

Paleo Solution - 348

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Robb: Hey, folks. Robb Wolf here. Another edition of the Paleo Solution Podcast. Super excited for today's guest. She is Allyson Chrystal. She works as an occupational therapist that uses the ancestral health template to inform her work. And we're going to talk a significant amount about play and kids and probably quite a few other things. Allyson, how are you doing?

Allyson: I'm great. How are you? Thanks for having me.

Robb: Good. Tell folks and remind me where on the planet are you located.

Allyson: I'm in freezing Chicago. So I'm jealous of those of you that are dealing with warmer temperatures right now.

Robb: Reno is chilly but it is not Chicago. At least if we get snow one day we usually get enough sun to get a tan the next day. So not too big of a deal.

Allyson: Love it.

Robb: Yes. The only time I've been to Chicago has been in the spring and it was late spring. So apparently it was like the time to be there.

Allyson: Very true. Yes. You want to avoid it pretty much like four or five months out of the year from about October to beginning of March and then you're good to go.

Robb: Okay. Cool. So Allyson, give folks a better sense of your background. I purposely do pretty skinny intro so that we avoid the canned bios and whatnot. I like to kind of hear it straight from folks what their background is and particularly how they've headed down the career path. And love to hear how the ancestral health revolutionary medicine kind of template has made its way into one's practice.

Allyson: Sure. Absolutely. Well, I'm currently combining functional medicine and OT. And I think that's what's been probably the most rewarding thing in recent years in terms of what I'm doing. But how I got to that combination -- I guess it's a little circuitous as many folks in this industry certainly have had their own journeys. But I definitely was, even as a little girl, really into the idea of being something of a professional with kids.

And so up until about college I was doing that whole "I want to be a pediatrician." And that was my mantra. "What do you want to do when you grow

up?" "I want to be a pediatrician. I want to help kids." So I did the premed thing in college and did microbiology organic chemistry major and still was like full force with MCATs. I did a little bit of teaching in undergrad with athletes. I went to an SCC school. So the athletes that really needed to boost their scores. I did a little bit of teaching in some of the sciences.

And as I finish up college I was like I'm not so sure about this doctor thing. There's some blood and some guts and I just don't know --

Robb: Super long work hours and liability and --

Allyson: Absolutely, absolutely. And I've done a lot of volunteering in children's hospitals but I started to get a little bit of cold feet. And so I took my MCATs. I applied to some schools. I deferred acceptances. And I took a couple of years to kind of evaluate -- quite honestly, I mean in the rawest sense, I wanted blood and guts to figure out whether I could handle it.

So I took the teaching experience from undergrad. And I got a provisional teaching job at this tiny little charter school in Georgia. And I had no formal education in terms of being a teacher but because I had had the "experience" they let me in to teach high school science. And then I worked as a paramedic at night. And my goal at the end of that year or two was kind of to tease out whether this doctor gig was really going to work out. And it's interesting looking back now 20 years how the teaching experience was probably the most informative in terms of what I do today.

So I taught high school science. And it was this charter school for kids that I later found out had been dismissed or kicked out or referred out of the public school setting because of either behavior disorders or some violent tendencies or disabilities that were just too much for the public school to handle. And that was really my first exposure to kids that didn't fit that traditional mold. And so combining that with trying to teach science to these kiddos who weren't super like into the school thing was a challenge at best. But it taught me a lot and really softened my heart, I think, for kids that now I will use the word just have that regulatory dysfunction, just aren't comfortable in their own skin.

So teaching during the day and then doing the paramedic thing at night. I loved the science and the medical aspect of the paramedic role but one of the things that really rose to the surface as a major frustration was that model of kind of meet, greet, treat, repeat. And now that I look back, that's sort of a little bit parallel to kind of an allopathic conventional medical model now. But I was the paramedic that when we dropped off somebody at the hospital in the emergency department the night before would call the ER the next morning and be like, "Hey, so we dropped off that girl. I just want to see if she's okay. Can I

come say hi?" I don't know if that traditional doctor role was really going to meet my need for that long term relationship in healing or with patient.

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So anyway, I took this place in my heart for these disregulated kids and this idea that maybe an actual doctor-doctor wasn't the best role and found occupational therapy and did a couple of degrees on that. And so I've been, until recent years, working in pediatrics as an OT. And I've had kind of the good fortune to be on a variety of settings, everything from the neonatal intensive care unit to inpatient hospital, to outpatient hospital, to schools, to therapeutic day school. So it's been a really good kind of eclectic mix of roles.

