthiest healthiest healthiest clients that I have from a metabolic clients that I have from a metabolic health perspective will have a health perspective will have a triglyceride level between like 40 and triglyceride level between like 40 and 70 pretty low. And that seems to be more 70 pretty low. And that seems to be more normal. That seems to be more indicative normal. That seems to be more indicative of a healthy liver that is insulin of a healthy liver that is insulin sensitive.

sensitive. sensitive. >> Hey Margie here. As a physical >> Hey Margie here. As a physical therapist, [music] therapist, [music] I know firsthand how important exercise I know firsthand how important exercise is for our bones, overall health, and is for our bones, overall health, and happiness. And unfortunately, there's a happiness. And unfortunately, there's a lot of confusion [music] lot of confusion [music] on what exercises are safe and effective on what exercises are safe and effective for people with osteoporosis. That's why for people with osteoporosis. That's why I created this handout [music] that I created this handout [music] that contains a 30inut video where I explain contains a 30inut video where I explain the concepts so you understand the dos the concepts so you understand the dos and [music] don'ts when it comes to and [music] don'ts when it comes to exercise. And this is important because exercise. And this is important because this way you can go into any class and this way you can go into any class and know what you should be doing and what know what you should be doing and what [music] you should avoid because too [music] you should avoid because too many people are doing exercises that many people are doing exercises that [music] actually increase their risk of [music] actually increase their risk of spinal fractures. I also included videos spinal fractures. I also included videos of me [music] demonstrating effective of me [music] demonstrating effective balance, posture, and weightbearing balance, posture, and weightbearing exercises you can put into your day exercises you can put into your day right away. [music] So, all you need to right away. [music] So, all you need to do to access this handout, it's free, is do to access this handout, it's free, is exercises. So, it's t i nyurl.com exercises. So, it's t i nyurl.com again/oststeoporosisex again/oststeoporosisex again/oststeoporosisex exercises or you can click the [music] exercises or you can click the [music] link in the show notes. Now, back to the link in the show notes. Now, back to the show.

show. show. >> So, those are a couple tests you can do. >> So, those are a couple tests you can do.

HOMA-IR and metabolic health markers

There are some simple calculations that There are some simple calculations that you can do also and you can do these by you can do also and you can do these by hand or you can just go online and type hand or you can just go online and type in the calculator. So there's a test in the calculator. So there's a test called homir called homir ho ma-IR.

ho ma-IR. It's the homeostatic model of assessment It's the homeostatic model of assessment for insulin resistance. So you just type for insulin resistance. So you just type in that homir calculator and you'll get in that homir calculator and you'll get it. you need a fasting insulin and a it. you need a fasting insulin and a fasting glucose and then it'll give you fasting glucose and then it'll give you a calculation. And we like to see that a calculation. And we like to see that below 1.6 below 1.6 um or even 1.4 to be optimal. Right um or even 1.4 to be optimal. Right around one is normal. If it gets over around one is normal. If it gets over two, you know, that's a sign again of two, you know, that's a sign again of insulin resistance. There's another insulin resistance. There's another calculation called the um uh uh glucose calculation called the um uh uh glucose triglyceride index and that one like the triglyceride index and that one like the name implies utilizes glucose and name implies utilizes glucose and triglycerides triglycerides triglycerides and it's a logarithmic calculation so and it's a logarithmic calculation so best to use the online calculator but best to use the online calculator but just look for that uh glucose just look for that uh glucose triglyceride index and you put your glue triglyceride index and you put your glue fasting glucose your fasting fasting glucose your fasting triglycerides and it'll give you uh a triglycerides and it'll give you uh a you know a uh a number and we compare you know a uh a number and we compare that to the normative data. So under that to the normative data. So under four and a half there is considered four and a half there is considered normal. Four and a half to five is normal. Four and a half to five is elevated usually associated with insulin elevated usually associated with insulin resistance and over five is also resistance and over five is also associated with fatty liver disease. So associated with fatty liver disease. So these are some good tests, simple things these are some good tests, simple things that you can do to get a sense of if you that you can do to get a sense of if you have insulin resistance or not.

have insulin resistance or not. >> And do you find that these typically are >> And do you find that these typically are not are not done by not are not done by >> never done?

>> never done? >> They're never done. Yeah. Some some >> They're never done. Yeah. Some some integrative or functional medicine integrative or functional medicine doctors will do them. Uh but not usually doctors will do them. Uh but not usually those calculations. Now they're used in those calculations. Now they're used in research all the time. I mean, if you research all the time. I mean, if you type in homir type in homir uh just into into Google, it's going to uh just into into Google, it's going to be mostly, you know, research citations be mostly, you know, research citations that are going to come up because it's that are going to come up because it's used in research all the time because used in research all the time because the gold standard is called a uglycemic the gold standard is called a uglycemic clamp that has to be done in a like a clamp that has to be done in a like a hospital or, you know, research facility hospital or, you know, research facility and most researchers aren't going to do and most researchers aren't going to do that and the home correlates pretty well that and the home correlates pretty well with that. So, they use this with that. So, they use this calculation. And you can calculate it on calculation. And you can calculate it on yourself and figure out if you have um yourself and figure out if you have um you know insulin resistance. And what I you know insulin resistance. And what I like more about it than the if or not is like more about it than the if or not is you can grade it, right? So you know you can grade it, right? So you know let's say you start uh where you are let's say you start uh where you are right now and your homir score is say right now and your homir score is say three or four and then uh after 3 months three or four and then uh after 3 months of doing some of the things we're about of doing some of the things we're about to talk about I hope then uh maybe your to talk about I hope then uh maybe your home score gets down to like 1.8 eight home score gets down to like 1.8 eight or two and you know you're getting or two and you know you're getting better. So, it's a good way to sort of better. So, it's a good way to sort of grade where you are uh along the grade where you are uh along the spectrum and you want to be you want to spectrum and you want to be you want to be correcting this not waiting until be correcting this not waiting until your blood sugar is 150 fasting and and your blood sugar is 150 fasting and

