Oxalates and Bone Health: What You Need to Know With Dr. Kim Millman Transcript

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Introduction

Hey, Margie here. Today, we're focusing Hey, Margie here. Today, we're focusing on oxalates because I've been getting so on oxalates because I've been getting so many questions. What are oxalates? Is it many questions. What are oxalates? Is it something I really need to deal with?

something I really need to deal with? How is this affecting my bones? What can How is this affecting my bones? What can I do to reduce the oxalates in the food I do to reduce the oxalates in the food I'm eating?

I'm eating? So, we are going to get those questions So, we are going to get those questions answered today. And what I decided to answered today. And what I decided to do, Dr. Kim Millman did a fabulous do, Dr. Kim Millman did a fabulous masterclass for my community. So, I on masterclass for my community. So, I on this podcast, I'm going to share that this podcast, I'm going to share that recording. And then at the end, I have recording. And then at the end, I have some other things that I've added some other things that I've added dealing with bile and oxalates. So, make dealing with bile and oxalates. So, make sure you stay tuned till the end. And sure you stay tuned till the end. And let me just tell you a little bit about let me just tell you a little bit about Dr. Millman. She is a Stanford, UCSF, Dr. Millman. She is a Stanford, UCSF, USC trained integrative medicine USC trained integrative medicine physician and research scientist. She's physician and research scientist. She's been working for over 18 years been working for over 18 years specializing in an integrative approach specializing in an integrative approach to osteoporosis. She sees patients to osteoporosis. She sees patients individually and teaches an online individually and teaches an online program called Restore and Rebuild, 100 program called Restore and Rebuild, 100 Days to Healthier Bones. And Dr. Millman Days to Healthier Bones. And Dr. Millman and I together co-founded the Bone and I together co-founded the Bone Health Academy and the Certified Health Academy and the Certified Integrative Bone Health Practitioner Integrative Bone Health Practitioner Program.

Program. Program. And so, anyone that's heard Dr. Millman And so, anyone that's heard Dr. Millman before, she's really a wealth of before, she's really a wealth of knowledge and this is full of so much knowledge and this is full of so much great information. Stay tuned.

great information. Stay tuned. >> [music] >> [music] >> [music] >> Welcome everyone to today's masterclass >> Welcome everyone to today's masterclass on oxalates. I'm so happy that everyone on oxalates. I'm so happy that everyone is here and took the time to come.

is here and took the time to come. So, from my point of view, the oxalate So, from my point of view, the oxalate discussion is really the elephant in the discussion is really the elephant in the room. So, I have personally and room. So, I have personally and professionally avoided this subject for professionally avoided this subject for many, many years because of the fact many, many years because of the fact that oxalates are are found in so many that oxalates are are found in so many healthy foods and it was the last thing healthy foods and it was the last thing that I wanted to do was to recommend that I wanted to do was to recommend that people start to take these foods that people start to take these foods out of their diet. But oxalates are out of their diet. But oxalates are central to the metabolism of calcium and central to the metabolism of calcium and other minerals that are very important other minerals that are very important for your bones, and it can be a reason for your bones, and it can be a reason why you can't absorb your calcium and why you can't absorb your calcium and other minerals. And so it can also be other minerals. And so it can also be damaging to tissues causing pain and damaging to tissues causing pain and inflammation and migratory symptoms that inflammation and migratory symptoms that just don't make any sense. And so I just don't make any sense. And so I thought that it was important to start thought that it was important to start looking at oxalates and to at least looking at oxalates and to at least educate people on the subject. And I educate people on the subject. And I want to really emphasize to people this want to really emphasize to people this is not something that everyone needs to is not something that everyone needs to do, and I think that there really is a do, and I think that there really is a process to figure out whether it is process to figure out whether it is important for you, and I'm going to important for you, and I'm going to teach you the process that I've teach you the

process that I've So in the in the webinar we're going to So in the in the webinar we're going to be describing oxalates and how they be describing oxalates and how they damage tissues and cause pain and damage tissues and cause pain and inflammation, the symptoms that you inflammation, the symptoms that you might have if you were having problems might have if you were having problems with oxalates. We're going to go over a with oxalates. We're going to go over a list of the top oxalate foods and we're list of the top oxalate foods and we're going to I'm going to give you a going to I'm going to give you a validated oxalate food chart. When you validated oxalate food chart. When you go to my site go to my site and then I'm going to give you some and then I'm going to give you some practical guidance on what you can do to practical guidance on what you can do to reduce oxalates if you decide that reduce oxalates if you decide that that's something that is right for you.

that's something that is right for you.

Oxalates and why they matter

So what are oxalates? Oxalates are the So what are oxalates? Oxalates are the same thing as oxalic acid. They are same thing as oxalic acid. They are little crystals. They are very small.

little crystals. They are very small. They're like shards of glass. They can They're like shards of glass. They can lodge in into any tissue lodge in into any tissue and they cause tissue inflammation, and they cause tissue inflammation, damage, and pain. They also bind to our damage, and pain. They also bind to our important minerals and other nutrients, important minerals and other nutrients, especially calcium, magnesium, especially calcium, magnesium, potassium, iron, potassium, iron, uh and some B vitamins.

uh and some B vitamins. Oxalates are found in plants. Um and Oxalates are found in plants. Um and it's interesting because the plant it's interesting because the plant mechanism is that if the ground water is mechanism is that if the ground water is too rich in calcium, then the oxalates too rich in calcium, then the oxalates act like a calcium sink. So, the act like a calcium sink. So, the oxalates bind to calcium and then uh oxalates bind to calcium and then uh take it away from the metabolism of the take it away from the metabolism of the of the plant and then the plant can grow of the plant and then the plant can grow normally.

normally. normally. And oxalates are found in many And oxalates are found in many vegetables, a variety of seeds, nuts, vegetables, a variety of seeds, nuts, beans, and fruits. They're highly beans, and fruits. They're highly reactive. They are attracted positively reactive. They are attracted positively to charged minerals and some uh and some to charged minerals and some uh and some B vitamins as uh I just described, and B vitamins as uh I just described, and they can cause nutrient deficiencies.