But I also have, at least in the last five or ten years, really felt like there's something missing. This traditional rehabilitation role of either remediation or compensation for disability just wasn't sitting well with me especially with some of the populations of kids that I started really interacting with. So I found myself asking the question "What else is there? What am I missing?" This template of rehab is not meeting the needs of so many of these kids.

I think it was actually about that same time I read Dallas Hartwig's book, *It Starts with Food*, and I was like "Oh, this is cool, this functional medicine thing." And then I had my own health issues with cancer and kind of was asking that same question, "What else is there? What else can I do? What's the missing link?" And so I think through that kind of process, it was the functional medicine piece. And so I started the master's in functional medicine.

And I think what I assumed is that once I completed all of my functional medicine training I could be a functional medicine practitioner and the OT thing would go out the window. And what I what I had really found is that the marriage of those two is able to address on a much deeper level deeper level so many of those questions that I felt like haven't been answered in my traditional rehab role.

So it's really been an illuminating few years and has manifested in many surprising ways but I think most importantly it has connected with folks that are like "The language you're speaking is one I haven't heard. And it meets what I've been looking for. And I think it's really helpful." So long story long I guess, it's been a journey but I feel like I'm in the right place now.

Robb: It sure sounds like you're in the right place. That's fantastic. There was a time when 90%-95% of the questions that came into website were diet-related, exercise-related. And over the course of time information has kind of spread out to the masses.

I get a significant number of questions from folks that are trying to figure out a career path. And do I do integrated nutrition deal or what have you? And so much of the advice that I give folks is to really figure out how you want to spend your day because it's interesting, you were right at the cusp of being able to go into mainstream medicine, you could've probably gone to PA school super easily, you're messing around with this paramedic thing. So you were really seeing the way that the sausage is made in medicine. And you were kind of like "I think that the way that I get the most satisfaction is this long term relationship."

And a lot of people are that way. Some people are not. They love medicine, they want to help people but they want to be able to go in and do an intervention and know that their skills change things and that's where they should probably become like a surgeon or something. The patient is unconscious and they would wake up and hopefully you've affected some change. But a lot of people get in these situations where they're not able to actually have a relationship and they actually derive satisfaction from that process versus just "Here's an intervention. We're going to jam it on you. And there you go."

Allyson: Absolutely. And I think even in my functional medicine world, my cohorts in my master's program and some of the other folks that I've connected with in different forums are traditional allopathic physicians that still have that hunger for that longer term solution to healthcare and that longer term relationship with a patient rather than just swooping in with a quick intervention, as you said, and then closing the door and never seeing them again unless there's a problem.

So it's interesting how even folks that have already found their niche in one profession can then feel like there's an additional place for them that gets a little more long term satisfaction anyways.

Robb: Right. Allyson, how are you parsing out your day like? What type of environment do you work in? Do you work in a hospital? Do you have a private clinic? And then how are you interfacing OT with the functional medicine?

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Allyson: So right now I am working as a consultant -- and I'm more traditional therapist I guess you could say -- and therapeutic day schools and in the public school setting. And I have some clients on the side that I see and give recommendations to in terms of clinical nutrition. But I am not completely done with my functional medicine master's. So I'm using those concepts to inform my practice as an OT but I have not completely transitioned into the ability to give fundamental recommendations from the functional medicine perspective and in terms of the integrity and ethic of the nature of the career.

So that's a few months away but right now, certainly, all of the functional medicine concepts and the things that I'm learning are directly informing my care with many of the dysregulated kiddos that I see both inside and outside of the schools.

Robb: Got you. And where are you doing this master's program?

Allyson: University of Western States has a functional medicine, clinical nutrition program. They kind of partner with the IFM certification process. So many of the professors and instructors are between the two and the credits are kind of interchangeable. So it's a good community that is definitely on the cusp of what the latest and greatest learning opportunities are in functional med anyways.

Robb: Oh, that's fantastic. That's super exciting. Wow. When I get some stuff squared away I may follow on your footsteps with that. That's fantastic.