and you know you already have type 2 you know you already have type 2 diabetes and you know you're basically diabetes and you know you're basically pushing a huge boulder up a hill at that pushing a huge boulder up a hill at that point.

point. point. So before we get into what we can do, So before we get into what we can do, which I know there's so much, can you which I know there's so much, can you just share the levels that you like just share the levels that you like because what I see I I mean and you said because what I see I I mean and you said it's so prevalent in our population in it's so prevalent in our population in terms of insulin resistance. It's not terms of insulin resistance. It's not something that just happens to a few something that just happens to a few people. It's, you know, it's very very people. It's, you know, it's very very common. But what you know in terms common. But what you know in terms because oftent times the doctor really because oftent times the doctor really even if it's pre-diabetes, they really even if it's pre-diabetes, they really won't say anything. Oh, you're okay.

won't say anything. Oh, you're okay. Let's just watch it. So tell us the Let's just watch it. So tell us the numbers because everybody gets their numbers because everybody gets their fasting blood sugar done. So let's just fasting blood sugar done. So let's just start with also what numbers you like to start with also what numbers you like to see on the fasting blood sugar and it's see on the fasting blood sugar and it's only I know it's only a glimpse in time.

only I know it's only a glimpse in time. It's only one time. So sometimes you It's only one time. So sometimes you know and I've noticed it could be very know and I've noticed it could be very different different days but in general different different days but in general what what what do you like to see with what what what do you like to see with that?

that? that? >> Yeah sure. So uh so fasting glucose >> Yeah sure. So uh so fasting glucose which you're right is part of any which you're right is part of any metabolic panel. Uh there's a basic metabolic panel. Uh there's a basic metabolic panel, a comprehensive metabolic panel, a comprehensive metabolic panel that doctors will do.

metabolic panel that doctors will do. The comprehensive includes liver enzymes The comprehensive includes liver enzymes and the basic basically or the basic is and the basic basically or the basic is some minerals and glucose and kidney some minerals and glucose and kidney tests. Usually comprehensive has all tests. Usually comprehensive has all that plus liver enzymes and they're that plus liver enzymes and they're about the same price. So I always about the same price. So I always recommend ask for the ask for the recommend ask for the ask for the comprehensive if they're going to do it.

comprehensive if they're going to do it. Get the liver enzymes. It's good to Get the liver enzymes. It's good to watch those. And by the way, this is not watch those. And by the way, this is not off topic, but a little bit off your off topic, but a little bit off your question. Liver enzymes should be uh question. Liver enzymes should be uh below the middle half of the range. So, below the middle half of the range. So, whatever that lab range is, you know, whatever that lab range is, you know, let's say it goes up to uh 40 on a liver let's say it goes up to uh 40 on a liver enzyme, you know, you want that to be enzyme, you know, you want that to be like around 20 or less, not not 39 or like around 20 or less, not not 39 or 35. So, uh liver enzymes should be 35. So, uh liver enzymes should be pretty low. You really shouldn't have a pretty low. You really shouldn't have a large amount of liver enzymes. That's large amount of liver enzymes. That's where the liver cells Um, and they're where the liver cells Um, and they're prevalent, they're present in other prevalent, they're present in other cells, too, but mostly liver cells are cells, too, but mostly liver cells are uh basically uh, you know, being uh basically uh, you know, being destroyed and and emptying these enzymes destroyed and and emptying these enzymes into the bloodstream. So, if you've got into the bloodstream. So, if you've got a lot of those, that's a bad sign for a lot of those, that's a bad sign for your liver. But, as far as glucose goes, your liver. But, as far as glucose goes, we want to see uh the glucose somewhere we want to see uh the glucose somewhere around 76 to 92. That's the range we use around 76 to 92. That's the range we use for fasting blood sugar. So, there is for fasting blood sugar. So, there is some variation from person to person. 83 some variation from person to person. 83 is sort of like the, you know, the is sort of like the, you know, the bullseye. Um, you know, a lot of people bullseye. Um, you know, a lot of people with diabetes are trying to get their with diabetes are trying to get their blood sugar to 83 and that's uh that's blood sugar to 83 and that's uh that's sort of the target, but somewhere in sort of the target, but somewhere in that range. So 76 to 92. Once it gets up that range. So 76 to 92. Once it gets up into the mid to high 90s or over a 100, into the mid to high 90s or over a

100, there really is uh some sort of problem.