they can cause nutrient deficiencies. They really are not just a worry for They really are not just a worry for kidney stones. They have multiple kidney stones. They have multiple effects throughout the body. And it can effects throughout the body. And it can be related to even just mineral be related to even just mineral imbalances. And then it can affect uh imbalances. And then it can affect uh your muscles and your joints and your your muscles and your joints and your connective tissues.

connective tissues. It can cause inflammation anywhere. Can It can cause inflammation anywhere. Can be a trigger for autoimmunity. It can be a trigger for autoimmunity. It can can can change uh and degrade your can can change uh and degrade your mitochondrial function, which is the uh mitochondrial function, which is the uh power source or the energy source of power source or the energy source of your cell. It can affect your your cell. It can affect your circulation, your heart, your circulation, your heart, your vasculature. It can affect your thyroid vasculature. It can affect your thyroid and other glands, uh like your adrenals.

and other glands, uh like your adrenals. And it absolutely affects your urinary And it absolutely affects your urinary tract um all along it, including kidney tract um all along it, including kidney and ureter and bladder. And it can cause and ureter and bladder.

Symptoms from high oxalate intake

And it can cause paralyzed gut and poor gut function. paralyzed gut and poor gut function. Just to show you all of the symptoms and Just to show you all of the symptoms and the different multiple organ the different multiple organ systems that that oxalates can affect, systems that that oxalates can affect, I've prepared these two charts.

I've prepared these two charts. And so, just in general, it can cause And so, just in general, it can cause fatigue and sleep issues. You can be fatigue and sleep issues. You can be slow to heal, feeling weak, all kinds of slow to heal, feeling weak, all kinds of circulation issues like having cold circulation issues like having cold hands and cold feet, and even having hands and cold feet, and even having heart palpitations. All kinds of things heart palpitations. All kinds of things to the muscular cell to the muscular cell skeletal system and especially pain. So, skeletal system and especially pain. So, if you're having pain in migratory if you're having pain in migratory areas, it moves around, it comes and areas, it moves around, it comes and goes, it it changes in severity, then goes, it it changes in severity, then that's very suspicious. Can cause low that's very suspicious. Can cause low muscle mass, which we know is bad for muscle mass, which we know is bad for our bones, and can cause problems with our bones, and can cause problems with your tendons and and your joints.

your tendons and and your joints. All kinds of issues with brain function All kinds of issues with brain function and peripheral neuropathies, and peripheral neuropathies, whether it be in the central nervous whether it be in the central nervous system or whether it be in the system or whether it be in the peripheral nervous system, oxalates can peripheral nervous system, oxalates can really bind anyway, anywhere. Eyes, you really bind anyway, anywhere. Eyes, you can have a gritty feeling like you've can have a gritty feeling like you've got a foreign body sensation in your got a foreign body sensation in your eyes. Definitely watery eyes, red, being eyes. Definitely watery eyes, red, being having blurry vision.

having blurry vision. You can have You can have TMJ, clenching, TMJ, clenching, gum inflammation, sinus pressure, gum inflammation, sinus pressure, hearing deficits. And with the bones, it hearing deficits. And with the bones, it can affect the bones in the spine, in can affect the bones in the spine, in the hips, in the in in the teeth, and the hips, in the in in the teeth, and The immune system, it can be a trigger The immune system, it can be a trigger for autoimmunity. It can cause food for autoimmunity. It can cause food sensitivities, chemical sensitivities.

sensitivities, chemical sensitivities. Uh it can calcify within Uh it can calcify within uh the the kidneys causing kidney uh the the kidneys causing kidney stones. Uh it can cause calcinosis, stones. Uh it can cause calcinosis, which is the calcium deposits around which is the calcium deposits around your joints. Uh excessive dental tartar.

your joints. Uh excessive dental tartar. Uh in the skin can cause all kinds of Uh in the skin can cause all kinds of things with like rashes and hives uh and things with like rashes and hives uh and hypersensitivity hypersensitivity hypersensitivity in the skin, wrinkling, in the skin, wrinkling, uh and a whole host of digestive issues uh and a whole host of digestive issues because it does paralyze the guts. But, because it does paralyze the guts. But, it can cause diarrhea and constipation it can cause diarrhea and constipation and bloating. A grainy looking stools is and bloating. A grainy looking stools is very very suspicious for being oxalates very very suspicious for being oxalates because the oxalates are kind of grainy because the oxalates are kind of grainy themselves. It can be you can have pain themselves. It can be you can have pain and burning, a leaky gut. It can cause and burning, a leaky gut. It can cause imbalances in the microbiome. It can imbalances in the microbiome. It can cause even ulcerative colitis and cause even ulcerative colitis and Crohn's disease. And the kidney bladder Crohn's disease. And the kidney bladder is very very specific to oxalates. So, is very very specific to oxalates. So, if you have urinary tract infections if you have urinary tract infections that seem chronic and you go to the that seem chronic and you go to the doctor, there's no bacteria there, then doctor, there's no bacteria there, then that's very suspicious of an oxalate that's very suspicious of an oxalate toxicity, something called interstitial toxicity, something called interstitial cystitis, which is not a um urinary cystitis, which is not a um urinary tract infection, but it is pain in the tract infection, but it is pain in the bladder is very very suspicious for bladder is very very suspicious for interstitial cystitis. Um interstitial cystitis. Um Uh urgency Uh urgency incontinence, blood.

incontinence, blood. Um definitely, if you have a urine Um definitely, if you have a urine analysis and you see calcium oxalate analysis and you see calcium oxalate crystals, obviously that's a dead crystals, obviously that's a dead giveaway. And then vulvodynia and giveaway. And then vulvodynia and prostatitis. So, vulvodynia is pain in prostatitis. So, vulvodynia is pain in the vulva vulvar area and it can be the vulva vulvar area and it can be quite

severe and really um, we don't quite severe and really um, we don't really have a reason why that can occur really have a reason why that can occur and sometimes it can be from oxalate and sometimes it can be from oxalate toxicity.