Allyson: Yes. It's been a great education. And last night actually I was in New York for -- you're probably familiar with James Maskell and his evolution of medicine forum and the functional medicine things. And many of the folks there are people that are in these different kind of allied health positions whether it be nurses or nurse practitioners or chiropractors or even the gentleman that I co-presented with was a neurosurgeon that are really now kind of adapting this approach as they see more and more in their practices where the functional medicine kind of tenets are most applicable. So it's a super exciting time and it feels good to kind of be introducing some concepts that may not have been spoken about before in that context.

Robb: Nice. That's fantastic. So you're working more with kids. Who are these kids? How are they making it towards you? And what are the challenges that they're facing?

Allyson: So in both the therapeutic and public school systems I think the original referral for an OT has to do with problems in either learning, attention, behavior or what we call sensory regulation or sensory integration. And so I'll get referrals to kids that might have some motor issues, more of a physical disability issue that's impacting their role successfully as a student. So a student that doesn't have good use of his hands because of cerebral palsy or a musculoskeletal disorder, all the way up to kids that are in high school with pretty severe mental health concerns and that is their form of dysregulation.

So if I had to cast a wide net I would say that kids with dysregulation, the inability to be successful in their role as a student because of either physical or emotional or behavioral kind of irregularities if you will. And so that's really vague which is a

good thing because I think it helps me help a few more kiddos that otherwise would kind of fall off the radar.

So a typical day for me is a combination of evaluating kiddos, making plans of intervention both behavioral and from an OT perspective, consulting with other folks on the team of psychologists or social workers or teachers of behavioral therapists. And also working directly with parents in terms of what good adaptations are for the home environment that would be helpful. And then outside of the school setting it's a combination of nutritional supports and environmental supports that might help some of the dysregulation as well.

So diagnosis include everything from ADHD to autism to some of the musculoskeletal issues like CP or genetic disorders. And some are kiddos that we know something's not quite right but we just haven't been able to put our finger on exactly what that root cause is.

Robb: Got you. Got you.

Allyson: So it's kind of all over the place.

Robb: This may, I guess, happen a little bit more when you wrap up the functional medicine piece of your training. But are you doing much in the way of like the organic acid screening and stuff like that to start building these profiles to see if there are nutrient deficiencies? How much of what you're tackling is kind of diet and lifestyle or let's just say diet first? How much of that are you going after? And what are you using to kind of inform that process?

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Allyson: So I'm not at a point where I'm ordering tests. When parents will give me a little bit more info about a typical diet or kind of what the lifestyle looks like we can go into some basic interventions and cast a wide net with getting test through their own physicians for nutrient deficiencies and things like that. I think there is, in general, at least in the school setting, kind of blockade against direct intervention that looks at the nutrition and supplementation and lifestyle piece. And that's the part that I will go full force in once I am complete with the functional medicine thing.

I think in the discussions among my functional medicine cohorts that's absolutely the foundational part that needs to start immediately because the root of dysregulation is such a physiological process. And, at least in my experience, the environment and the things that are going on in the school setting or even in the behavioral setting at home are really secondary. So I think if we can get to that very root cause and look at what the deficiencies are and what maybe some of

the environmental inputs are that are causing that dysregulation there's an opportunity to intervene long before we get to some of the behavior disorders that we're seeing.

And I think that's really where I think I get -- I don't want to say emotional but in passion because when we look at the big picture of our nation, we have literally a nation of kids in crisis and it's evidenced by statistics about suicide and the number of diagnosis of those dysregulatory disorders like ADHD or autism or anxiety disorders or depression that are really coming to the surface and the number of kids that we have that are medicated for those disorders.

And we can go into all the day the ideas of bullying and violence in the schools but if you zoom out and you look at what is causing ultimately those statistics to skyrocket, the fundamental caveat, really the nucleus of that is an aspect of dysregulation that starts internally and manifest externally. So the internal piece I think is the one that we have to initiate. And it's going to be a while before that model fits into a school setting but if parents can find those supports outside of the school then it's easier for success really in any of the settings that the kids find themselves in.

Robb: Got you. Could you characterize maybe like three to five buckets of categories of maybe nutrient deficiencies, food intolerances? Nutritionally, what do you see hamstring these kids most consistently?

Allyson: I think with many of my kids it's kind of a chicken or the egg thing and it's a vicious cycle where children with dysregulation disorders are often hypersensitive to certain kinds of foods. And so they will eat a very limited diet of a specific kind of food whether it's a specific -- some kids are, from a sensory regulation standpoint, they only crave crunchy which is lots and lots and lots of carbs and usually it's not a carrot stick. And some will crave sweets.