there really is uh some sort of problem. So that's a that's a sign of what's So that's a that's a sign of what's called dislycemia or an imbalance in the called dislycemia or an imbalance in the blood sugar. If it's fasting, it almost blood sugar. If it's fasting, it almost always has to do with the liver. So the always has to do with the liver. So the liver really controls fasting glucose liver really controls fasting glucose more than any other organ. And it has more than any other organ. And it has much less to do with what you're eating much less to do with what you're eating on a daily basis. In other words, if on a daily basis. In other words, if your blood sugar this morning is 98 and your blood sugar this morning is 98 and tomorrow morning it's 91, tomorrow morning it's 91, um it probably didn't have that much to um it probably didn't have that much to do with what you ate in that span. It do with what you ate in that span. It has more to do with your your overall has more to do with your your overall metabolic health. And there are other metabolic health. And there are other factors that affect your insulin factors that affect your insulin sensitivity. We talked about insulin sensitivity. We talked about insulin resistance and those things are things resistance and those things are things like sleep and stress and exercise. Yes, like sleep and stress and exercise. Yes, diet plays a role. Um, and long-term diet plays a role. Um, and long-term diet plays a huge impact, but from a diet plays a huge impact, but from a fasting blood sugar perspective, I'm fasting blood sugar perspective, I'm mentioning this because I see a lot of mentioning this because I see a lot of people, they say, "Oh my gosh, my blood people, they say, "Oh my gosh, my blood sugar was 110. I wonder what I ate sugar was 110. I wonder what I ate yesterday." And there might be a yesterday." And there might be a connection, but it's more likely it's connection, but it's more likely it's something else. And most likely if if it something else. And most likely if if it stays relatively high all the time, it stays relatively high all the time, it has to do with the liver. And your liver has to do with the liver. And your liver is likely uh insulin resistant. Your is likely uh insulin resistant. Your triglycerides are probably not 50 or 60.

triglycerides are probably not 50 or 60. They're probably up around 90 or 100 or They're probably up around 90 or 100 or 120 or something like that. And uh 120 or something like that. And uh that's a sign that your liver again is that's a sign that your liver again is at least somewhat insulin resistant.

at least somewhat insulin resistant. So fasting blood sugar should be 76 to So fasting blood sugar should be 76 to 92. Hemoglobin A1C if you have it tested 92. Hemoglobin A1C if you have it tested should be between 4 and 1/2 and 5 and should be between 4 and 1/2 and 5 and 1/2 closer to five or less is better.

1/2 closer to five or less is better. And I mentioned insulin but insulin And I mentioned insulin but insulin should be between two and a half and six should be between two and a half and six fasting.

fasting. fasting. >> Okay, that's just so incredibly helpful. >> Okay, that's just so incredibly helpful. So are we ready now to go to what can we So are we ready now to go to what can we do? Um because first of all I just want do? Um because first of all I just want to tell everyone this book is to tell everyone this book is outstanding. I have this the ProFast outstanding. I have this the ProFast diet. It's just you know you did such a diet. It's just you know you did such a good job and it's really a complete good job and it's really a complete program. So there is help and and program. So there is help and and you've been so successful in really wherever been so successful in really wherever you're at you can stop and you can you you're at you can stop and you can you can really reverse type two diabetes.

can really reverse type two diabetes. But I mean that's what's so nice about But I mean that's what's so nice about this. You can actually reverse that. But this. You can actually reverse that. But wherever you at you you don't want to wherever you at you you don't want to get don't want to go beyond. it's so get don't want to go beyond. it's so much easier to just stop, make the much easier to just stop, make the corrections, and things improve. So, corrections, and things improve. So, that must be so rewarding for you that must be so rewarding for you because this is one field where you know because this is one field where you know what you're telling people can what you're telling people can dramatically change their change their dramatically change their change their values. Yeah.

values. Yeah. >> Yeah. Yeah. And I think that's one of >> Yeah. Yeah. And I think that's one of the things that drew me to diabetes care the things that drew me to diabetes care is that there is so much you can do to is that there is

so much you can do to fix it and turn it around. even you know fix it and turn it around. even you know even more advanced cases uh I've seen even more advanced cases uh I've seen people make absolute incredible almost people make absolute incredible almost miraculous changes and get rid of miraculous changes and get rid of diabetes completely. So it it is not diabetes completely. So it it is not type one but type two and so it is type one but type two and so it is possible and um and even type one can be possible and um and even type one can be you know can be managed to the point you know can be managed to the point where you know you can live a where you know you can live a extraordinarily healthy high quality extraordinarily healthy high quality life um and have a normal life life um and have a normal life expectancy um with a disease that used expectancy um with a disease that used to be completely devastating and you to be completely devastating and you know fatal uh you know and and you know know fatal uh you know and and you know of course some of that is with the of course some of that is with the advent or discovery and production and advent or discovery and production and use of insulin insulin, external use of insulin insulin, external insulin, but um a lot of it has to do insulin, but um a lot of it has to do with good management of blood sugar, with good management of blood sugar, too.

too. too. >> No, I couldn't agree more. I have a son >> No, I couldn't agree more. I have a son who who has type 1 diabetes and he found who who has type 1 diabetes and he found out in college and you know, he had out in college and you know, he had gained weight and they sort of just gained weight and they sort of just said, "Oh, just eat and dose yourself said, "Oh, just eat and dose yourself and and it didn't work." And then he and and it didn't work." And then he ended up working with someone and who ended up working with someone and who totally changed his life, you know, a totally changed his life, you know, a coach and really figured out what to do.

coach and really figured out what to do. So, it does it it really, you know, he's So, it does it it really, you know, he's he's thriving now, but It was because he's thriving now, but It was because of, you know, some certain things that of, you know, some certain things that you teach as well that really made a big you teach as well that really made a big difference and that's actually what difference and that's actually what motivated me to go back to school to motivated me to go back to school to learn nutrition and become learn nutrition and become >> Oh, that's incredible.