toxicity. toxicity. So, the problem is is as you've seen in So, the problem is is as you've seen in the last two slides, oxalates can cause the last two slides, oxalates can cause symptoms in almost any body system and symptoms in almost any body system and um, many of these symptoms overlap with um, many of these symptoms overlap with other conditions. So, it's very other conditions. So, it's very difficult from a symptom perspective difficult from a symptom perspective whether or not you have an oxalate whether or not you have an oxalate toxicity. However, one of the things toxicity. However, one of the things that you can look at is the migratory that you can look at is the migratory pain is something that would be pain is something that would be suspicious um, and anything occurring in suspicious um, and anything occurring in the bladder or the kidney, urinary area, the bladder or the kidney, urinary area, vulvodynia, interstitial cystitis, um, vulvodynia, interstitial cystitis, um, kidney stones, of course, having kidney stones, of course, having problems with digestion, and of course, problems with digestion, and of course, one of the biggest thing is having one of the biggest thing is having multiple systems um, multiple symptoms multiple systems um, multiple symptoms in multiple body systems. So, when you in multiple body systems. So, when you go to those two slides, okay, I've got go to those two slides, okay, I've got something neurologically, I've got something neurologically, I've got something circulation, I've got something circulation, I've got something kidney, bladder, maybe that something kidney, bladder, maybe that all could be related to oxalates. And if all could be related to oxalates. And if that's happening for you, then that's happening for you, then going on a low oxalate diet for some going on a low oxalate diet for some time and doing some oxalate clearance be time and doing some oxalate clearance be just empirically to find out if uh, just empirically to find out if uh, that's a problem for you could could be that's a problem for you could could be a reasonable approach.

a reasonable approach. So, I'd like to go through a list of the So, I'd like to go through a list of the top foods so that you really understand top foods so that you really understand what are and I'm not going to do this in what are and I'm not going to do this in detail because of course you're going to detail because of course you're going to have the resource which is a validated have the resource which is a validated oxalate food chart from Harvard.

oxalate food chart from Harvard. Um but just wanted to go through a few Um but just wanted to go through a few of the really really top top foods. of the really really top top foods.

Top foods that contain high oxalate levels

So when I think about um uh So when I think about um uh oxalates, of course I'm thinking about oxalates, of course I'm thinking about greens like spinach and Swiss chard and greens like spinach and Swiss chard and beet greens and there are a few more.

beet greens and there are a few more. Um nuts, uh almonds and cashews are very Um nuts, uh almonds and cashews are very high. Uh there can be beans that are high. Uh there can be beans that are high and moderate.

high and moderate. Uh raspberries used to be high. They Uh raspberries used to be high. They it's been recategorized it's been recategorized and so um but there can be many many of and so um but there can be many many of these top um oxalate foods that you're these top um oxalate foods that you're going to find on the validated uh food going to find on the validated uh food chart that you're going to have as a chart that you're going to have as a resource.

resource. resource. So one thing that I think about when um So one thing that I think about when um I look to take the second part of is I look to take the second part of is oxalate are oxalates important for you?

oxalate are oxalates important for you? The first part is do you have oxalate The first part is do you have oxalate symptoms? The second part is how much symptoms? The second part is how much oxalates do you get in your food? So you oxalates do you get in your food? So you can use a free app called Cronometer and can use a free app called Cronometer and you can put in your daily diet and then you can put in your daily diet and then it will give you an estimate of how much it will give you an estimate of how much oxalates you have in your food. And I

oxalates you have in your food. And I like to think of these in different like to think of these in different categories. So there was a study that categories. So there was a study that showed that anything over 250 mg per day showed that anything over 250 mg per day of oxalates in your food increased the of oxalates in your food increased the 24-hour urinary oxalates from somewhere 24-hour urinary oxalates from somewhere um all the way up to 40 um all the way up to 40 uh and I've forgotten the units, but 40 uh and I've forgotten the units, but 40 per 24 24 hours I think it's milligrams.

per 24 24 hours I think it's milligrams. 20 40 40 mg per 24 hours. And that is 20 40 40 mg per 24 hours. And that is considered high. So, we can excrete considered high. So, we can excrete about 250 mg of oxalates, and so about 250 mg of oxalates, and so anything over that is really high. When anything over that is really high. When you're having, just for example, a half you're having, just for example, a half a cup of spinach is around 750 mg, so a cup of spinach is around 750 mg, so it's really really high high. So, if it's really really high high. So, if you're having spinach every day, and a you're having spinach every day, and a half cup is not very much of spinach, if half cup is not very much of spinach, if you're having a handful of you're having a handful of of almonds, if you're having a spinach of almonds, if you're having a spinach smoothie with almond milk every day, smoothie with almond milk every day, then you may be in this very high then you may be in this very high oxalate category. And so, it's a good oxalate category. And so, it's a good idea to find out what category you're idea to find out what category you're in, and also if you want to reduce in, and also if you want to reduce oxalates because that you you made a oxalates because that you you made a decision that that is important for you.

decision that that is important for you.

Soluble vs. insoluble oxalates and absorption factors

Again, it's not important for everyone, Again, it's not important for everyone, but you've you've made a decision to do but you've you've made a decision to do that, it's good to know that that, it's good to know that what these categories are, and that you what these categories are, and that you can reduce, say you're at 500, you can can reduce, say you're at 500, you can reduce down to 250 for a while, reduce reduce down to 250 for a while, reduce down to 100, and then low oxalate diet down to 100, and then low oxalate diet So, not only is it important of how much So, not only is it important of how much you consume, but obviously it's you consume, but obviously it's important of how much you absorb. So, important of how much you absorb. So, there are soluble oxalates, and there there are soluble oxalates, and there are insoluble oxalates. So, soluble are insoluble oxalates. So, soluble oxalates are the ones that are oxalates are the ones that are absorbable, and insoluble oxalates are absorbable, and insoluble oxalates are the ones that are bound to usually the ones that are bound to usually calcium and magnesium and potassium, and calcium and magnesium and potassium, and they are passed through the stool. And they are passed through the stool. And so, one of the things um that can happen so, one of the things um that can happen is that if that is not absorbed, like if is that if that is not absorbed, like if you have um fat malabsorption, you have um fat malabsorption, then the fat will come and bind to the then the fat will come and bind to the calcium and the magnesium, calcium and the magnesium, thereby leaving more in insoluble I'm thereby leaving more in insoluble I'm sorry. Thereby leaving more soluble sorry. Thereby leaving more soluble oxalates to absorb. So, you have to make oxalates to absorb. So, you have to make sure that your gut is working properly, sure that your gut is working properly, and that you don't have fat and that you don't have fat malabsorption.