And what I've seen most often is that very stressed out parents that have been dealing with really maladapted behaviors at home kind of pick their battles. And as a result, the food issue becomes one that even after lots of trial and error kind of goes by the wayside because at the end of the day very, I think, stressed out parents will believe that "Shoot. As long as my kid is eating and I'm getting something in his system and he's still gaining weight and he's still hitting those milestones I'm going to wait and pick that battle once I get all of these other behaviors under control." So that then kind of begets major nutritional deficiencies across the board.

I think although there is a lot of hype about gluten-free and diets especially with kids with regulation issues, that's really kind of another wide net that's easy to assess if there's a direct change because going gluten-free although it's not for

everyone and it certainly might not be because of celiac but the inflammatory response especially in these kiddos that are predisposed to autism or ADHD or inflammatory regulation issues is an easy -- well, I should say that with a grain of salt -- is a doable or realistic modification that I've seen some real changes in terms of behavior.

And then I think there's, as we know, a huge issue with the microbiome and inflammation. And the combination of getting a kiddo's gut healthy is paramount especially when we talk about that kind of gut-brain connection and behavior and anxiety and depression. And all the things that we know are tied up in the gut especially from a gut health perspective.

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So I think the gluten piece is one that I see a lot of times very helpful and is one that I'll certainly recommend if possible. And then getting more of kind of a good regime in terms of gut health is another important aspect. And I think those are kind of you can't go wrong. Worst case, you don't see immediate improvement but there isn't kind of a con to that scenario because either way it's kind of win-win.

Robb: Right. Gosh. I was curious. When you're doing these screens are you digging in at all in like super early life history like situation in utero, vaginal birth versus C-section, breastfeeding versus formula? Are you getting in and doing that type of an assessment when trying to figure out what's going on to be able to dig in and get a little bit more granular as to is this gut issue or is it just -- I mean it seems like everybody has gut issues. It's kind of like "Okay, we'll assume that that's the case." But are you doing any really, really early kind of life epigenetic stuff to get a better handle on what's going on?

Allyson: Sure. In outpatient setting that's a little realistic. So in an outpatient setting we can get really deep into some of those correlations in terms of the antecedents or triggers that even happened in utero or even in mom's life as she was preparing to conceive. So we can go way back there. But in the school setting unfortunately there's kind of a cap on how deeply I can go into that. And quite honestly, I think in most settings it comes down -- at least in my experience -- that this sensory regulation piece is one that is so underdiscussed and underaddressed. And that we can trace back to kind of preconception issues.

So I would say in terms of what we're looking at, on an outpatient basis we can get really detailed with some of that history. In different settings the assessment begins at the point where dysfunction was perceived initially. And that to me is we're missing a big piece if we start there because obviously it goes way to really understand the big picture. From a functional medicine perspective we can

certainly go super deep into some of the history. From a rehab perspective it starts at the dysfunction.

And I think that's one of the reasons why I found this frustration with the traditional rehab model is we initiate therapy when there's dysfunction but we start our assessment at the point at which dysfunction was first described or found or induced. And so we're missing everything that led up to that in terms of stress or nutritional deficiencies or things that happened around conception or birth.

So I think there are certainly environments where that can be addressed but I feel like there are many others where it's frustrating that there's a cap and it can't be. And I think with the functional medicine lens that's where some of those holes are going to hopefully be kind of filled and we'll get a better picture in terms of treatment if that answers your question.

Robb: It absolutely does. I'm thinking a ton of different stuff. Do you mind me asking what's the kind of socioeconomic kind of strata that you're dealing with? Is it a mix? Is it kind of more upper middle class, lower income?

Allyson: It's a really interesting mix. And I work in several districts and several therapeutic day schools. And so there are districts that certainly have more taxpayer income and so they might have access to technology. And the socioeconomic status of many of those kiddos might be different than some of the more inner city schools where I've consulted or work where the resources are just not there.

And in terms of trends of diagnosis or disability within those two settings, I don't feel like there is a huge difference, to be quite honest, because I think the fundamental imbalances that we're looking at in terms of kids and self-regulation have to do with not just that predisposition to physiological stress but perceived stress is stress. And whether it's that there isn't breakfast on the table because mom and dad can't afford it or there's a single parent home and there's violence in the home, that is internalized as stress and dysregulation in much the same way that a family of four with all of the resources in the world but with maybe busy parents and different caregivers and siblings that are also going through their own things.