>> Oh, that's incredible. >> Yeah. Because I saw, you know, I was a >> Yeah. Because I saw, you know, I was a physical therapist, but I saw I thought, physical therapist, but I saw I thought, oh my gosh, that's the missing piece in oh my gosh, that's the missing piece in osteoporosis. I have to learn what osteoporosis. I have to learn what helped him so much anyway, but that's helped him so much anyway, but that's another story. But so let's I just want another story. But so let's I just want to start. So before we go into the steps to start.

Supporting liver health and reducing insulin resistance

So before we go into the steps that you're going to share that people that you're going to share that people can do, let's just can we talk about can do, let's just can we talk about this liver thing because you know most this liver thing because you know most people have no idea like okay my fasting people have no idea like okay my fasting sugar is high. What you know and you sugar is high. What you know and you were mentioning it's the liver. What were mentioning it's the liver. What steps could people take with their steps could people take with their liver?

liver? liver? >> Yeah. So I think you know we want to do >> Yeah. So I think you know we want to do everything we can to make the liver everything we can to make the liver healthy. So we talked about the healthy. So we talked about the connections between insulin resistance connections between insulin resistance and osteoporosis and bone loss. two of and osteoporosis and bone loss. two of them being inflammation and oxidative them being inflammation and oxidative stress and those two things uh create a stress and those two things uh create a lot of problems in the liver. So lot of problems in the liver. So inflammation inflammation inflammation uh blocks insulin signaling in liver uh blocks insulin signaling in liver cells and oxidative stress uh blocks cells and oxidative stress uh blocks insulin signaling in liver cells and insulin signaling in liver cells and both lead to insulin resistance and it both lead to insulin resistance and it becomes sort of a vicious cycle. So uh becomes sort of a vicious cycle. So uh so those two things are really important so those two things are really important is reducing inflammation and trying to is reducing inflammation and trying to reduce and manage oxidative stress. Now reduce and manage oxidative stress. Now again there are uh like these vicious again there are uh like these vicious cycles. So oxidative stress can lead to cycles. So oxidative stress can lead to insulin resistance can lead to high insulin resistance can lead to

high blood sugar which causes more oxidative blood sugar which causes more oxidative stress and it goes round and round. Same stress and it goes round and round. Same thing with inflammation, but we can thing with inflammation, but we can still get in there and try to sort of still get in there and try to sort of break that cycle. And I think that's, break that cycle. And I think that's, you know, one of the most important you know, one of the most important things we can do. So uh you know we look things we can do. So uh you know we look at the three main drivers for insulin at the three main drivers for insulin resistance in the liver are chronic resistance in the liver are chronic inflammation, osteo stress or toxins inflammation, osteo stress or toxins and uh the third one is what's called and uh the third one is what's called lipotoxicity lipotoxicity lipotoxicity which is fat accumulation in the liver which is fat accumulation in the liver cells themselves. So this isn't fat on cells themselves. So this isn't fat on the back of your arms or fat on your the back of your arms or fat on your thighs or your buttocks. This is fat thighs or your buttocks. This is fat inside the liver in the liver cells and inside the liver in the liver cells and uh that usually happens somewhat uh that usually happens somewhat genetically but uh oftentimes happens genetically but uh oftentimes happens with the wrong diet with not enough with the wrong diet with not enough exercise with high stress and high exercise with high stress and high cortisol levels and with overconumption cortisol levels and with overconumption of high energy foods.

of high energy foods. So once it's there that's usually how it So once it's there that's usually how it gets there. Once it's there, uh, we want gets there. Once it's there, uh, we want to try to encourage the liver to burn to try to encourage the liver to burn through that fat as much as possible.

through that fat as much as possible. And that's what ProFast diet is all And that's what ProFast diet is all about, by the way, because it's not about, by the way, because it's not meant to be like a lifelong maintenance meant to be like a lifelong maintenance diet. It's a strategy to sort of force diet. It's a strategy to sort of force the body to burn through those deep the body to burn through those deep recesses of fat that it maybe doesn't recesses of fat that it maybe doesn't want to tap into or that it's not sort want to tap into or that it's not sort of programmed to tap into. Um, and of programmed to tap into. Um, and that's a sort of a highly uh that's a sort of a highly uh energyrestricted energyrestricted energyrestricted diet. If you, you know, want to learn diet. If you, you know, want to learn more about it, you can check it out.

more about it, you can check it out. But, um, but that's what that's designed But, um, but that's what that's designed to do is to kind of help burn that fat to do is to kind of help burn that fat out of the liver. And that's that's out of the liver. And that's that's something that's really important that something that's really important that can be done through fasting strategies.

can be done through fasting strategies. Um, you know, as long as you're, you Um, you know, as long as you're, you know, fasting is healthy for you. We can know, fasting is healthy for you. We can certainly talk more about that if you certainly talk more about that if you want to. um any type of energy want to. um any type of energy restricted uh diet like for example restricted uh diet like for example there's fasting mimicking diet uh you there's fasting mimicking diet uh you know there's other strategies that know there's other strategies that people can use intermittent fasting is people can use intermittent fasting is one of them and pro-fast diet is you one of them and pro-fast diet is you know these are called modified fasts and know these are called modified fasts and those can be helpful um just uh reducing those can be helpful um just uh reducing carbohydrate in the diet not for the carbohydrate in the diet not for the rest of your life but at least until you rest of your life but at least until you burn through that fat in the liver a lot burn through that fat in the liver a lot of people think fat fat in the liver.