malabsorption. malabsorption. And as I teach in my class, um if you do And as I teach in my class, um if you do have fat malabsorption, you can use a have fat malabsorption, you can use a digestive enzyme like Lipogold, which digestive enzyme like Lipogold, which has lipase in it, which will help to has lipase in it, which will help to break down the fats so that you can break down the fats so that you can absorb your fats, and then they're not absorb your fats, and then they're not going to bind to your minerals, and that going to bind to your minerals, and that way you're going to keep your oxalates way you're going to keep your oxalates insoluble, so you get rid of them in insoluble, so you get rid of them in your stool.

your stool. Also, because leaky gut um can uh cause Also, because leaky gut um can uh cause um um um it can increase absorption just because it can increase absorption just because the tight junctions are no longer a good the tight junctions are no longer a good barrier against the oxalates, and the barrier against the oxalates, and the oxalates can come through the cells oxalates can come through the cells instead of coming through the instead of

coming through the microvilli, which is the proper way to microvilli, which is the proper way to absorb.

Gut bacteria, probiotics, and oxalate metabolism

So, your microbiome is also a important So, your microbiome is also a important in your oxalate health. So, there are in your oxalate health. So, there are strains of bacteria that degrade strains of bacteria that degrade oxalates, and um there's called oxalates, and um there's called oxalate-specific oxalate-specific oxalate-specific bacteria, and then the bacteria, and then the non-oxalate-specific bacteria. The one non-oxalate-specific bacteria. The one that is specific is called Oxalobacter that is specific is called Oxalobacter forminogenes.

forminogenes. forminogenes. And um it is very very sensitive to some And um it is very very sensitive to some of the antibiotics that are often used of the antibiotics that are often used for upper respiratory infections, and for upper respiratory infections, and these include the macrolides. And um you these include the macrolides. And um you may have may have um taken one of these macrolides in the um taken one of these macrolides in the past, uh erythromycin or azithromycin, past, uh erythromycin or azithromycin, and this will basically um decrease the and this will basically um decrease the concentration of this very important concentration of this very important bacteria. And once this bacteria is bacteria. And once this bacteria is gone, the bacteria will be in your gut, gone, the bacteria will be in your gut, and it will be degrading your oxalates and it will be degrading your oxalates that are there in your gut. And so and that are there in your gut. And so and then you will have less of the oxalates then you will have less of the oxalates that will actually be absorbed. And they that will actually be absorbed. And they have looked at studies where they've have looked at studies where they've looked at people who have a significant looked at people who have a significant burden of oxalobacter forminogenes, and burden of oxalobacter forminogenes, and those who are no longer colonized with those who are no longer colonized with it, and they see much bigger uh it, and they see much bigger uh increases in 24-hour urine oxalates increases in 24-hour urine oxalates after a challenge with oxalate. So it is after a challenge with oxalate. So it is very important. But again, um it a lot very important. But again, um it a lot of people have lost this bacteria of people have lost this bacteria through antibiotic use. And at this through antibiotic use. And at this point, there is no probiotic that point, there is no probiotic that includes it. Although they are looking includes it. Although they are looking at uh this bacteria in research studies, at uh this bacteria in research studies, and it is an important area of research.

and it is an important area of research. Um there are a couple of other bacteria Um there are a couple of other bacteria that they're looking at, uh that they're looking at, uh lactobacillus um lactobacillus um rhamnosus uh GG, uh and I I think that's rhamnosus uh GG, uh and I I think that's in Probiomed 50.

in Probiomed 50. And um some of you in my class, you And um some of you in my class, you know, we talk about uh the Supergut know, we talk about uh the Supergut book, which Dr. Davis talks about uh book, which Dr. Davis talks about uh lactobacillus rhamnosus GG. Um also uh lactobacillus rhamnosus GG. Um also uh bifidobacteria lactis has been one. Uh bifidobacteria lactis has been one. Uh lactobacill bacillus paracasei.

lactobacill bacillus paracasei. So in as far as in emerging research, So in as far as in emerging research, they're looking at the bacteria that they're looking at the bacteria that actually can be uh supplanted as actually can be uh supplanted as probiotics that can help to break down probiotics that can help to break down the oxalates and it is an important area the oxalates and it is an important area of research um that can be promising um of research um that can be promising um for later. But at this point um I like for later. But at this point um I like ProBioMed 50 uh as as being able to um ProBioMed 50 uh as as being able to um just just just increasing your probiotic strains.

increasing your probiotic strains. Uh SIBO and SIFO can also be Uh SIBO and SIFO can also be contributors um and increasing the contributors um and increasing the absorption of uh of oxalates and fungus absorption of uh of oxalates and fungus and yeast and mold uh including candida and yeast and mold uh including candida produce oxalates. And so that is another produce oxalates. And so that is another reason to look at your microbiome and reason to look at your microbiome and have good gut health.

have good gut health. >> Hey, Margie [music] here. High-quality >> Hey, Margie [music] here. High-quality supplements are a big part of a supplements are a big part of a comprehensive osteoporosis program. To comprehensive osteoporosis program. To help you I offer significant discount help you I offer significant discount

every day in my supplement [music] store every day in my supplement [music] store through Fullscript. Fullscript has the through Fullscript. Fullscript has the most extensive catalog [music] of most extensive catalog [music] of professional grade supplements and professional grade supplements and wellness product I've ever found. So all wellness product I've ever found. So all you need to do is go to [music] you need to do is go to [music] tinyurl.com.