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That's perceived as stress. Internally it looks the same. Externally it's very different. But internally it ultimately goes down the path of dysregulation regardless of what the external socioeconomic status is. So there are differences in socioeconomic status but ultimately it manifests in very similar ways physiologically.

An interesting part of that though is that parents might accept interventions differently. And you're a parent. I'm a parent. On some level we trust our gut more than we trust some external professional. But many of the things that I'm trying to teach parents is how to recognize signs of dysregulation in their kids before it gets to the point of aggression or violence or self-harm or cognitive dysfunction. And so by teaching parents how to recognize what that dysregulation and sensory disintegration looks like it gives them the tools to then intervene and, at least at the home environment, hopefully be a little more proactive in providing opportunities for self-regulation for the kids.

And one of the things, I think, why I bring up sensory integration is because in pediatrics sensory integration and sensory integration theory is a huge buzz word. It's one of the things that OTs are known for doing in practice both on a pediatric level and sometimes even in adult clients. And for my kids in different settings whether it was the NICU or outpatient or in therapeutic settings, that really is the cornerstone of being able to kind of maintain successful roles in their environment.

So what is sensory regulation and integration? It's the ability to take in all of the information from your environment, combine it with what your internal information is telling you -- and that goes to like your gut, your anxiety, your feelings, the way you feel in your own skin -- combine all of that external and internal information, integrate it into an adaptive or meaningful response in order to be successful in your environment. And that's where it breaks down.

I'm trying to think of like a super easy example. If you're walking down a dock and on the side of the dock in the water there's a canoe. And your goal is to step from that the dock, into the canoe without falling in the drink, without busting. So you're probably not going to take the flying leap into the canoe and successfully manage to get in without dumping yourself in the water. So you're integrating all of this vision and hearing and the sense of your body and space and movement and your potential anxiety and all of these different things in order to have the adaptive response or the outcome of getting into the canoe successfully.

And that template for thinking is exactly what kids are doing every day in the classroom, every day at home at the dinner table, every day when they're up in the playroom playing with their peers or interacting with neighbors or on the fields or on the ice or whatever they're doing. So that process is one that we all do but the breakdown of that process causes a cascade of behaviors that then end up manifesting as learning problems or behavior problems or oppositional defiant disorder or apathy or depression.

So it's really an interesting kind of model that helps me inform -- once we figure that out then we "Okay, where is the dysfunction in the sensory integration system and how is that kiddo not doing or doing some of those things successfully?" And then we build in strategies for both the parents and teachers and therapists and folks in their world to kind of support them and help them seek out what they need to feel more regulated I guess.

Robb: Got you. Wow. Fantastic answer. How much of what you are seeing these kids are experiencing is a lack of physical activity like just letting kids get out and go bananas and burn off some extra energy?

Allyson: Okay. Pandora's Box. That's like the million-dollar question.

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So when we look at ancestral health we look at the function of play way back in the day in our ancestors. And the function of play was ultimately interaction with the environment to imitate what the adults were doing. And war the adults were doing was basically surviving. So the play skills were very motor-driven, very nature-driven, very environmentally-driven.

And today if we look at the model of play it's the complete opposite of that. I know I'm probably preaching to the choir. But it's screen-driven and there's really no movement to speak of unless it's initiated in the sport. Even in our schools we don't have consistent opportunities for movement. So the issue of movement and its role in self-regulation which then transcends into a kiddo's ability to learn and interact and reason and cope is exactly where things break down and in my opinions one of the major reasons why we are having this incredible increase in regulation disorders in kids.

So I guess to go back to the original question, the mismatch now between our environment and our activities with the kids, that kind of evolutionary mismatch, we are essentially growing kids who are programmed to be still. And that creates an entire host of issues. I mean we actually are seeing the ranges of developmental milestones changing because there are so many whistles and bells that keep kids stationary. I know you have little ones yourself. And even to take the crawling milestone. Twenty-five, thirty years ago the average age of crawling was between four and six months. Today it's between six and nine months because we are inundating our kiddos with the swingers and the bumble seats and all the things that kind of keep them stationary. That's a tiny little nugget but that concept goes all the way up through high school.