of people think fat fat in the liver. Does that come from eating fat? It Does that come from eating fat? It really doesn't. Dietary fat gets burned really doesn't. Dietary fat gets burned or stored in fat cells. Doesn't go to or stored in fat cells. Doesn't go to the liver. It's the it's the the liver. It's the it's the carbohydrate, particularly the sugar and carbohydrate, particularly the sugar and most particularly the fructose that goes most particularly the fructose that goes to the liver. Um if you're healthy, to the liver. Um if you're healthy, metabolically healthy, it'll get burned metabolically healthy, it'll get burned or stored as as glycogen. But if you're or stored as as glycogen. But if you're not, if you're starting to lose not, if you're starting to lose metabolic health, it gets turned into metabolic health, it gets turned into fat. That's what leads to those high fat. That's what leads to those high triglycerides and that fat accumulation triglycerides and that fat accumulation in the liver. So, so we want to um in the liver. So, so we want to um restrict sugar for sure at least for a restrict sugar for sure at least for a while and uh fructose in particular uh

while and uh fructose in particular uh particularly processed refined fructose particularly processed refined fructose that is sort of out of its cellular that is sort of out of its cellular matrix and and goes right to the liver matrix and and goes right to the liver gives us a huge hit um and reduce gives us a huge hit um and reduce inflammation. you know that can be done inflammation. you know that can be done accomplished by healing the gut by uh accomplished by healing the gut by uh reducing food allergies or reducing food allergies or sensitivities.

sensitivities. sensitivities. uh we're addressing those. Uh there are uh we're addressing those. Uh there are certain supplements which can be helpful certain supplements which can be helpful to reduce inflammation, things like to reduce inflammation, things like curcumin and black seed oil and green curcumin and black seed oil and green tea extract and others. And um we want tea extract and others. And um we want to try to live an anti-inflammatory to try to live an anti-inflammatory lifestyle. And then the uh and then the lifestyle. And then the uh and then the the third thing I mentioned is that the third thing I mentioned is that oxidative stress. So, uh, you know, we oxidative stress. So, uh, you know, we want to try to breathe clean air and, want to try to breathe clean air and, uh, you know, eat good quality food so uh, you know, eat good quality food so we're producing less, uh, toxins and we're producing less, uh, toxins and we're intaking less toxins. And then we we're intaking less toxins. And then we can protect our liver cells with things can protect our liver cells with things like lipoic acid and, uh, benotamin, like lipoic acid and, uh, benotamin, which is a a fats soluble B1 that is which is a a fats soluble B1 that is very protective to liver cells. things very protective to liver cells. things like uh milk thistle or silarin has been like uh milk thistle or silarin has been shown to be protective for liver cells.

shown to be protective for liver cells. Uh glutathione either sublingual or Uh glutathione either sublingual or through something like an acetylcyine through something like an acetylcyine which drives natural glutathione which drives natural glutathione production can um help boost glutathione production can um help boost glutathione which can protect our liver cells from which can protect our liver cells from oxidative stress. So, I know there's a oxidative stress. So, I know there's a lot there if you want to unpack some of lot there if you want to unpack some of that or, you know, we can kind of move that or, you know, we can kind of move on, but uh that's those are probably the on, but uh that's those are probably the most effective ways to support liver most effective ways to support liver health.

health. health. >> No, I think that's great. I just wanted >> No, I think that's great. I just wanted to give people some things that they can to give people some things that they can start doing in terms of, you know, if start doing in terms of, you know, if that's the case that they find their that's the case that they find their resting blood sugar is is high. Um, but resting blood sugar is is high. Um, but let's go on because I think, you know, let's go on because I think, you know, let's talk about a few of the concepts let's talk about a few of the concepts that in in the pro diet that have really that in in the pro diet that have really that you've seen really turned the that you've seen really turned the needle. So, I don't know if you want to needle. So, I don't know if you want to talk about intermittent fasting a little talk about intermittent fasting a little bit.

bit. bit.

The biggest health lever: improving body composition

>> So, we talk about this concept of health >> So, we talk about this concept of health leverage and I think it's important to leverage and I think it's important to think about this. So, we want to use the think about this. So, we want to use the longest levers possible. Um, a lot of my longest levers possible. Um, a lot of my clients are very health consscious clients are very health consscious people. I'm sure yours are too, Margie.

people. I'm sure yours are too, Margie. And they come in sort of with this And they come in sort of with this encyclopedic knowledge of, you know, encyclopedic knowledge of, you know, health from watching podcasts and health from watching podcasts and summits like this. And they'll um, you summits like this. And they'll um, you know, they'll be doing all sorts of know, they'll be doing all sorts of things like things like um avoiding oxalates or avoiding um, you um avoiding oxalates or avoiding um, you know, certain chemicals in their food, know, certain chemicals in their food, eating only grass-fed organic meats, uh, eating only grass-fed organic meats, uh, that kind of thing. And they'll be that kind of thing. And they'll be trying, you know, supplements that I've trying, you know, supplements that I've never even heard of sometimes. And there never even heard of sometimes. And there are, you know, all that stuff has its are, you know, all that stuff has its place and it can be beneficial. But what place and

