

Julie:

We have Karla Wiersma on the line with us today and I'm Julie Matthews. I'm a certified nutrition consultant and my specialty is autism and I found about a diet called the low oxalate diet and the concept of oxalates from Susan Owens. I have been very intrigued by this since I found out about it and I wanted to do an interview with Karla because she is on the yahoo group for this oxalate project and is just constantly sharing really helpful information.

It's obvious you have a lot of experience with this and are helpful to a lot of people and so I really wanted to get you on the line - and together - me with my clinical experience with the diet and oxalates, and yours with personal experience and your experience helping so many people on the board. I thought it would really be great to share kind of the next level of information with parents and other people [and practitioners] that are out there.

Oxalate and Low Oxalate Diet Resources

Let me give a couple resources for people to get us started. There is a website, run by Susan Owens and the autism oxalate project, which is lowoxalate.info. So I want to share that website and then from there you can also link to the yahoo group that I'm speaking of and that is "trying_low_oxalates" and that website [yahoo group] is a wealth of information. Particularly I love the file (and I believe you put this file together Karla) it's the file with all oxalate values that have been calculated over the course of a number of years put together into an amazing 100 page spreadsheet, so I believe that is your work, yes Karla?

Karla:

Yes

Julie:

Alright, well that was a huge service to people because it's very comprehensive. I know one of the challenges with oxalates is a lot of the times they the numbers are a little conflicting so it's nice to have everything all in one place so people can see.

Karla:

It's been very helpful here.

Family Experience with Oxalates

Julie:

Yes... So Karla can you share with people, what your experience has been? What has brought you to oxalates? What brought you to the low oxalate diet and the group?

Karla:

I came to the low oxalate diet pretty much by accident. I had attended an autism conference and sat in a seminar about oxalates not really realizing that we needed it and had heard some of the symptoms of oxalate problems. So six months later when my son with autism started displaying some of these symptoms I knew that that this was a diet that we needed to look into so at that point I had joined the low oxalate group and started removing high oxalate food and getting him into the diet. And it's been a very positive experience, very positive.

Crystals: Biggest Indicator of High Oxalates

Julie:

And what were some of those symptoms that you identified you know that were that that came up that you noticed was going on with your family

Karla:

We had very sandy stools, crystals in the urine, that was probably the biggest, crystals in the urine was probably the biggest indicator that we needed to do the diet, that and the sandy stools. And then once I started to look at the foods that were high oxalate, I noticed my son was refusing those foods, so those very high oxalate foods like spinach, charred, almonds you know all of those he had, had a month before with no problem, suddenly he started rejecting them outright. So the crystals in the urine was the biggest, the biggest indication that we needed to do this diet.

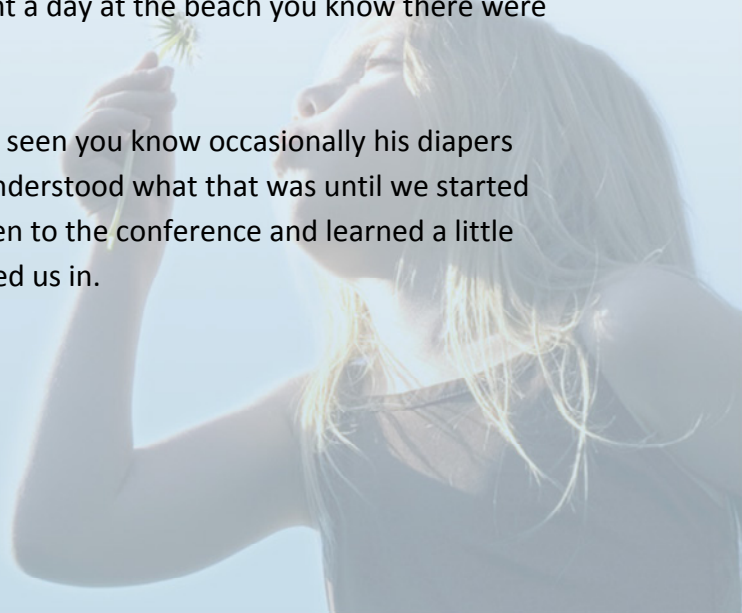
Julie:

Interesting and how did you determine that he had crystals?

Karla:

You could literally see them in his potty chair. He was potty training at the time and as soon as it would dry out a little bit, it would look like he spent a day at the beach you know there were shiny sandy crystals lining the bottom of the chair

And previously when he had been in diapers we had seen you know occasionally his diapers appeared to be kind of grainy and we never really understood what that was until we started the potty training and at that point I had already been to the conference and learned a little bit about oxalates and so that was what really queued us in.



Julie:

Wow that's really interesting! Alright! So and then what was your experience? You obviously had signs that this seems like it's important to address - and then what was your experience once you started the diet?

Improvements from Low Oxalate Diet

Karla:

Well within about two or three days of starting the diet of pulling the high oxalates out, you know, we started to see you know dumping signs, more sandy stools more crystals in the urine, a very strange rash that we had never seen before and that lasted for about a week or so and once that went away we started seeing some behavior gains. We started seeing some physical gains. My son was chronically constipated up to this point, he was going maybe about a bowl movement once every six days, and within a couple of weeks of starting the diet we noticed he started having you know more frequent bowl movements. He still wasn't regular, but he went from once every six days to once every three to four days. So that was another good indication we were on the right track, and that just adjusting the diet, to remove those high oxalates was having some benefit.

Julie:

And then as you continued on the diet?

Karla:

The improvements just continue. We eventually got to the point to where constipation was over, within about six months he was going once a day, so it took a while but we got there. And we'd have a dump and you'd see a bit of regression and when the dump ended we'd start see more improvements more social you know improvements better eye-contact better fine gross and motor skills.

Julie:

Wonderful!

Karla:

About a year in, better, yeah. Control definitely some emotional self-regulation improvements and the gains have just kept coming.

Julie:

Great. Yes. I have to say that this diet is in some ways it's been around for a long time but in different communities, but in the world of autism it's fairly "new." I've just seen such



wonderful progress, and [heard such wonderful] parent experience, and just the real benefits have really been quite wonderful, especially when people have tried a lot of diets they've done a lot of nutritional intervention and then they isolate this and then they start some principles of this and they start to see some very specific gains associated with it. Everything from: reduction in stimming and tics to improvements in the gut and reduction in some of the pathogenic microorganisms (kind of balancing that gut flora) and of course pain and all of that. Those kinds of things I think have been really kind of highlighted for me and wow this diet has been really powerful. When I'm talking to families you can kind of see a pattern sometimes of the common symptoms that you've said and the people that really benefit and improved levels of energy and fine and growth motor and things like that so I was very intrigued from the very beginning when I started getting some experience with this. It's been a very helpful diet and I think it's very important to share it with other people so I'm really excited to go into some of those details.