tinyurl.com. tinyurl.com. That's t i n y u r That's t i n y u r l.com/supplementsforless l.com/supplementsforless l.com/supplementsforless [music] and you'll get to my Fullscript store and you'll get to my Fullscript store and in there you'll see [music] my and in there you'll see [music] my favorite bone-building supplements. So favorite bone-building supplements. So make sure to check it out [music] and make sure to check it out [music] and the link will also be in the show notes.

the link will also be in the show notes. >> Okay, so then there is the amount of >> Okay, so then there is the amount of oxalates that it are come from dietary oxalates that it are come from dietary contributions contributions contributions and how much we absorb is related to and how much we absorb is related to some of the things that we just talked some of the things that we just talked about including our gut health. But not about including our gut health. But not only do we get oxalates from our diet, only do we get oxalates from our diet, but we also make them inside our body.

but we also make them inside our body. So, So, So, there's an estimate that that our there's an estimate that that our dietary contribution is about 50% dietary contribution is about 50% and that our endogenous synthesis, what and that our endogenous synthesis, what we make in our bodies, is about 50% we make in our bodies, is about 50% and they've looked at studies to find and they've looked at studies to find out what are these dietary precursors out what are these dietary precursors that actually contribute to the that actually contribute to the production of oxalates within our body.

production of oxalates within our body. And it's thought to be that some of the And it's thought to be that some of the genetic genetic genetic it's called hyperoxaluria.

it's called hyperoxaluria. Some of these these people who have Some of these these people who have genetics who make too much oxalates in genetics who make too much oxalates in their body and they have recurrent their body and they have recurrent kidney stones and they actually get kidney stones and they actually get kidney damage kidney damage quite early.

quite early. They have problems with They have problems with being able to degrade oxalates and they being able to degrade oxalates and they make oxalates make oxalates too readily.

too readily. And so as far as endogenous oxalate And so as far as endogenous oxalate production, one of the things that the production, one of the things that the research studies have bore out is that research studies have bore out is that ascorbic acid taking vitamin C as ascorbic acid taking vitamin C as ascorbic acid ascorbic acid is about 50% of the contribution is about 50% of the contribution to endogenous production of oxalates and to endogenous production of oxalates and the studies have shown that 2 g of the studies have shown that 2 g of vitamin C either from supplements and vitamin C either from supplements and and from diet is around the sweet spot.

and from diet is around the sweet spot. So, if you take more than 2 g of vitamin So, if you take more than 2 g of vitamin C per day, then uh it can increase your C per day, then uh it can increase your endogenous synthesis.

endogenous synthesis. Um Um Um and then the other major contribution is and then the other major contribution is hydroxyproline. hydroxyproline. hydroxyproline.

And hydroxyproline is the component that And hydroxyproline is the component that is in gelatin. So, this is not only is in gelatin. So, this is not only collagen, but it is also bone broth collagen, but it is also bone broth contains a lot of gelatin. Now, its contains a lot of gelatin. Now, its contribution, it's it's dietary contribution, it's it's dietary precursor contribution is only 15% to precursor contribution is only 15% to the endogenous synthesis. But, the endogenous synthesis. But, interestingly enough, I had a patient interestingly enough, I had a patient who who who

um was having some symptoms that she um was having some symptoms that she thought might be related to oxalates, thought might be related to oxalates, and so she went on a low oxalate diet.

and so she went on a low oxalate diet. And we measured and I'm going to go into And we measured and I'm going to go into the testing options next, but she the testing options next, but she measured her 24-hour urine oxalate measured her 24-hour urine oxalate level, level, level, and it was 40, and 30 is normal. So, she and it was 40, and 30 is normal. So, she was a little bit high, and 3 months was a little bit high, and 3 months later, her later, her oxalate level went up to 60.

oxalate level went up to 60. So, we were a little bit perplexed as to So, we were a little bit perplexed as to why her dietary oxalate level had gone why her dietary oxalate level had gone down, but yet she was showing a higher down, but yet she was showing a higher oxalate burden.

oxalate burden. And one of the things that she realized And one of the things that she realized was that she had started collagen right was that she had started collagen right around the time. Um now, this just around the time. Um now, this just recently happened a few months ago, and recently happened a few months ago, and so um I I told her that, you know, it so um I I told her that, you know, it maybe it's a good idea to go off the maybe it's a good idea to go off the collagen for a few months, and we'll collagen for a few months, and we'll retest and we'll really find out if it's retest and we'll really find out if it's from the collagen or not. Um and she was from the collagen or not. Um and she was very reluctant to go off of the collagen very reluctant to go off of the collagen for very good reason.

for very good reason. Uh and so, whether or not this is a Uh and so, whether or not this is a problem for anyone, this is a very minor problem for anyone, this is a very minor contribution.

contribution. contribution.

Testing options available

um but I want to just have the um but I want to just have the information out there. information out there. So, how can you test for oxalate burden? So, how can you test for oxalate burden?

Uh you can do a 24-hour Uh you can do a 24-hour urine oxalate level. And so, um more urine oxalate level. And so, um more than 38 per 24 hours of um of oxalates than 38 per 24 hours of um of oxalates is high. And then, citric acid is is high. And then, citric acid is something that inhibits the stone something that inhibits the stone production or crystal production. So, it production or crystal production. So, it inhibits calcium in the blood from inhibits calcium in the blood from forming a stone with the oxalates. So, forming a stone with the oxalates. So, we want our citric acid to actually be we want our citric acid to actually be high. Um and the level in the 24-hour high. Um and the level in the 24-hour urine um that we want to see is 600 mg.

urine um that we want to see is 600 mg. And um and these are the two tests that And um and these are the two tests that nephrologists do when they're following nephrologists do when they're following people with kidney stones. And people with kidney stones. And nephrologists are kidney doctors. And uh nephrologists are kidney doctors. And uh they recommend somewhere between one and they recommend somewhere between one and two juiced lemons in water per day to two juiced lemons in water per day to bring up the citric acid. Um and also, bring up the citric acid. Um and also, I'll show you some other things that I I'll show you some other things that I recommend as well.

recommend as well.