it can be beneficial. But what we try to do is kind of narrow down we try to do is kind of narrow down what, you know, what one thing can you what, you know, what one thing can you change is going to have the biggest change is going to have the biggest impact on your health now that's going impact on your health now that's going to move the needle, so to speak, the to move the needle, so to speak, the most in the shortest amount of time. You most in the shortest amount of time. You know, what's the longest lever that we know, what's the longest lever that we can, you know, push on that's going to can, you know, push on that's going to really move you? And I think for really move you? And I think for diabetes and metabolic health, it's body diabetes and metabolic health, it's body composition. So, you know, we have to composition. So, you know, we have to think in terms of decrease fat mass, think in terms of decrease fat mass, build lean mass or muscle mass. And I build lean mass or muscle mass. And I know that sounds ultra simple and it's know that sounds ultra simple and it's not as, you know, maybe sexy as some of not as, you know, maybe sexy as some of the other things, but it really is the other things, but it really is crucial and it's it's it's, you know, crucial and it's it's it's, you know, one of the longest levers we have. So, one of the longest levers we have. So, um, you know, don't overlook that. you um, you know, don't overlook that. you know, if you've got that sort of 12 know, if you've got that sort of 12 pounds of, you know, extra fat around pounds of, you know, extra fat around the belly that, you know, you've been the belly that, you know, you've been working on for a while and you're like, working on for a while and you're like, "Ah, I'll never get rid of this." Um, "Ah, I'll never get rid of this." Um, and you've moved on to, and you've moved on to, you know, wild caught fish and, you you know, wild caught fish and, you know, supplements out of the rainforest, know, supplements out of the rainforest, exotic, you know, supplements from the exotic, you know, supplements from the rainforest. Um, you might want to go rainforest. Um, you might want to go back and reook at at the body back and reook at at the body composition. And there are ways to, you composition. And there are ways to, you know, to get rid of that stuff, but it know, to get rid of that stuff, but it it takes work for sure. And you got to it takes work for sure. And you got to kind of lean into it more sometimes. And kind of lean into it more sometimes. And then don't forget the other side of the then don't forget the other side of the equation, which is lean mass. Lean mass equation, which is lean mass. Lean mass is ultra important when it comes to is ultra important when it comes to blood sugar regulation, and we lose it blood sugar regulation, and we lose it as we get older. um from a bone health as we get older. um from a bone health perspective, you know, how important it perspective, you know, how important it is to have good muscle mass and good, is to have good muscle mass and good, you know, and the exercise that goes, you know, and the exercise that goes, you know, with that to build it. So, you you know, with that to build it. So, you know, it's you're going to you're going know, it's you're going to you're going to get so many benefits from doing what to get so many benefits from doing what it takes to build lean mass and um and it takes to build lean mass and um and it's going to pay huge dividends from a it's going to pay huge dividends from a metabolic health perspective. Your metabolic health perspective. Your muscles are your largest disposer of muscles are your largest disposer of glucose in the body. something like 70 glucose in the body. something like 70 to 80% of the glucose that you consume to 80% of the glucose that you consume and produce is going to get used by your and produce is going to get used by your muscles. Now the brain is a more muscles. Now the brain is a more expensive tissue. It will use more per expensive tissue. It will use more per cell or per per cubic centimeter, but cell or per per cubic centimeter, but you have a lot more muscles than you do you have a lot more muscles than you do brain. And your muscles are going to brain. And your muscles are going to burn most of the glucose in your body.

burn most of the glucose in your body. So, the more muscle you can build, and So, the more muscle you can build, and I'm again, I'm not suggesting you I'm again, I'm not suggesting you become, you know, a massive bodybuilder, become, you know, a massive bodybuilder, but the more lean mass you can build but the more lean mass you can build through the right exercise, through the right exercise, the uh more glucose you're going to the uh more glucose you're going to dispose of, your metabolic rate dispose of, your metabolic rate increases, your mitochondrial increases, your mitochondrial um activity increases, your insulin um activity increases, your insulin receptor number and activity increases.

receptor number and activity increases. So all of that is very beneficial for So all of that is very beneficial for increasing what we call metabolic increasing what we call metabolic flexibility.

flexibility. flexibility. So body composition is a big one and So body composition is a big one and again you know by not by mistake the again you know by not by mistake the prof diet book is all about changing prof diet book is all about changing body composition. It's sort of again body composition. It's sort of again forcing the body to burn through the uh forcing the body to burn through the uh you know that stored fat that is you know that stored fat that

is sometimes hard to get at in the sometimes hard to get at in the midsection in the visca and the organs midsection in the visca and the organs and uh and then on the other side of the and uh and then on the other side of the equation it's building some more lean equation it's building some more lean mass and muscle to improve glucose mass and muscle to improve glucose utilization.

utilization. utilization. Okay, we could talk forever, but I did Okay, we could talk forever, but I did have one question with the because have one question with the because everybody, you know, worries especially everybody, you know, worries especially are they going to get their nutrients, are they going to get their nutrients, you know, if they change the fasting you know, if they change the fasting window and this has really helped so window and this has really helped so many people. I know you discussed this many people.