So we don't have kids that have that freedom of movement. Physiologically what we know is that movement and proprioceptive input actually creates self-

regulation and calming and the ability of the parasympathetic nervous system to kind of kick in and give kids the ability to reason and learn and remember and adapt to their environment. And when we take away movement and we take away that proprioceptive input things break down and we start to see issues in all of those areas that I mentioned before.

So yes, there's a huge correlation there. It's interesting. I often will discuss with parents or with teachers that will say, "Well, I found that once I let him go outside and "burn off" all his energy he comes back inside and he can actually sit down and do some math with me or he can sit down and talk to his sister and not be a brat or he can do his chores" or whatever it is. And there are a couple of sides to that. One is yes, a kiddo can go and just completely tap themselves outside and be so exhausted. But the other side of that is when we see kids that get all of that movement and input and then come back in and are alert but calm and ready to learn and ready to engage, that's when we know that we've met all of those internal sensory senses and we facilitate the kid's ability to really be clearheaded and kind of in a state of readiness

Robb: Totally makes sense. What tiny credibility I have I'll probably destroy in my next analogy but I used to crack out on the dog whisperer a lot, Cesar Millan. You'd see it again and again and again like this problem dog and he's like exercise, discipline, affection. He would take the dog and exercise it. And exercising it wasn't just leaving it in the backyard to run and chase its tail. It actually needed something engaging and interesting.

And kids don't go outside much anymore. This is part of the reason why we move to small farm so that the kids catch frogs and climb bushes. It is crazy. And every once in a while they'll do something where they kind of get hurt. And you're like "It sucks." I remember reading something that was talking about how risk assessment could apply to financial planning like is going and putting all of my check on the pass line at a roulette table, is that a good idea. A bunch of that stuff gets laid down in the brain from physical risk assessment like is a good idea to jump from this rock to that rock.

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And so kids learn on the physical level but setting up the circuitry for that risk analysis applies to all the rest of our lives. And if that doesn't get established then it's going to be a hell of a challenge to convince people that "Hey, man. You might need to save for a rainy day" our outburst of nonsensical behavior is probably going to get you fired. There's just literally not the neural circuitry to process that stuff.

Allyson: Absolutely. And it brings up a really, really interesting point. That's not completely different than kids getting feedback on their own behavior and figuring out whether or not this is going to work for me. So when I work with impulsive kids, for example, that idea of risk assessment -- so if we translate that into kids getting feedback from their environment and making a decision and learning from it and growing those circuitry connections that allows them to then in the future make a better or similar decision -- there's actually research that says that if -- not to get like super crazy neuro -- but we have the amygdala. And the amygdala is kind of the gateway to two other aspects of the brain; the hippocampus which we know is kind of a memory center, and then the prefrontal cortex which is directly related to that impulsivity and action.

When we are able to identify our current state and reason our current state --in your analogy, we're able to have that conversation in our brain about "Man, how am I feeling? This feels like a risk. I'm not sure" kind of that reasoning piece -- when we're able to identify that research tells us that it opens the gates to the hippocampus which then allows us to remember and learn, and to the prefrontal cortex which allows us to make effective decisions for our environment.

So when there are states where we are not taking risks or we're not directly exploring physically our environment or we're not directly putting ourselves in a new situation or a novel context, that's amygdala gets really static and it closes the gates to the hippocampus and the prefrontal cortex so we don't have those circuits of memory and impulse control and decision making that we can eventually learn from. So it's a fascinating kind of neurophysiological aspect of the regulation of behavior and how we can modify our environments and our self-awareness to really create long lasting lessons.

Robb: Wow. That is really fascinating stuff and exciting because I think we're able to bring more information to bear on this stuff and sad because I think the way that our culture has shifted, we are so far away from doing this stuff that it's kind of crazy. Allyson, could you share maybe a couple of things nutritionally, lifestyle, sleep, exercise that you could recommend that folks do with their kids? And I know this varies because we're talking about like a two-month-old, a two-year-old, a 12-year-old. But what are some things that folks could do even just kind of big picture that would help their kids to integrate as effectively as possible?