How to know if you have an oxalate problem

>> Okay, so how do you figure out if you >> Okay, so how do you figure out if you have an oxalate problem? Um so, the have an oxalate problem? Um so, the first thing is you look at your diet and first thing is you look at your diet and put it into categories. And are you put it into categories. And are you moderately high or are you above that in

moderately high or are you above that in your oxalate dietary your oxalate dietary um contribution? Uh um contribution? Uh what about your oxalate symptoms? Are what about your oxalate symptoms? Are any of them severe? Um any of them severe? Um anything that's really suggestive of anything that's really suggestive of oxalate toxicity like those that I I oxalate toxicity like those that I I talked about earlier. Um talked about earlier. Um when a person is uh is deficient in when a person is uh is deficient in calcium, then the 24-hour urine calcium, then the 24-hour urine oxalates will be higher. So, having oxalates will be higher. So, having enough calcium in your diet and through enough calcium in your diet and through supplements is very important. And then supplements is very important. And then magnesium and potassium as well. Uh magnesium and potassium as well. Uh do you have any gut um do you have any gut um dysfunction, any kind of um dysfunction dysfunction, any kind of um dysfunction in the gut that would contribute to a a in the gut that would contribute to a a higher absorption level of oxalates.

higher absorption level of oxalates. Um and do you have a fair amount of Um and do you have a fair amount of dietary contributions that could be dietary contributions that could be pushing your endogenous synthesis of pushing your endogenous synthesis of oxalates high, like um taking a lot of oxalates high, like um taking a lot of ascorbic acid or having a lot of bone ascorbic acid or having a lot of bone broth or collagen. Um having a broth or collagen. Um having a vegetarian diet or a vegan diet for a vegetarian diet or a vegan diet for a long period of time, uh that can put you long period of time, uh that can put you at risk. Um and then when you look at at risk. Um and then when you look at the testing, is your testing high?

the testing, is your testing high? So, I want to absolutely uh in um So, I want to absolutely uh in um encourage people to understand that not encourage people to understand that not everyone needs to do these things. Um everyone needs to do these things. Um that that oxalates are not necessarily a that that oxalates are not necessarily a problem for everyone. It's not as if I'm problem for everyone. It's not as if I'm saying that anyone with bone disease has saying that anyone with bone disease has a problem with oxalates. It's something a problem with oxalates. It's something to be on on on your radar, and it really to be on on on your radar, and it really can uh potentially improve your health.

can uh potentially improve your health. And if you have a high oxalate diet, And if you have a high oxalate diet, there's some ways to mitigate it. Um and there's some ways to mitigate it. Um and um and so I think it's it um um and so I think it's it um I kind of I just like the idea of having I kind of I just like the idea of having a you know, not having a very, very high a you know, not having a very, very high oxalate diet, but then doing things in oxalate diet, but then doing things in moderation and whether moderation and whether in this case moderation would be oxalate in this case moderation would be oxalate foods. So, moderation of spinach, foods.

Dietary strategies to reduce oxalates safely

So, moderation of spinach, moderation of almonds, and then when moderation of almonds, and then when you're having these high oxalate foods, you're having these high oxalate foods, So, what are some options to reduce the So, what are some options to reduce the dietary oxalates? Um and so, you have a dietary oxalates? Um and so, you have a few options. You can look at the very, few options. You can look at the very, very high oxalate foods like your very high oxalate foods like your spinach and beet greens and Swiss chard spinach and beet greens and Swiss chard and quinoa uh and and some of almonds.

and quinoa uh and and some of almonds. And then you can take a few of these And then you can take a few of these very, very high oxalate foods and swap very, very high oxalate foods and swap them out with low to medium foods. You them out with low to medium foods. You can reduce the frequency. If you have a can reduce the frequency. If you have a spinach salad three times a week and a spinach salad three times a week and a spinach smoothie two times a week, you spinach smoothie two times a week, you can reduce the frequency.

can reduce the frequency. Um and also um Um and also um if um you if you are really looking at if um you if you are really looking at trying to reduce oxalates to get to a trying to reduce oxalates to get to a low oxalate point, you don't want to do low oxalate point, you don't want to do this dramatically because what can this dramatically because what can happen is that the tissues can start to happen is that the tissues can start to dump oxalates. This is called oxalate dump oxalates. This is called oxalate dumping.

dumping. dumping. So, if your oxalate contribution goes So, if your oxalate contribution goes low and your tissues still have a lot of low and your tissues still have a lot of oxalates in it, then the tissues don't oxalates in it, then the tissues don't really dump when the bloodstream has a really dump when the bloodstream has a fair amount of oxalates in it, but they fair amount of oxalates in it, but they start to dump when the bloodstream gets start to dump when the bloodstream gets clear of oxalates. So, you want to do clear of oxalates. So, you want to do this over a slow period of time or you this over a slow period of time or you There are different kinds of things that There are different kinds of things that you can do to reduce the absorption of you can do to reduce the absorption of the oxalates when you have a meal that the oxalates when you have a meal that might be and have a higher amount of might be and have a higher amount of oxalates. So, you can take somewhere oxalates. So, you can take somewhere between 150 and 300 mg of calcium between 150 and 300 mg of calcium citrate. Citrate is the best form. You citrate. Citrate is the best form. You can also take magnesium citrate. You can also take magnesium citrate. You have to be careful with magnesium have to be careful with magnesium citrate because it can cause loose citrate because it can cause loose stools. And then potassium citrate as stools. And then potassium citrate as well.

well. well. Um you can do food combining. So, you Um you can do food combining. So, you can take high oxalate food and combine can take high oxalate food and combine it with a food that has quite a lot of it with a food that has quite a lot of calcium. And then the calcium will bind calcium. And then the calcium will bind to the oxalates and reduce the to the oxalates and reduce the absorption. Uh there are a lot of absorption. Uh there are a lot of different cooking um and um cooking uh different cooking um and um cooking uh methods. So, you can boil vegetables and methods. So, you can boil vegetables and and then you take the um the water and and then you take the um the water and you discard the water and a lot of the you discard the water and a lot of the water has the oxalates in it. Um and you water has the oxalates in it. Um and you can steam and uh and you can soak can steam and uh and you can soak overnight. So, those are really good overnight. So, those are really good ways to reduce the oxalate content in ways to reduce the oxalate content in Uh fermentation and sprouting, uh those Uh fermentation and sprouting, uh those are good ways to reduce oxalate content.

are good ways to reduce oxalate content. You can cook in milk. Of course, that's You can cook in milk. Of course, that's because of the calcium. Uh macerating because of the calcium. Uh macerating with whey.

with whey. Of course, that's because of the calcium Of course, that's because of the calcium as well. And you also want to drink as well. And you also want to drink plenty of water to flush the oxalates plenty of water to flush the oxalates out of the system. Because remember a out of the system.