Now, in terms of underlying causes: people with certain genetic tendencies towards creating oxalate, the gut being leaky, and diets that are high in oxalates. This is one of the biggest things I've heard - I've had a mom come to me and say 'I was doing one of the grain-free diets and I was doing all these wonderful broths and I realized, I was putting spinach in there and I calculated my son was getting 700mgs of oxalate a day.

I want to say that now not everybody on the group has autism—all kinds of people with different conditions and even some adults with varying conditions are benefitting from this diet. But there are definitely some things that can contribute and I'm curious about your perspective.

What have you seen as being the biggest underlying causes and contributors for oxalate issues? What did you see from your son and your family? Any thoughts for us on some of those big factors, and also might be part of the history, might lead someone to think that they might have an oxalate issue?

Causes/Contributors to Oxalate Issues

Karla:

I think in my son's case, and from what I've seen in a lot of cases, you got the combination of a leaky gut, and that's a huge problem. A lack of good gut flora, so you know, the flora that normally degrade the oxalates isn't there, and then combine that with a high oxalate diet, particularly if you're going gluten-free, and most of the gluten-free grains are even higher than their gluten counterparts. So, you go gluten-free, you have no good gut flora, and a leaky gut, you're pretty much going from the frying pan into the fire. And lots of high oxalate meals tend

to be very high in nuts, the almond flour and most of those have fairly high oxalates. So you're kind of compounding the issue, so you essentially set yourself up – [not enough] the good gut flora to deal with it, and then you're piling a much higher amount of oxalates than you normally would. And, you're right, we do see some folks with the genetic errors, and we do have some people with [vitamin] B1 and B6 deficiencies. My son is just one of those - and from what we're seeing when you're deficient in B1 and B6 your body will generate oxalates on its own. The diet, in that sense, doesn't necessarily do a lot of good until you get a handle on that.

There seems to a lot of factors but I do think that the high oxalate diet, the leaky gut and the lack of good gut flora are probably the predominant issue we see.

Common Symptoms of Oxalate Issues

Julie:

I see, are there any other red flags, you have mentioned some from your son, anything else that you want to share to people out there with really common symptoms, red flags and issues with oxalates?

Karla:

The two big ones, as I've mentioned, are crystals in the urine, the sandy or grainy stools, some folks have pain upon urinating or vaginal or penis inflammation that seems to be a fairly common sign with some kids, those are the big ones that we pretty much see.

Julie:

I find too- that eye poking is a very, to me is kind of a red flag and when I hear some of the doctors and other people talk about it, they often say calcium deficiency, and that can cause eye poking. To me there's always that connection with calcium binding to oxalate then it doesn't get into the tissues [and is deficient]—tome, there must be some kind of connection going, which is kind of interesting.

Karla:

Yes, there is. Some parents do report that.

Julie:

So where shall we start with this - so people that might have issues with oxalates, these oxalates are very sharp crystals, and they can get in with the leaky gut, into the bloodstream, they can lodge in tissues, they can create chronic inflammation including in the gut. So there's a couple of things, support, you can do on the supplementation side, and there's also the diet

which will help reduce the oxalates to a level that can it start pulling out of the tissues. My understanding is that if you have oxalates that's coming in through the diet; in order to get it out of the tissue, the ones coming through the diet must be low enough, that's why they said with a threshold of 40 to 60 mg of oxalate on a 2000 calorie diet. If it's low oxalate one can't sort of dabble in low oxalates, it really needs to be down to a certain level in order for those oxalates to really be dumping for many people. And that's where the low-oxalate diet comes in.

I see a couple of factors, the supplementation to support them, both on things like deficiencies, as well as dumping as things we'll talk about later—and then the other side which are the foods that they eat and making sure that the oxalates they're bringing in, or the food they're bringing in is low oxalate.

Question for you, the comment I get all the time is - that darn oxalate diet is getting rid of everything healthy. So maybe you can address for people that, yes it does take out certain greens but there's a lot of other greens that you can add. Do you have any words of wisdom or support for people regarding that?

Oxalates are Anti-Nutrients: Eating Healthy on Low Oxalate Diet

Karla:

We do, we do get that a lot. And I'm happy to say that you can eat very healthy and you can eat very well on a low oxalate diet. Yes, you're removing some things like spinach, which is hard, but to be honest, you have as many of the anti-nutrients on those foods as you do in nutrients. So nutritionally, they're really not that great for you. If you still want greens, there's kale, there's arugula, there's collard greens, there's mustard greens, there's a wider variety of low oxalate. And there's even medium oxalate foods that if you're careful with the serving size and watch your numbers, you can eat quite well.

Julie:

I think that's really important point. This diet is not all or nothing - unlike, let's say a gluten-free diet that is absolutely no gluten, but with low oxalate diet, it's not "no oxalate" - it's not really possible. It's just keeping the total down, so you have some flexibility to choose a medium oxalate because it has something to do with how much oxalate is in there, and has to do with how you cooked it and how big your serving size is, and things like that.

I think that's an important point - there is some flexibility on the diet - now you probably never add spinach –it's just too high. And you're right, a very interesting study done on spinach and rats were fed the diet, and then the second set of rats were fed the diet plus the

spinach, and interestingly the ones that had spinach on their diet were calcium deficient and because the calcium that's in the spinach is bound to that oxalate and not be able to be used, and it seems also that the extra oxalate was also absorbing some of the other calcium from the rest of their diet, and that's making them deficient which I thought was very interesting since spinach is so high with so many nutrients, but as you've said, those anti-nutrients are really doing a nutritional disservice to us.

Karla:

Yes, I agree.

Oxalate Dumping

Julie:

Alright, so let's talk about dumping. So dumping being the symptom that you get - I sort of think of it as detoxing from the oxalate. Can you share some things about dumping, and also do you have any recommendations for people in terms of reducing oxalates, slowly to slow the dumping symptoms? What are your thoughts on dumping that can be helpful?