Allyson: Sure. Absolutely. So nutritionally I think, again, casting a wide net -- and it's the basic stuff that we know kind of from that ancestral health, Paleo sort of whole food kind of supplementation issue that we try and take out as much process through it as possible. And that, I realize, is a tall order because I think if you open the pantries of most folks who have little humans that are under the age of like ten in their house you're going to have the pantry as much more full of what they're going to eat than the fridge. So I think trying to make baby steps in

transitioning to a whole food diet with adequate macronutrients and not that emphasis on carbs is huge. I think trying to eliminate or at least decrease the amount of gluten is huge. And certainly any sort of like refined sugar is huge.

I think the other aspect of that is movement. And it's interesting to me and really illuminating to me when, I start helping parents understand the patterns of behavior that are associated with stress or dysfunction at home and I couple that and I help them identify what the kind of precursors or antecedents to that are -- and sometimes it's "Well, he was sitting in front of the Xbox three hours." Go figure, right? Human nature, right?

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But it's usually a lack of movement and a lack of opportunities for that exploratory play. So nutritionally casting a wide net but then also identifying what those cause and effect kinds of patterns are when we see dysregulation occur whether it be at school or at home -- what happened in the one to four to five hours before -- and then building in every day opportunities for heavy proprioceptive work because we know that that absolutely drives up the parasympathetic response and drives down the sympathetic response. And that sympathetic response, as we know, is that fight or flight, aggressive, impulsive kind of thing. And so I think ultimately identifying what some of those triggers are but more importantly, building in that proprioceptive heavy work-play.

And so recommendations for both kids and parents to seek out that regulatory movement include a bunch of different things. And it was interesting. When I spoke at the Ancestral Health Society and I gave this talk -- I think it was actually Chris Masterjohn that started making the connections and was like "Well, I know after I foam roll, I kind of feel this certain way. And I was like "Bingo! You got it."

So it's the idea that the activities we seek out as children and adults ultimately and intuitively help us with our self-regulation. And I guess one example is -- I know you're a jiu jitsu guy. And I would argue that after just a really good session on the mat, like an hour of just straight up rolling and a great session that you're probably a certain level of, sure, physically exhausted but there's a certain sort of cognitive acuity that might come from that -- I don't know if you've noticed or not -- but that is different than if you just went for a run or jumped on a trampoline for 20 minutes.

Robb: Absolutely. One, I'm a much better human being. And two, doing stuff like jiu jitsu has made like going to a gym and lift some weights, do some cardio, has made that so boring that I just can't do it, I just literally can't do it. For my looking jacked physique, jiu jitsu has not really been that great for me but I am such a better human being, better father, better husband. And it's fascinating.

With the girls, we do horsey rides and everything and then I'll do airplane rides, rolling on my back and I'll put my feet in their hips, grab their hands, flow them in the air and then I have them dismount with like a front flip and they land on the ground. And they love that stuff and I love it. And then we'll do kid jitsu where they'll get me in side control and then I'll roll them over. Man, they just won't stop doing that. If we've got eight hours to do it, they'll do it for eight hours.

Allyson: First of all, no one is going to mess with them in a few years, that's for darn sure. To dad, it's play and then also kind of self-preservation in about ten years. Essentially what you're doing, Robb, is you are giving them all of the tools they need -- in their minds it's fun with dad but, really it is creating pathways neurophysiologically that help them identify their own states of alertness and regulation and happiness. And it's amazing how when I've done not horsey rides with my students but when I've done proprioceptive work that is movement-based I will have kids that maybe have said one or two novel words in their entire life suddenly string together a sentence or who could never articulate the way they were feeling suddenly be able to say, "I really feel sad."

So this unlocking that happens when there's that kind of movement experience is really transformative when it comes to kids' abilities to name what they need and how they're feeling.

Robb: It's actually being in touch with what's going on. Wow. Yes.

Allyson: That's it, that self-awareness piece. I think as a society we have taken that away from them. We have become to gun-shy about self-expression in kids that we tend to suppress it either through the words that we use or the zero tolerance kind of things or our intolerances of different levels of activity and learning and speech. So I feel like there's the suppression on that self-expression. And that ultimately leads to regulatory disorders as well.

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So parents providing opportunities for their kids to seek out that input -- I mean I have parents all the time that are like "I just don't know what to do. He's jumping on the coach and he's climbing on the walls and he'll run circles around the dog. He can't sit down without crashing into the dinner table and milk spills. And he is so loud and heavy with his movements." And ultimately what that kid is doing is trying to make himself okay. He's seeking out that input that is neurologically helpful --

Robb: Because he didn't wrestle with his classmates that day.