Fasting, nutrient-dense foods, and metabolism

I know you discussed this in detail in your book, but just maybe in detail in your book, but just maybe just share real briefly how about the just share real briefly how about the fasting where people could start if they fasting where people could start if they wanted to try to because there are a lot wanted to try to because there are a lot of people who eat right before they go of people who eat right before they go to sleep and there are people who eat to sleep and there are people who eat all day and you know sometimes just all day and you know sometimes just changing that up can make such a big changing that up can make such a big difference.

difference. difference. Yeah. So, think about your food um Yeah. So, think about your food um logically uh you know for kind of what logically uh you know for kind of what it's for. And it's it basically provides it's for. And it's it basically provides uh two main things, nutrition uh two main things, nutrition and energy. And so based on uh what our and energy. And so based on uh what our goals are, we try to we want to try to goals are, we try to we want to try to balance our eating strategy balance our eating strategy uh thinking about those two things. So uh thinking about those two things. So nutrients are really important. We all nutrients are really important. We all need them. And so we always want to eat need them. And so we always want to eat nutrientdense, nutrient-rich foods. Um, nutrientdense, nutrient-rich foods. Um, one thing that there's some confusion on one thing that there's some confusion on is which nutrients do we count? And I is which nutrients do we count? And I believe we need to count not only believe we need to count not only vitamins and minerals, but also fatty vitamins and minerals, but also fatty acids and amino acids because those are acids and amino acids because those are required required required essential nutrients and uh those are essential nutrients and uh those are part of our you know nutrient matrix. So part of our you know nutrient matrix. So when you add those into the mix, the when you add those into the mix, the most nutrient-dense foods are going to most nutrient-dense foods are going to be your uh fibrous be your uh fibrous uh vegetables, leafy greens, uh uh vegetables, leafy greens, uh cruciferous vegetables, those types, you cruciferous vegetables, those types, you know, the salad greens, uh the know, the salad greens, uh the vegetables that uh you you know you vegetables that uh you you know you already know are healthy.

already know are healthy. And meats, believe it or not, a lot of And meats, believe it or not, a lot of people don't think about meats as being people don't think about meats as being nutrient-dense, but if you look at an nutrient-dense, but if you look at an egg, it is loaded with nutrition and egg, it is loaded with nutrition and things that you can't find in many other things that you can't find in many other places like choline and leithin for places like choline and leithin for example. Um, these are important example. Um, these are important nutrients. Carnitine is found in certain nutrients. Carnitine is found in certain meats. It's important for fat oxidation.

meats. It's important for fat oxidation. So, we need uh these nutrients. So, we need uh these nutrients. And so, those are going to be your two And so, those are going to be your two most nutrient-dense sources. And you most nutrient-dense sources. And you know, uh, animal proteins like wild know, uh, animal proteins like wild caught salmon or shrimp or even, um, caught salmon or shrimp or even, um, like leaner cuts of beef and pork, for like leaner cuts of beef and pork, for example, are very nutrientdense. And, example, are very nutrientdense. And, you know, compared to the nutrition they you know, compared to the nutrition they have, not very calorie dense, not very have, not very calorie dense, not very energy dense. So, those are good choices energy dense. So, those are good choices if you're trying to lean down, build if you're trying to lean down, build more lean body mass, burn some fat mass.

more lean body mass, burn some fat mass. Uh, we also have to look at when you're Uh, we also have to look at when you're eating because like Margie you eating because like Margie you mentioned, a lot of people eat right mentioned, a lot of people eat right before bed, especially if you're eating before bed, especially if you're eating energy richch foods. So, you know, energy richch foods. So, you know, highfat or high carb foods or both, um, highfat or high carb foods or both, um, you want to make sure you have time to you want to make sure you have time to burn that energy. Otherwise, it's all burn that energy. Otherwise, it's all going to get stored. So, um, you know, going to get stored. So, um, you know, you can eat some of that earlier in the you can eat some of that earlier in the day, you know, when you can actually day, you know, when you can actually utilize it throughout the day.

utilize it throughout the day. But I don't recommend eating it right But I don't recommend eating it right before bed. And in fact, I don't before bed. And in fact, I don't recommend eating at all right before recommend eating at all right before bed. Most people don't, but uh it's just bed. Most people don't, but uh it's just not a good idea because our our not a good idea because our our digestive fire, so to speak, um we have digestive fire, so to speak, um we have a we have these circadian rhythms for a we have these circadian rhythms for different hormones and functions of the different hormones and functions of the body.

body. body. The digestive system is at it at its The digestive system is at it at its peak between like 1 and 300 p.m. So peak between like 1 and 300 p.m. So that's when we should be getting the that's when we should be getting the majority of our food, you know, majority of our food, you know, especially high energy foods. So we especially high energy foods. So we we'll take those, we'll burn them, and we'll take those, we'll burn them, and there won't be that much left to store.

there won't be that much left to store. And then as the day goes on, we need to And then as the day goes on, we need to eat less and less. So um we want to be eat less and less. So um we want to be thinking sort of in in the evening about thinking sort of in in the evening about more nutrient density not energy more nutrient density not energy density. So energy again think of energy density. So energy again think of energy as carbs and fat. So the the sugar the as carbs and fat. So the the sugar the starch in our foods and the fat in our starch in our foods and the fat in our foods. Nothing wrong with fat and really foods. Nothing wrong with fat and really nothing wrong with healthy carbs either nothing wrong with healthy carbs either um if you're not diabetic but uh eating um if you're not diabetic but uh eating them at the wrong time can be a problem them at the wrong time can be a problem or in the wrong combination. So like or in the wrong combination. So like something like potato chips. Nobody something like potato chips. Nobody thinks those are healthy, but just as an thinks those are healthy, but just as an example, or even something like ice example, or even something like ice cream. These are high carb and highfat cream. These are high carb and highfat foods. And they're just too energy dense foods. And they're just too energy dense and they don't have enough nutrients. So and they don't have enough nutrients. So they don't fill us up. You know, we they don't fill us up. You know, we don't get that nutrient satiety. We don't get that nutrient satiety. We don't get there's hardly any protein in don't get there's hardly any protein in them. So we're not getting protein them. So we're not getting protein satiety.