Karla:

We recommend that when you first start the diet, that: 1. Calculate, as best as you can, how high-oxalate your diet is beforehand, if it's very high, reduce one item at a time, if you're using almond flour, don't pull almond flour completely outright, but maybe substitute a lower oxalate flour like chestnut, it's also high oxalate but it's nowhere as high as almond and just start slowly reducing. The one thing that you don't want to do is detox faster than your body can handle. It's not a pleasant experience, it's very stressful on the body, so as they say with chelation, it's a marathon, not a sprint. It's going to take a while to get oxalates out of your system, so, pamper your body as best as you can and you really do want to go as fast as your body can handle and no more than that.

Julie:

So people would, let's say if they've got 4 or 5 high oxalate foods in their diet, you're suggesting removing one of them and substituting something else for that, and then after a little time, then work on that next high oxalate food in getting that out rather than doing everything all at once. I think that makes a lot of sense. Do you have general sense for people? I know people are so different, our diets are different, their different ages it's hard to say really, but do you have some sort of range of how long this dumping goes on for, because I know that it can even take years. Can you share a little bit about the cycles of the dumping and the periods of the dump, and the duration or how long this kind of cycle might last, just a little bit of bigger picture for people?

Karla:

It really can vary. We've had some folks that when they first started, they will dump for a week, and then the body would stop, they would feel better for two weeks, and then the process will start over again. That was pretty much what it was like for with my son and me when we did the diet. We'd have one pretty lousy week of dumping, both of us would be feeling great after a week or two, and it will start up again. And for us that lasted probably about 4 to 6 months, then the dump started getting farther apart, maybe once every three weeks then it was once a month then once every two to three months, and between dumps we're feeling fantastic when my son is seen on cognitive games, behavioral, physical games, then you go through another dump for a couple more days, you get a little bit of regression and then the gains keep coming. Some folks would dump a lot longer, I think a lot of it depends on how high the oxalate you had to begin with, and how gradually you step into the diet. The other thing can be whether you're producing oxalates, so if you happen to be very deficient in vitamin B1 and or B6 that can kind of exacerbate the problem and you're dumping continually.

Producing Endogenous Oxalate

Julie:

Let's talk a little bit more about that. When you're talking about *producing* oxalates—things like B6 deficiency, the ability of certain things like vitamin C to convert to oxalate—anything else outside of the food piece of it that people might want to be aware of, about how to be careful of things that would produce more oxalate?

Karla:

The big ones at this point are vitamin C or fructose based food, so agave nectar (there's a thought that it) can convert to oxalate as well, glycine, but I think a lot of that ties back to the B6 and B1 deficiency so if you can get your B1 and B6 levels to optimum, hopefully that stops the endogenous production, and then you can concentrate on the diet.

Crystals in Urine, Sandy Stools, and Skin Rashes

Julie:

So, you had mentioned that you see crystals in the urine, and that's one of the best ways to identify oxalates. I had a client that actually had a microscope, but most parents don't have a microscope. In diapers, there was some sort of a residue or graininess that you can see. If it's in a regular toilet, I would imagine that it would be more difficult to see the cloudiness, any

suggestions for people on kids that are self sufficient and go to the bathroom on their own, how would you might be able to identify these oxalates? Any thoughts for me there?

Karla:

Take a urine sample, and let it sit. If you're dumping heavily, you can see that the crystals are settling through the bottom, it looks cloudy when you collect it, that's a good sign that you're dumping oxalates through the urine, and if you evaporate it, the crystals will be there at the bottom.

Julie:

Wow, do you ever use those crystals as an indicator of when you're doing the dumping? I'm guessing obviously on symptoms, that you have an idea that you're dumping but do you see the crystals go hand in hand, is that a helpful piece of the puzzle or you can just tell based on how you're feeling?

Karla:

That's one of the indicators that my son is dumping. The other one is the bowel movements; they're very sandy and also very painful. So when he tells me that he's having painful bowel movement, that's another clue that he's dumping. The big thing that I notice with him and I think other parents also see is that he tends to have more accidents. When he's not dumping, he has very good bladder control; we don't have accidents at all. But the first day or so on dumping, we will have two or three accidents. Where his body just doesn't seem to recognize that it needs to go until the very last minute. So there seems to be an urgency to urinate and then incontinence, for us that are a big sign. That's the first sign that I usually see. I see the crystals in the urine and then my son gets a rash that he only gets when he's dumping.

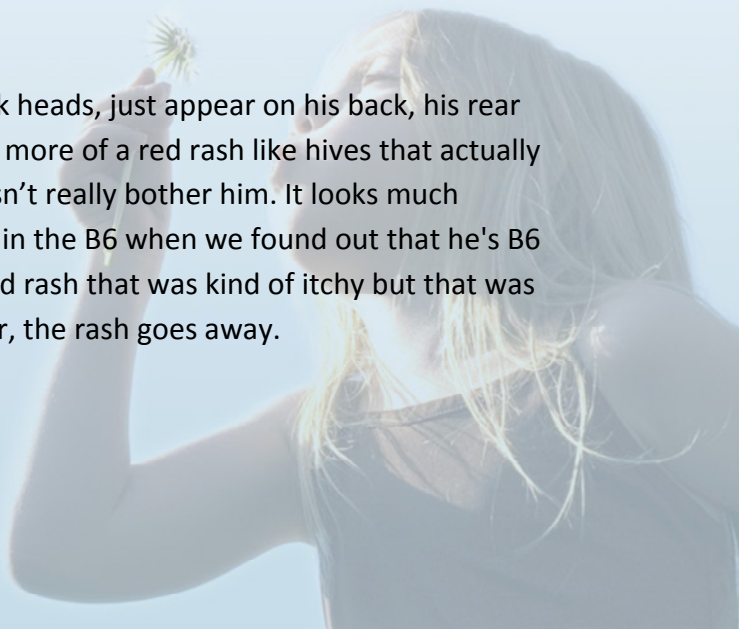
Julie:

Is that rash consistent with other people? Can you share what that rash looks like?

Karla:

With my son it looks like thousands of tiny little black heads, just appear on his back, his rear and the back of his legs. Other people report getting more of a red rash like hives that actually itch, I would say 90% of the time; my son's rash doesn't really bother him. It looks much scarier than it is. Every once in a while when we add in the B6 when we found out that he's B6 deficient, when we bumped up the B6 he got that red rash that was kind of itchy but that was fairly unusual for him. And when the dumping is over, the rash goes away.