Allyson: Right. Exactly.

Robb: So he's just dying for that input. It's almost like a sonar type of gig. You need that input to then kind of map the external world.

Allyson: That's it. Absolutely. And the interesting part of that is we as individuals all have different needs for that. So you might have some folks who seek out the high adrenalin, the very, very risky kinds of behaviors and those are your X game athletes that are really talented and they're very risky skills and all that kind of stuff. So their threshold for needing input to self-regulate is different than a kiddo who maybe is kind of low tone and on a good day kind of a little slower mover. And their need for input is going to be much different than the high adrenalin-seeking person.

So I think the fundamental concept is that evolutionarily we have developed to seek out the input that our individual system needs. And so some people seek that out in deep pressure ways like jiu jitsu, like swimming, like a nice slow and controlled heavy deadlift session. And some people seek that out in a movement-oriented fast-paced. And they might be the ones that connect with like a crossfit or like an acrobatics kind of thing.

So I think as parents we really have to pay attention to the cues that the kids are giving us and try and put them into a box but identify and appreciate that they're going to seek out in their environment what makes their little bodies feel regulated. And that's going to make them better siblings and better peers and better learners and better players and just kind of more interactive with their environment in successful ways overall.

And I think if look at what the patterns of your girls are or other kiddos in your life, they seek things out differently. You have some that need to move all the time and you have some that get really, really hypersensitive to certain kinds of touch or fabrics or movements. So there's a spectrum of sensitivity. And kids can be underresponsive or too responsive and hyperresponsive. And it's a little bit delicate to figure out where the middle of that pendulum lies so that that particular child can be successful and feel good in their own skin.

Robb: Challenged but not overwhelmed.

Allyson: Well said. Exactly, exactly.

Robb: Wow. Allyson, this is amazing stuff, really, really amazing. So excited for what you're doing. We could go on forever because I just find this stuff fascinating, but I want to be respectful of your time. Where can folks track you down on the

interwebs? Are you doing any speaking? Are you going to be at Paleo f(x), Ancestral Health in New Zealand? What are you up to?

Allyson: Yes. I will be at Ancestral Health in New Zealand again for sure.

Robb: Nice.

Allyson: And the website is EvolutionaryTherapies.com. And so that right now is a way for folks to get a little more information and some of the research and background about why these things are so important in addition to places to get a little more insight into the day to day kinds of things that both parents and kids and teachers can do. There's also a cool checklist on there that we as adults can take that allows us to kind of figure out what our own sensory needs are and how we can modify our own environment or activity to be more successful in what we're doing as well.

So EvolutionaryTherapies.com is where to find that. And then definitely Ancestral Health in New Zealand. I will be attending Paleo f(x) to support some of my colleagues that may be speaking but I will not be presenting there but certainly we'll be excited to rub elbows with folks that think along the same lines for sure.

Robb: Bring a RushCard and some shorts and you can do more than rub elbows. We can do some jiu jitsu.

Allyson: I actually dabbled in that for a couple of years so I may take you up on that.

[0:50:04]

Robb: Bring some gear. That's where I'm going to spend the bulk of my time this year.

Allyson: Terrific. Awesome.

Robb: Allyson, thank you so much for coming on the show. This is just such incredibly valuable information. It is really cool. Having been in the scene for 15 going on 20 years now, you didn't exist ten years ago, the many, many yous who are out there doing this stuff, taking this integration of mainstream clinical medicine of a wide variety of sorts from actually being a doctor to OT, PT, physician's assistant, and then integrating this functional medicine, evolutionary health template into that. It's just super exciting. You're really doing amazing work.

Allyson: Well, thank you. I'm excited to see what unfolds. I think the potential is huge. And I'm certainly grateful to have found my niche for sure.

Robb: Well, either fortunate or unfortunate. I think we have massive job security in what we're trying to do. I don't think anybody's going to solve this problem out from under us. So we'll just forge ahead as best as we can.

Allyson: Absolutely. It's been a pleasure, Robb. Thank you.

Robb: Really enjoyed chatting with you and looking forward to seeing you at Paleo f(x).

Allyson: Sounds fantastic.

Robb: Okay, Allyson. Take care.

Allyson: Bye-bye.

Robb: Bye-bye.

[0:51:25] End of Audio