satiety. satiety. And we're getting a lot of energy from And we're getting a lot of energy from them. and it makes us kind of want to them. and it makes us kind of want to eat more. So those foods are the most eat more. So those foods are the most problematic and I don't think that's a problematic and I don't think that's a it's probably not a revelation to it's probably not a revelation to anybody, but that that's probably, you anybody, but that that's probably, you know, some justification on why those know, some justification on why those are the best foods to eat. So yeah, you are the best foods to eat. So yeah, you want to think uh excuse me, you want to want to think uh excuse me, you want to think nutrientdense, think nutrientdense, which is going to be mostly your which is going to be mostly your fibrous, vegetables, and um you know, fibrous, vegetables, and um you know, high quality high quality uh proteins. And then you want to think uh proteins. And then you want to think about uh uh the nutrient-dense and then about uh uh the nutrient-dense and then low energy density foods, especially if low energy density foods, especially if you're trying to burn fat and build lean you're trying to burn fat and build lean body mass.

body mass. >> Oh, well that's great. Well, this has >> Oh, well that's great.

Resources and next steps for better metabolic health

Well, this has been so helpful and you have so many been so helpful and you have so many resources in this book, but also on your resources in this book, but also on your website. So, why don't you share how website. So, why don't you share how people can follow you and learn more?

people can follow you and learn more? Yeah. So, uh, the best way is just to go Yeah. So, uh, the best way is just to go to the website which is drmmole.com.

to the website which is drmmole.com. drm wll.com. drm wll.com. We have a freebie there called the blood We have a freebie there called the blood sugar manifesto which you can download.

sugar manifesto which you can download. And when you do that, you'll get on our And when you do that, you'll get on our uh email list and we, you know, we don't uh email list and we, you know, we don't uh we don't uh send all kinds of uh we don't uh send all kinds of nonsense. We uh send really things that nonsense. We uh send really things that are very relevant. Um, but you'll hear are very relevant. Um, but you'll hear about uh our group challenges that we about uh our group challenges that we do, our, you know, some of the programs do, our, you know, some of the programs that we offer and we try to send out a that we offer and we try to send out a lot of really good information, lot of really good information, highlight uh interviews um that either highlight uh interviews um that either I'm in like this one or that I do like I'm in like this one or that I do like I've interviewed you before for the I've interviewed you before for the podcast and summits and I always love podcast and summits and I always love talking to you and if people want to talking to you and if people want to learn more about that kind of stuff learn more about that kind of stuff related to metabolic health, uh, go to related to metabolic health, uh, go to the website and and get on the email the website and and get on the email list. Oh, well, I can't thank you enough list. Oh, well, I can't thank you enough and I just love the work you do and it's and I just love the work you do and it's helped so many people. So, I just helped so many people. So, I just encourage everybody that's listening.

encourage everybody that's listening. Thank you first of all for being here Thank you first of all for being here and if you value this information, and if you value this information, please share it with a friend to help please share it with a friend to help spread it. But also take what Dr. Mole spread it. But also take what Dr. Mole said seriously. Look at your values.

said seriously. Look at your values. Start looking at this. I think this is Start looking at this. I think this is something we sort of have to take into something we sort of have to take into our own hands because often times it's our own hands because often times it's missed and in that window so much can be missed and in that window so much can be done to just make a real difference in done to just make a real difference in every aspect of your life really even every aspect of your life really even including your sleep. I mean it's including your sleep. I mean it's amazing when you dial this in how how amazing when you dial this in how how many things improve. So I I just I just many things improve. So I I just I just love what you do and this is so love what you do and this is so important and it's very important to our important and it's very important to our bones and as I always say happy bones bones and as I always say happy bones create a happy life.

create a happy life. I hope you enjoyed this interview as I hope you enjoyed this interview as much as I did and have a better much as I did and have a better understanding of the importance of understanding of the importance of managing your blood sugar, how to test managing your blood sugar, how to test for insulin resistance, and what steps for insulin resistance, and what steps you can take to improve this. All the you can take to improve this. All the links that Dr. Mole talked about will be links that Dr. Mole talked about will be in the show notes. And he also created a in the show notes. And he also created a special guide for us on the connection special guide for us on the connection between blood sugar and bone health. And between blood sugar and bone health. And so that will be in the show notes. And so that will be in the show notes. And also this was a talk that was originally also this was a talk that was originally from my more natural approaches to from my more natural approaches to osteoporosis and bone health summit and osteoporosis and bone health summit and there are many many other talks of this there are many many other talks of this quality in that summit. So if you quality in that summit. So if you haven't listened to it you still can haven't listened to it you still can listen for free for seven days. So that listen for free for seven days. So that link will also be in the show notes. So link will also be in the show notes. So thank you so much for tuning in and I thank you so much for tuning in and I look forward to seeing you on the look forward to seeing you on the