Julie:



So you don't do anything for the rash, it's sort of it's there but it goes away, and it doesn't bother him too much?

Karla:

For him now, a lot of people when they get the red kind of itchy rash, epsom salt bath and baking soda seem to really help.

Yeast Flare Up, Oxalates, and Biotin

Julie:

Great, so let's talk a little bit about yeast, so I know that there's some connections—parents often tell me that when they're having an oxalate dump, that they get a yeast flare up. I'm curious; I'd love to hear your thoughts and experiences with that.

Karla:

We generally found that the only time we get yeast flare-ups is when we're dumping. Before we started the diet, yeast was an issue. Yeast now is easier to control since going on the diet and really as I've said, during the dumps, is when we see the yeast. I think it has a lot to do with the biotin because that's a big supplement for oxalates and it's a big supplement for yeast and oxalate and biotin compete for the same transport. So when you're dumping, you're flooding that system with a whole bunch of oxalates and if you don't have enough biotin in your system, the yeast is going to flare up. So one of the things we found very helpful is to increase the biotin when we're going through the dump and we see the yeast flare up, and that tends to keep the yeast under control.

Julie:

And the oxalate group tends to use up a decent amount of biotin—I've heard 20 mg is often used. Is that consistent with what you know/do?

Karla:

Yes we have some folks on 10-15 mg, my son is at 60 mg. at the moment, and we have folks that are on up to 80, 80-100 mg, so biotin deficiency does seem to be a big factor in oxalates. We know that the oxalates impair a lot of biotin dependent functions. So the more biotin you can get into your system, the more it'll help.

Julie:

How does somebody know because usually, biotin is often in microgram amounts, or you might find a 5 mg amount? When you're talking about 40, 50, 60 it's quite a bit of biotin compared to what we normally use supplementally but at the same time as the research that

Susan Owens has presented, it seems to be quite safer in higher amounts. How does someone figure out or how do you figure out when you need 60?

Karla:

We started out up to 40 mg and one of the things I've noticed was yeast was improving, his ability to handle yeast is improving, the higher amount of biotin that we got. And thankfully one of the things the great plains lab organic acid test has a marker for biotin so that's a very good indicator whether you need to go higher or not, and my son's recent OAT actually showed that he was still not getting enough biotin even at 40 mg. So we've been increasing it, 60 at this point and then we'll do another organic test, and see how the numbers look. We definitely know that the 40 is helping, just not enough for us.

Julie:

That's interesting, that makes a lot of sense. You're using science [labs] as a way to add the supplement and see how those pathways, and see how the biotin marker is, and adjusting it. So that's wonderful and Great Plains Lab has that great organic acid test that also has oxalate markers. Do you use oxalate markers as well?

Karla:

Oh yes. Yes they're very helpful. The actual oxalic acid will tell you how much oxalate is in your system. That's a fairly good indication that you need the diet. The only caution though that I would have with that is low numbers doesn't necessarily mean that oxalates aren't an issue, that might just mean that you're not dumping when you took the test. We've seen, my sons numbers have been in the 30s which is a good number but we knew he needed the diet so we've seen in the 30s, we've seen it in the 70s, we've seen it in the 300's so it can depend. It's a good indicator.

Julie:

I'm glad to hear that because I love that test. It's the only one that I know that has the oxalic acid marker, and I've seen it in the hundreds as well but I like that point. Susan Owens was telling me that if it is on the low side [oxalates can still be a problem]. She was saying that one of the doctors she knows - she put everybody on low oxalate diet, and even with the people in the really low numbers improved. And I don't know if we're going to find out something new but I'm always kind of curious at this, like mercury -Mercury being toxic - you're holding your mercury [and it doesn't show in the test]. If you have an oxalate problem, your numbers may still be on the lowside. If the oxalate marker is on the high end it's most likely there are high oxalates, but if it's low, it doesn't necessarily mean that there's not something going on with oxalates.

Karla:

And we know that the body understands that oxalates are a toxin, and they don't want it floating around on the blood stream. So they'll store them, until it finally hits the level when they can't store anymore and you'll start dumping on your own.

Julie:

Very interesting. Is there any other relationship with dysbiosis or yeast or even improvements that you've heard of the people? I have some clients that have been on some of the SCD/GAPS-type diet for a long time. You'd think that would've gotten rid of the yeast and in some cases have added the low oxalate and that really was the missing piece for them - that was able to get the dysbiosis piece under control that they weren't able to do before. Do you see that as well?

GAPS/SCD Diet and High Oxalate Pitfall

Karla:

Yes, yes we do. I think that obviously GAPS/SCD is a very good diet and they help with the healing. I think that once we get the oxalate levels lower, that really just allows the gut to heal that much quicker. I think once you get the gut healing and you're giving the probiotics - either through fermented foods or kefir, once you get that started, then the body starts to handle things on its own.

Julie:

I would have to agree with that - there are people, clients of mine across the board that do the GAPS diet or Specific Carbohydrate Diet along with the low oxalate diet and that really is a good combination for people who cannot tolerate grains or other things. So yes, I agree. The SCD/GAPS is a wonderful diet and just cautioning people—that they haven't paid attention to the high nut flour in the past, and they're not seeing the results that they want then there's this potential missing piece, the oxalate piece. I think it's really helpful to know about.

Soluble Oxalate vs. Insoluble Oxalate

Alright, so let's get into some of the details. There's oxalate and if you look at the list you put up for everybody there's the total oxalate value, there's soluble oxalates, and insoluble oxalates. And so the soluble oxalates tend to be a bigger problem because the soluble is not bound, so the nice thing when you soak something is that you are able to release the soluble oxalates. So to some extent, by soaking it you're able to maybe decrease some of those soluble oxalates. I would love your thoughts on total oxalate value versus soluble oxalate.

I know that there are some big differences; I want to remember, I think it's Chia seeds or something, one of those is super high oxalate - do you only take total oxalate into consideration or do you look at soluble. And when you calculating levels, do you calculate it on the total or is the soluble part an important part for you?