Tips for managing oxalate intake for better bone health

Because remember a lot of the oxalates do that are absorbed lot of the oxalates do that are absorbed So, if you um if you don't get very much So, if you um if you don't get very much calcium from your diet, um I like I just calcium from your diet, um I like I just said, you can take calcium with a high said, you can take calcium with a high oxalate meal.

oxalate meal. You can add lemon juice to your foods You can add lemon juice to your foods and to your smoothies to increase the and to your smoothies to increase the citric acid so that you're not forming citric acid so that you're not forming stones.

stones. stones. And I really don't think it's a good And I really don't think it's a good idea to have a very very high oxalate idea to have a very very high oxalate diet where you would be having spinach diet where you would be having spinach and almonds on a regular daily basis. So and almonds on a regular daily basis. So I feel like swapping out some low and I feel like swapping out some low and medium oxalate foods for high oxalate medium oxalate foods for high oxalate foods is a very good idea.

foods is a very good idea. So um I like this electrolyte repletion. So um I like this electrolyte repletion. Um what it is from Trace Minerals, it's Um what it is from Trace Minerals, it's called 40,000 Volts and it has boron, called 40,000 Volts and it has boron, sulfate, magnesium, and potassium in it.

sulfate, magnesium, and potassium in it. And so that is going to replete some of And so that is going to replete some of the minerals that get depleted with the minerals that get depleted with oxalates. And then if you squeeze a half oxalates. And then if you squeeze a half a lemon, uh you take a teaspoon of a lemon, uh you take a teaspoon of 40,000 Volts, you squeeze a half a lemon 40,000 Volts, you squeeze a half a lemon and and into a big thing of water and and and into a big thing of water and drink that throughout the day, that can drink that throughout the day, that can be a good way to start repleting those be a good way to start repleting those minerals. And so I have a little recipe minerals. And so I have a little recipe Uh in addition, uh you may want to Uh in addition, uh you may want to specifically look at calcium.

specifically look at calcium. Uh I really like the the form of calcium Uh I really like the the form of calcium in the dimalate form and magnesium. in the dimalate form and magnesium.

Uh you can do citrates, uh dimalates. Uh you can do citrates, uh dimalates. Potassium would be citrate and Potassium would be citrate and bicarbonate. And one of the B vitamins bicarbonate. And one of the B vitamins that really gets depleted uh is B6. And that really gets depleted uh is B6. And you want to you want to take the active you want to you want to take the active So some other strategies. Some other So some other strategies. Some other strategies would be drinking plenty of strategies would be drinking plenty of hydrating beverages and water, uh adding hydrating beverages and water, uh adding lemon juice to the water so that you get lemon juice to the water so that you get enough citric acid. Uh, you want to enough citric acid. Uh, you want to address any kind of gut dysbiosis and address any kind of gut dysbiosis and clear candida.

clear candida. Uh, you can take probiotics with Uh, you can take probiotics with bifidobacterium lactis and probiomed 50 bifidobacterium lactis and probiomed 50 does have that uh, probiotic in it. Uh, does have that uh, probiotic in it. Uh, oxbile is something that you can take oxbile is something that you can take uh, uh, uh, for uh, reducing the fat malabsorption.

for uh, reducing the fat malabsorption. Uh, something like lipase is something Uh, something like lipase is something that you can do. Um, you can take B6 in that you can do. Um, you can take B6 in the form of P5P, um, but be very careful the form of P5P, um, but be very careful because doses above 300 mg of P5P can be because doses above 300 mg of P5P can be neurotoxic.

neurotoxic. neurotoxic.

Possible benefits of removing oxalates

So, I did want to share uh, some So, I did want to share uh, some benefits that a few of my students have benefits that a few of my students have had. Um, so I had a a a student who was had. Um, so I had a a a student who was having urinary tract infections almost having urinary tract infections almost monthly.

monthly. monthly. And And And some she would take a urinary um, some she would take a urinary um, a urinalysis and sometimes there would a urinalysis and sometimes there would be bacteria and other and other times be bacteria and other and other times there were not bacteria. So, she was there were not bacteria. So, she was constantly taking antibiotics. It was constantly taking antibiotics. It was breaking down her gut and then she breaking down her gut and then she listened to the talk on oxalates and she listened to the talk on oxalates and she thought, "Well, I might as well give it thought, "Well, I might as well give it a try and just go on a low oxalate a try and just go on a low oxalate diet." And her chronic UTIs went away.

diet." And her chronic UTIs went away. So, she was very thankful, um, not only So, she was very thankful, um, not only just to um, have the information, but just to um, have the information, but she was really worried about what um, she was really worried about what um, chronic chronic antibiotic use was going chronic chronic antibiotic use was going to do to her health long-term and so it to do to her health long-term and so it made her feel very empowered and she was made her feel very empowered and she was very grateful. Uh, another student of very grateful. Uh, another student of mine was just eating exceptionally mine was just eating exceptionally healthy. She was having spinach salads a healthy. She was having spinach salads a lot um, and she was eating beets and lot um, and she was eating beets and almonds and she had chronic moderate to almonds and she had chronic

moderate to severe neck pain that was uh severe neck pain that was uh it had been going on for decades and she it had been going on for decades and she went on a low oxalate diet and most of went on a low oxalate diet and most of that neck pain disappeared.

that neck pain disappeared. And so she was actually a chiropractor And so she was actually a chiropractor and she told her chiropractor about it and she told her chiropractor about it and they were both really really quite and they were both really really quite thrilled that it was a dietary solution thrilled that it was a dietary solution and it was and it was it was empowering for her.