Karla:

I generally stick with the total, but I do take the soluble number into consideration for two reasons. One because the soluble becomes absorbed into the system, there's really not whole heck of a lot you can do about that, but when you're looking at what foods you're going to use, I'll give sorghum flour for an example, it's almost all soluble oxalate. So if I was going to use sorghum flour which is high but not real high that would be flour I wouldn't use because there's nothing there for the calcium to bind. The flipside of that is soaking. We found out that brown rice is medium oxalate and wild rice is high, but they're also high in very soluble oxalates. So we found that soaking it over night getting rid of that water, and the boiling it and cooking it more like pasta, and getting rid of that water, we found out that it took the brown rice from medium to low, and wild rice from medium to low. So I do take that into consideration because it gives me more food options—so if it's a legume, or a vegetable or a grain that I can soak to potentially reduce the oxalate value then that's a food I'm going to look at for using. In the case of the flour, if it's almost all soluble oxalate, that's something, I'm not going to use.

Oxalate Numbers and Super High Oxalate Foods

Julie:

That's good to know, and for people out there listening, "high oxalate" it can range right, so it can be 50 or 450 like almond flour is, so I think it's looking at the number and seeing it high is one thing but seeing how high it is something else, as well as the serving size. So I'm curious, what's your thought on Chia seeds? Because I know that if you only use a small amount, like a tablespoon, it's very high. Today Chia is like the "health food" or "new food of the day" and you get 900 mg or something of oxalates. It concerns me that we have all of these new foods like kombucha filled with chia seeds—so many people are eating so much chia seed these days. I don't know if you have any thoughts or even just some really high foods or anything that you want to share about those really high ones.

Karla:

The high ones, I just avoid all together. I mean, we'll take spinach I think it's a 150 mg for a half cup of raw spinach cook that up and a half cup of cooked spinach is 2-3 cups of raw spinach and you're getting in the 500's so that's a week and half's worth of oxalates in one shot. So when it gets that high, those are the things that aren't going to be in the menu.

Carrots however, 15 mg of oxalates per half cup. That's something I might use, like quarter cup here, quarter cup there. Or half cup if I'm making a meal that's 8 servings. One of the reasons that I like having the numbers is that it gives me the flexibility to maybe use some higher oxalate items if the meal is big enough, and I can control the serving size or if I'm giving it with lower items. As long as I'm staying between that 40 and 60, that's the goal. It doesn't necessarily mean using all low foods, or maybe one or two mediums. You have a lot of flexibility when you know what the numbers are.

Julie:

How much do you suggest that people calculate the numbers versus sticking with the lows and throwing in a few mediums? I can hear from your explanation knowing those numbers are very valuable to having a flexible diet and the most variety possible and I think that's great but I can imagine that for busy moms, too much calculation can be time consuming so do you measure your numbers all the time? Do you have a general sense? How do you keep those numbers in your mind?

Karla:

Well when we initially started the diet, I didn't have all of the numbers available. So I pretty much stuck with low foods and the occasional medium thrown in. One of the problems I've found is that not knowing the numbers, I couldn't really tell whether we're staying within that 40 to 60 range, because like as you said, not all highs are equal, not all mediums and / or lows are equal. So a half cup butternut squash is on the fine edge of low and medium, its 4.9 where medium is bet 5 and 15. Acorn squash is 3 mg per half cup so it does make a difference so for me I couldn't get a good handle of the diet until I look at the numbers.

Julie:

Which is why you made that incredible resource to share with everybody else in the world because it's such a valuable document. I just want to tell people - you go to [trying_low_oxalates yahoo groups](#) and in the file section under the Food Spreadsheets you'll find this document. It's really amazing so I just want to thank you because it's something that I think is a huge service for people to figure out these numbers.

Karla:

The reason why I developed this was basically I didn't have a good handle on the numbers, I joined the VP foundation so I was getting the information but I didn't want to have to go through 20 different newsletters and one cookbook every time I'm making a meal or tinkering with the recipe so one place that I can go one stop shop, get the numbers, plug it into the recipe, and then get a much better idea of what my family is eating. And at the same time, I figured I'm not the only one on the same boat so why not share it. For us it's really been

helpful. At this point, I've used the database and the spreadsheet so much I don't really need to use it anymore so I know when I'm making a meal - "okay, I'm using butternut squash, this is 5 so I need to serve it with brown rice, protein and a lower oxalate vegetable or lower oxalate fruit. So it becomes old hat after a while but I would say probably for the first couple of months, me and the database were pretty tight.

Julie:

If you're doing 40 to 60 mg, then people, is that like 10 for meal and 5 for snacks or something like that? It's definitely low, is that your rule of thumb? Could you try and keep a meal under 10 or something?

Karla:

Between 7 and 10, and realize that the 40 to 60 is more for adult, for a child maybe you want to go from 20 to 40 with the understanding that if the kids are growing obviously you need to give more calories so that the oxalate level is going to increase but the longer that you stay on the diet, the more you find that you can add many more mediums, even a few highs in with no problems.

Julie:

And speaking of problems, if you were to accidentally when you were starting out maybe not realize a food was high added in, would you see an immediate negative reaction from that food? Some of my clients definitely have pain or have problems with right after eating that food. Did you find or either did you find other people on the board with that experience, or is it more like a build up for a lot of people?

Karla:

I think a lot of it depends on what they're dumping signs are. I've noticed that a few that have the vaginal pain, that when they eat something with high oxalate, or if they have IC [Interstitial Cystitis]. They tend to react a lot quicker than others. With my son, I've never seen anything that really he reacted to very quickly. But he's never been a quick reactor to anything so that's fairly typical for him. I find myself potatoes, plantains which are very high - If I have those, hours later I'm reacting.

Julie:

Interesting. So going back to 40 and 60 mg goal – what I'm usually suggesting to people that its 40 to 60 for 2000 calorie diet but their diet was 1500 calories then I might reduce it by 25 percent, in other words I kind of keep it in the relationship with the 2000 calories. Is that kind of what you suggest?

Karla:

That's a very good idea. We find that there are some folks that 40 might be a little too high for them, so they may need to go a little bit lower. For some, maybe 75, 60 or 65 works for them. It's pretty individual. We have some folks that they go beyond 40 and they have problems. So they have to stay between 30 and 40.

Julie:

I have some clients and they come to me and they're doing the low oxalate diet already, and I've had some people have their diet be incredibly low. Is there anything detrimental to having a total oxalate of the day of 15, assuming that you're not just starting out? If you're starting then yes there is a detriment going from a normal diet to a super low diet like 15 mg at the beginning. But as people are going, is there any advantage or negative if you're way down at 15 mg of oxalate? Is less better? Or not really?

Karla:

I think, hopefully the longer that you are on the diet, the more of you can increase. So if they're at 15, I would wonder if there is something else, if they're having other sensitivities. I would wonder how nutritionally sound, if they're getting 15 mg of oxalates a day, are they getting enough nutrients especially if you're looking at an adult. Now for a child, 15 might may not be that bad depending on things but the goal is to be able to eventually increase to what you can, maybe not to a point where you're eating spinach and chard, maybe instead of being at 30, maybe after a while, you can get up to handling 50 mg a day with no problems or 60 or 70.

Julie:

I think in the case of people I often see kind of this, in the case of the person I'm thinking of, I don't think it was necessary that the 15 was based on seeing a problem with going higher, I think sometimes there are kind of a sense of "ooh I need to keep it low" –"lower is better." I guess what my question might be here is that as long as they're in a range, that kind of keeps the dumping cycle happening over time, and keeps them in a low range for them. If that range for somebody was, let's say around 40, I guess my thought is that just doing lower is not necessarily better, at some point you might be sacrificing nutrition. So I guess my question for people out there is a little bit about is it just reasonable to try and stay within whatever they might be a nice range for you and not feel like "okay if my range is 40, I'm going to do even better by going to 15" I guess that is part of my question.

Karla:

Yeah, I would agree with that logic that you don't probably want to, say going lower is better. I mean 40 to 60 is the optimum range you will find some folks that do that maybe 30 is better

for them, they feel better at 30 than they do at 40, or maybe they still feel good at 70 as supposed to 60, but I wouldn't go too much lower than that because I think at that point, you really maybe starting to sacrifice nutrition for oxalates.

Supplement Support for Oxalate Issues and the Low Oxalate Diet

Julie:

Alright, and let's talk a bit about some of the supplements that are used because you and Susan [Owens] and the research out there has really helped to figure out how to support this issue with oxalates with the diet. But to me, it's not just about the low oxalate diet. It's about an issue with oxalates, and how to address oxalates is a combination of the low oxalate diet and the supplementation that can support a person's biochemistry to handle the oxalate, support their system and whatever they need, when they need to, because of they have issues with oxalates.

So what do you think some of the most important supplements are? Calcium and magnesium citrate to me seems to be really important ones but I would love to hear from you, what are some of the top oxalate supplements that people would like to take a look at?

Karla:

Well the first two you mentioned I would think are pretty much the tops on the list. Either calcium or magnesium citrate, both calcium and magnesium will bind with oxalates citrate actually helps prevent crystal formation, so both of those are good and you want to take them 20 minutes before the meal so that way by the time the food gets there, the calcium is already there to bind those oxalates, keep it on the GI tract and escort it out which is what you want, and if you can't tolerate citrate there are other forms of magnesium or calcium just as well for the binding.

Probably the other big one is biotin; again we know that oxalate interferes with so many biotin dependent functions like fatty acid metabolism, glucose regulation. We have a lot of folks with those kinds of issues and oxalates maybe adding to the problems or maybe causing those problems. So high-dose biotin is good, it kind of evens the odds and it's great for yeast as well so you get a lot of bang with your buck with biotin.

A good B complex, we've talked a little bit about folks producing oxalates when they're deficient in B1 and B6 so those are probably the other big ones. With B6, some folks do well with pyridoxine, others do well with P5P. You might have to play around with that to see what works best for you. For my son it is pyridoxine that is the heavy hitter for oxalates with us. We've seen some good things with P5P so we use that as well.

My son happens to be deficient in B1 so we use the allithiamine and benfotihamine those are two good one. And then as I said a good B complex because all the b's work together you want a good complement of those.

For dumping, one of the big things helpful is l-arginine especially if you have a lot of pain associated with dumping. Some folks get migraines, some folks have joint pains, for those with the vaginal or penis inflammation, arginine can be very helpful for that.

And magnesium is also good for dumping when you dump you tends to deplete magnesium and your B vitamins require magnesium to work. Biotin needs magnesium if you can give it orally for binding but to keep those mineral levels up, that's good. Epsom salt bath, topical magnesium either through magnesium oil or Epsom salt cream, those are very good. They're also very good in detox. I find at least, when my son dumps, he's very emotional and the Epsom salt and the magnesium oil are very good with calming him down and kind of helping with the detox process. So those would be the big ones that I would use, and then the rest tends to be on what kind of symptoms you're seeing.

If you're seeing yellow stools then you might want to add some taurine.

If your ph levels are out of whack, then baking soda can be good as well.

Supplements for Oxalate Dumping

Julie:

Alright Karla, you were going to share some information about supplements for dumping?

Karla:

The only ones that are really helpful here are arginine, an amino acid that's very good for pain management. There are a lot of folks that have pain and inflammation—sometimes they get migraine when they dump or just joint pains - Arginine tends to be very helpful for that.

Extra magnesium, is really good because if you dump, the oxalates tend to tie up all those minerals, especially magnesium seems to be a common theme that folks seem to need a little bit more magnesium. If you do not want to give it orally because of bowel tolerance, you can use Epsom salt - either on bath or the cream, or even topical magnesium that seems to really help. Magnesium is also really good for the emotional side of dumping folks tend to be a little bit rowdy, understandably, and emotional. Magnesium is a very calming supplement so that it

seems to help with that aspect as well. I know it does with my son, extra minerals in general - some folks may need a little bit of extra iron, oxalates also tend to bind with iron.

A good mineral, a multi mineral supplement can be very helpful.

Baking soda - mainly because when you're dumping your pH level tend to be all over the place, baking soda or bicarb supplement can really help with that and is also good for detox. A lot of times what I do with my son is that give him an Epsom salt bath - with equal amounts of baking soda in there. That tends to help.

Taurine is another good one, mainly because dumping also tends to take toll on the liver and a lot of folks find that when they are dumping they end up with grayish or yellow stools which indication of a bile issue and taurine can help with that, and like magnesium it's also very calming so a lot of folks take Magnesium taurate - so they get the benefits of magnesium and taurine as well.

The other big one that I use is biotin if I see that yeast is becoming an issue and during dumps frequently is I'll bump up the biotin a bit and that usually gets yeast back under control.

Julie: Great

Karla: Those would be the big ones

Julie:

Alright, so pain is more specifically arginine, yeast is biotin, and then minerals. I don't want to simplify that much but my comment was - it sounds like the dumping support is based on what you're trying to support which with the dumping, so if someone's "dumping" you get a sense as to why they're dumping or what symptoms they're experiencing with their dumping and supplement based on their symptoms.