it was empowering for her. Another student had chronic leg pain and Another student had chronic leg pain and it was soreness and it was getting in it was soreness and it was getting in the way of her being as active as she the way of her being as active as she wanted to be and that leg pain and that wanted to be and that leg pain and that leg soreness and it was kind of leg soreness and it was kind of heaviness as well that went away when heaviness as well that went away when she went on a low oxalate diet. Now I she went on a low oxalate diet. Now I don't know that this is going to be a don't know that this is going to be a solution for something that's going on solution for something that's going on with you but it is important to be with you but it is important to be informed that this is a possibility and informed that this is a possibility and it doesn't take very much effort to go it doesn't take very much effort to go on a low oxalate diet and do the on a low oxalate diet and do the repletion repletion repletion strategies strategies strategies and so and so you know it is worth a try it especially you know it is worth a try it especially if you have some of these like if you have some of these like interstitial cystitis or vulvodynia or interstitial cystitis or vulvodynia or kidney stones or chronic UTIs it's worth kidney stones or chronic UTIs it's worth a try.

a try. And so I am going to be giving you these And so I am going to be giving you these resources. I did produce these for my resources. I did produce these for my program.

program. program. We have an oxalate symptom and food We have an oxalate symptom and food assessment which can go through and you assessment which can go through and you can try to figure out whether some of can try to figure out whether some of the symptoms that you have are the symptoms that you have are indicative of of oxalates. Again there's indicative of of oxalates. Again there's a lot of overlap between oxalate a lot of overlap between oxalate symptoms and other chronic conditions symptoms and other chronic conditions and there's a food assessment. So, how and there's a food assessment. So, how often are you eating these very high often are you eating these very high oxalate foods and we give you a scale to oxalate foods and we give you a scale to look at that. Um and we within an email look at that. Um and we within an email stream also giving you some additional stream also giving you some additional information about how to get on to information about how to get on to Cronometer and and also how to Cronometer and and also how to categorize categorize categorize your your your oxalate levels into those categories oxalate levels into those categories that I showed you. And then if you're that I showed you. And then if you're finding that you're having some high finding that you're having some high oxalate foods, all you want to do is oxalate foods, all you want to do is just do some swapping out of very high just do some swapping out of very high oxalate foods with some low to medium.

oxalate foods with some low to medium. We have this validated food chart that We have this validated food chart that was from Harvard that was just updated was from Harvard that was just updated in 2023 in 2023 and we have the updated chart. So, you and we have the updated chart. So, you can do the food swapping with that can do the food swapping with that chart. And then all the things that I chart. And then all the things that I was talking about was talking about as far as mitigation strategies, we've as far as mitigation strategies, we've got some guided email support around got some guided email support around that. All you need to do in order to get that. All you need to do in order to get these two resources is go to these two resources is go to themilmanclinic.com/oxalates and you'll get and you'll get about a six or seven day email stream about a six or seven day email stream with all these resources and helpful with all these resources and helpful tips for tips for helping you to learn about oxalates.

helping you to learn about oxalates.

Bile flow and oxalate absorption

>> I hope you enjoyed this masterclass and >> I hope you enjoyed this masterclass and now have a better

understanding of now have a better understanding of oxalates. There's something that Dr.

oxalates. There's something that Dr. Milman and I recently discussed that was Milman and I recently discussed that was not part of this masterclass, but I not part of this masterclass, but I think it's so important that I want to think it's so important that I want to talk about it now. And that's the talk about it now. And that's the connection between bile flow and oxalate connection between bile flow and oxalate absorption. So, when you eat fat, the absorption. So, when you eat fat, the bile helps break it down so your body bile helps break it down so your body can absorb it properly. If the fat isn't can absorb it properly. If the fat isn't absorbed well, it remains in the gut and absorbed well, it remains in the gut and binds to calcium. So, when the calcium binds to calcium. So, when the calcium gets tied up with the fat, there's less gets tied up with the fat, there's less available to bind to oxalates and carry available to bind to oxalates and carry them out of the body. And what this them out of the body. And what this means is more oxalates get absorbed, means is more oxalates get absorbed, which can increase oxalate-related which can increase oxalate-related issues throughout the body. Dr. Milman issues throughout the body. Dr. Milman has been seeing this clinically and has been seeing this clinically and finds it's an important, often finds it's an important, often overlooked part of oxalate management, overlooked part of oxalate management, especially if you have sluggish bile especially if you have sluggish bile flow or have had your gallbladder flow or have had your gallbladder removed. But there are a few things that removed. But there are a few things that she talks about that helps. Ox bile she talks about that helps. Ox bile supplements, lipase enzymes, or a supplements, lipase enzymes, or a bile-supporting product. And the one she bile-supporting product. And the one she likes is Seeking Health's Bile likes is Seeking Health's Bile Nutrients, which contains betaine, Nutrients, which contains betaine, dandelion, artichoke, milk thistle, and dandelion, artichoke, milk thistle, and ginger.

ginger. ginger. So, I just think this is important. We So, I just think this is important. We don't want to overlook digestive health don't want to overlook digestive health when it comes to oxalates. And for many when it comes to oxalates. And for many people, this is really an important people, this is really an important piece of the puzzle.

piece of the puzzle. So, before we end, I did want to tell So, before we end, I did want to tell you about a course that Dr. Milman you about a course that Dr. Milman teaches called R&R, Restore and Rebuild, teaches called R&R, Restore and Rebuild, 100 Days to Healthier Bones. And I teach 100 Days to Healthier Bones. And I teach two of the modules, and it's just really two of the modules, and it's just really a phenomenal class where you'll be able a phenomenal class where you'll be able to learn all about your labs and do the to learn all about your labs and do the testing and really figure out root testing and really figure out root causes. So, there's more information causes. So, there's more information about that, as well as a coupon code to about that, as well as a coupon code to get $100 off in the show notes. So, get $100 off in the show notes. So, thank you so much for tuning in, [music] thank you so much for tuning in, [music] and I look forward to seeing you on the and I look forward to seeing you on the