And, what about probiotics? I know that there is a study done they found to degrade oxalates was the VSL3. I was wondering from your experience on the board: do the people need to use this one or are there other good ones? Can any probiotic be good? Can fermented foods be helpful...what do you think about probiotics?



Probiotics and Oxalates

Karla:

I think probiotics in general are good - some folks can't tolerate VSL3, we find it very helpful here but it's pretty potent, and a little goes a long way. And some folks have found it just too much for their body to deal with, also if PANDAS is an issue, it does have a Strep strain. So for some folks, it's simply out of the question because they react to it. My son has PANDAS but oddly enough, doesn't trigger any flairs on him so we're fine with that. Some of the other ones that folks use are NOW brand has a probiotic called the 4x6 Acidophilus and that one has also been tested, and it has a lot of the same strains that VSL3 does, and that seems to work very well, it also have a strep strain though so that's something to take in consideration, and they also both contain VSL3 And the 4 x 6 - have trace amounts of casein so if you're on a casein-free diet and/or you're very very sensitive to it, it can cause problems that way. So that's also something to take in consideration.

Another one that folks have found some good success with is Custom Probiotics 11 Strain. It has a lot of the same strains in VSL 3, and the 4 by 6, but it does not have the Strep strain, and I believe there are some Klaire Labs probiotics that don't have the Strep strain that work as well. But if you can do coconut water kefir or of you can do goat dairy or maybe some goat kefir, fermented foods, probiotics in general are just going to be very helpful. Some are going to degrade oxalates better than others but having those beneficial bacteria is going to be helpful regardless.

Julie:

Sure, that makes a lot of sense. Anybody with experience on the board with the soil-based organisms?

Karla:

Not that I know of. I know there is one or two families that are starting to try the SBO's but I haven't really heard anything about those yet and how those are working so that's something we're considering. We're considering trying as well. But I haven't heard too much from the board.

Julie:

I know that if there were the commercial oxalobacterformingene, or bacteria specifically designed to degrade oxalate then that would be nice, but there isn't so do we know what it is about these particular strains? Do we know what people are looking for at these other lactobacillus strains or are we just kind of figuring out which ones right now are effective based on experience?

Karla:

It's more based on experience, we have had some testing done so we do know that the strep strain will degrade, actually does degrade pretty well. We know that *b. brevis* and there were two or three other strains in VSL3 and 4 by 6 that have all been shown to degrade and I think that one thing that can help is that if you're doing an anti-Candida diet and you're kind of reducing the sugar and carb load you're depriving the beneficial stuff of the sugars so they're not eating their normal food, they'll eat oxalate in a pinch. That's essentially what's happening.

Julie:

Interesting, I've heard about it too much on the oxalate board with that said how does that relate to like beyond the oxalates, the diet somebody chooses? Of course I always recommend a low sugar diet and not a lot of any grain. Do you find that that is a particularly important aspect of the oxalate diet? Get rid of those other potential substances or not really?

Karla:

I think some folks; there are definitely some folks this time that they need to be low carb and low sugar. And that definitely helps them. Especially the folks that are doing a combination of GAPS or SCD with low oxalate. I think they're definitely getting some good benefit by controlling the sugars. A lot of it depends on your individual situation. My son, for instance, can't metabolize fats very well so he needs a good deal of carbs for energy so; yeast is always going to be of somewhat an issue for us for that reason. But he still does pretty well on the diet, with the probiotics. It's situational. I do think that if you can keep the sugar, the refined processed carbs, if you can keep the stuff into a minimum then that would definitely help as well.

Fat Malabsorption and Oxalates

Julie:

You brought up a good comment of fats, which fat issues can go along with issue with oxalates. Any support or information that can be helpful for people in determining their issues with fats? Or any experience on the board with how many people with oxalate issues have some people have problems with fats? I run across them sometimes but not in a majority of people at least I've noticed. So I'm curious from your perspective, have you found a majority of people with oxalate issues have issues with digesting fat or is it some kind of a subset?

Karla:

That does seem to be a subset. There are definitely a few of us on the board but I wouldn't say the majority and for us one of the things we learn to do with the diet is when we're giving calcium, we don't give it with vitamin D. If we want calcium absorption we'll give it with the D away from meals. We generally give our fat-soluble vitamins away from meals as well and that's been fairly helpful. So the others there are a couple of tricks, things you need to take into account if malabsorption is an issue.

Arginine and Herpes

Julie:

I remember I had a client recently—we were talking about dumping and arginine, and they had a question because their child has a tendency to get the herpes virus, cold sores and things, and I know that lysine is helpful to keep the herpes infection lower, while arginine would seem to be feeding it. Do you have other people on the board with that situation? Would you suggest arginine and lysine in that case or do you find those people just can do the arginine? Do you have any experience on that?

Karla:

We do have a few folks with that issue, there are some that would take the arginine and the lysine and that seems to be okay, and there are others who won't just do arginine at all. For them it's just not worth the risk. So we do a little bit of it and I only tend to use it when needed, it's not a daily supplement that we use, we only use it at dumping. My son also has the herpes issue so generally when I give arginine I will also give some lysine to balance things out. And that seems to be okay, we don't have any herpes flair ups so that seems to work alright for us.

Julie:

Alright, great. I want to talk more about Susan Owens and support for Susan, but anything else before we get to that that you can think of that would be supportive? Are there any kind of big pitfalls you've ran into when it comes to, like challenges with oxalates and the diet, mistakes people make, common errors, or anything that new people starting out might be things to be aware of that we really haven't covered?

Antioxidants

Karla:

Let's see, one thing I did forget to add on the useful supplements would be an antioxidant—something that isn't vitamin C, which is obviously a big problem because it converts to

oxalates especially in high doses. It doesn't mean that you have cut out vitamin C all together - my son takes in 100mg. Susan also recommends 3-4 times RDA that's fine, that's not so much that the body can't handle. But an antioxidant support is another thing that's really important. We already deal with oxidative stress, especially with autism. We know our kids already deal with oxidative stress, and dumping only makes that worse. There is some thought that one of the reasons that vitamin C converts so quickly when you're oxidative stress that it doesn't go through it's normal process so it may convert quicker than people think - so a good antioxidant like: Astaxanthin, vitamin e, vitamin a, or Coenzyme Q10. Those are all good antioxidants. Glutathione, if you can tolerate it, that's another big thing our kids tend to be depleted in, so anything we can do to help bolster that will help.

Certain Vitamins and Minerals Taken Away from Meals

Julie:

Great! What about vitamin D, just given that the vitamin D can help the calcium absorbed in. What we're really looking for is to not absorb the calcium but to bind it in the gut for oxalates. When do you recommend people to take their vitamin D?

Karla:

We generally try to give it early in the morning and late at night. Anytime basically away from food. Like you said we don't want that calcium being absorbed but if calcium is an issue, and then give it separately with the vitamin D, away from food. And same with fats, if you have a fatty acid metabolism issue, you don't want to take your fat soluble vitamins with the meals because you don't want that undigested fat to be combining with the calcium and they're inhibiting that binding. So rule of thumb for us is to generally take it early in the morning, and late at night. Those are the two times that I know he's not going to be eating anytime soon.

Julie:

Now, with that all calcium conversation, it's a bit of a tough one because we're saying here that we don't want the calcium to be absorbed, in terms of oxalates but obviously in some levels people will need calcium, do we have any sense of how much of the calcium, when you take the calcium citrate with the meal how much does it absorb anyway? Do you suggest taking extra calcium away from these meals? How do we balance not wanting the calcium to absorb and needing the calcium to absorb? Do you take extra? Do you take a different form, a different time?

Karla:

Yes, yes. One of the things that we found through testing was that my son was chronically low in calcium and magnesium and likely because it was getting tied up with oxalates so I do give

calcium and vitamin D as well as magnesium twice a day, separate from the meals, along with the fat soluble vitamins, and found that through testing that's definitely improved his levels.

Julie:

Any general sense of how much calcium that your family does? Are they different for your son in the day?

Karla:

He's taken probably 1200 mg. He's taken about 250 per meal, 250 before each meal and then the rest we split between early morning and bed time.

Julie:

Okay. When you say separate from meals, is it truly on an empty stomach then?

Karla:

Yes.

Julie:

Okay, alright. I think that those are all the questions I could think of, and this has been really really amazing! It's so helpful to speak to somebody that has really in-depth long term personal experience and has the experience of talking to so many other people from the board, the Yahoo board. It really gives a nice, well-rounded perspective and so I really appreciate your perspective and really thank you for sharing it with everybody.

So let's talk about how we can support The Autism Oxalate Project is headed up by Susan Owens, who really is an amazing researcher, who, I feel, when she finds the truth, she's compelled to follow it regardless of whether there's money to do so from the goodness of her heart and for scientific expansion. And at the same time the project can use support in terms of getting some food tested. You're often sending foods into the lab and getting testing information and data, and there's a lot of amazing research and information that can come out of this group so I really want to support Susan Owens and the Autism Oxalate Project. You can donate to the project directly by going to their website to lowoxalate.info and there's a button right there on the top on how to donate. It will take you to the Autism Research Institute page and you can go ahead and put in your donation, and you can then specify that you want it specifically for that project. Right, Karla?

Karla:

Yes, at the bottom of the page there's a little box that says "I want my donation gifted to the Autism Oxalate Project and then that money goes directly for food testing and also to help Susan to continue her research.

Julie:

Wonderful, so when you click on that box it takes you over to the "autism donations.com" and then just specifying the autism oxalate project? Anything you want to add about Susan, or the group or the project or the donation or what you seen or anything else?

Karla:

Well Susan has been just amazing. She is a fantastic woman who has given pretty much her everything to not just helping folks with autism and oxalates but you have mentioned earlier that the yahoo group is a pretty vary group with a number of conditions that are all impacted by oxalates and one of the reasons I love the group is that it gets me out of the autism box and I can learn. I've learned so much from other conditions and from folks who have no connection with autism at all—they have shared their stories, what works for them, what doesn't work for them, and it's been a huge benefit to me and my son and other members of my family who's also got oxalate issues. So her inspiration to get as many different communities together, to cross-pollinate, has just been amazing and the group is fantastic.

Julie:

Yes, great, that's nice to hear and I thought I'd put a final plug for you and to thank you - I hear that you're an amazing cook, and that you're constantly adding recipes and good cooking ideas to the group because I think it's a really important point you made early on this diet that it can be nutritious and taste good, and you just need to learn certain tricks and tips to learn how to do it. There's a lot of good information you've shared in terms of helping people with resource, recipes and cooking ideas. Thank you for that as well.

Karla:

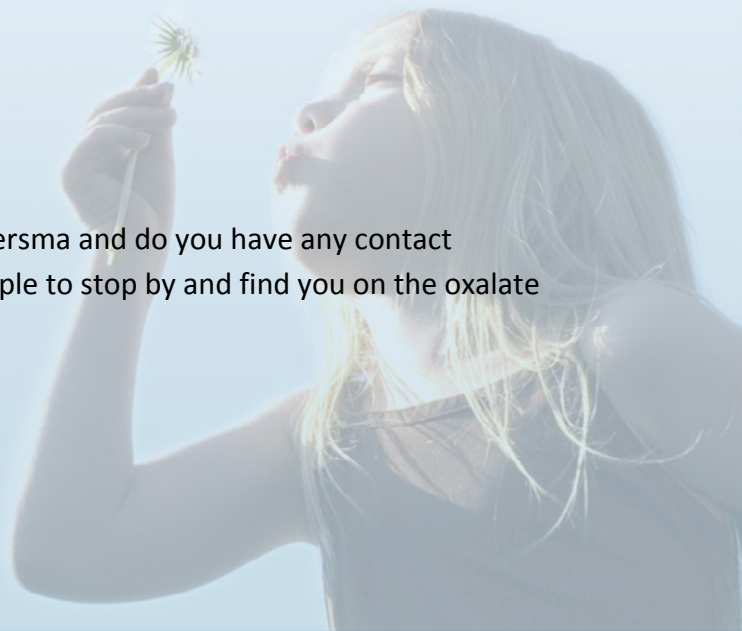
Thank you; it's my labor of love.

Julie:

So if I got it right this time, we're talking to Karla Wiersma and do you have any contact information you want to share? Or do you want people to stop by and find you on the oxalate group?

Karla:

They can find me on the oxalate group.



Julie:

Great. Okay so it's "trying_low_oxalates" on yahoo groups. Karla, thank you so much for being here today and make sure we'll get this recording up to share to a lot of parents and for people looking for information on oxalates.

Karla:

Thank you so much, I really appreciate the time you've taken with this diet and I think it will really help folks to understanding the diet, and no deprivation.

Julie:

Absolutely! Alright, thanks again Karla!

