

Steph G (host): Welcome to Harder to Kill Radio, a top rated health and fitness podcast. It's Steph Gaudreau, your host. This show is all about finding out what it takes to build unbreakable humans and passing that knowledge on to you so you can unleash your inner badass and change the world. We have another amazing guest on the show this week, so let's do this. I'm so excited that you're here for episode 69 of Harder to Kill Radio. This week with the incredible Allyson Chrystal. She's the founder of Evolutionary Therapies, and she's an occupational therapist and clinical instructor who focuses on pediatrics specifically helping kids be more resilient in their environments. This is an absolutely fascinating show with so many implications not just for kids but adults as well.

Remember, you can get the show notes for this episode at stupideasypaleo.com for links and of course, please hit the subscribe button in iTunes. It helps people to find the show. All right. Let's jump in. Welcome back to Harder to Kill Radio. I'm very, very, very pleased to have a super, super smart woman here with me today. She's going to talk about so many nerdy, cool, amazing things that I can't even preface at all but I'm super excited to have her on the show. This is Allyson Chrystal. Welcome.

Allyson C: Thank you so much with that intro, the bar is set high. I better sound smart now.

Steph G (host): I've said this before already this season so this is sort of a season three of the show and we're over 65 episodes. It's interesting. I'm always like, "Who am I going to interview next?" We had a little bit of a break between season two and season three a couple months and I just was like, "Who haven't I talked to yet?" It turns out lots of people.

Allyson C: Right.

Steph G (host): The point is that it's always awesome to just look out into my general friends and acquaintances and people that I know and think of who's doing really cool stuff that would be great and interesting and fascinating to talk to. Your name was one that came up in this season three like, "All right, who haven't I snared yet? Let's get her on the show." You've got so much great cool stuff going on and I want to talk about what you've got in the hopper and all that stuff. Your website is called evolutionarytherapies.com.

Allyson C: Right.

Steph G (host): You are not necessarily somebody who people would automatically think, "Oh, you're in the paleo ancestral health crowd."

Allyson C: Right, that's a 100% true. I'm kind of in the grand scheme of things a little bit of a newbie in terms of the last probably four or five years. What I found is that in my occupational therapy practice with kids, the paleo ancestral health thing really fits incredibly well and so that's why I'm really excited about the things that we're finding and doing now. Relatively new to paleo but definitely fits with everything else that I believe in and do.

Steph G (host): I think that's really fascinating. One of the fascinating things about things like AHS which is the Ancestral Health Society / Ancestral Health Symposium and you spoke at the American AHS last year. You attended the New Zealand AHS the year before in 15 and you're going to be going back to New Zealand with all of us and speaking again. I think it's really cool like I think you're right, the paleo crowd can sometimes get really boxed in. The ancestral health crowd, it's like there's so many cool overlaps. I really want to know, you already said you're an occupational therapist but give us your ... You know, Shawn Stevenson, a friend of mine, has an incredible podcast, he always calls it the superhero origin story. How did you come to do what you're doing? Why are you passionate about following this particular path? Then we'll get into some of the other stuff.

Allyson C: Sure, that's a big question but it's a really important one I think. I started out kind of early in my career growing up saying, "I want to be a pediatrician. I want to be a doctor. I want to help kids." The pediatric thing which is obviously my practice now has always been kind of in the hopper, in the back of my mind but as I got to the premed stages and I had that love of science and the geeky science thing. I started really evaluating whether medical school was the right choice for me. I decided to take a couple of years before I knew anything about OT and was still on that doctor path to teach high school science which I know we have that in common which we could probably talk about today.

Steph G (host): Yes.

Allyson C: I worked as a paramedic at night because I figured if I can take couple years to do this teaching gig, work as a paramedic and really evaluate whether that whole medical model doctor thing is really for me. Obviously, being a medic and a physician are not the same but just in that general role. What I found is I didn't have an education degree, I had a microbiology degree and so I was only in Georgia where I grew up, only licensed to teach at very tiny private schools where you weren't required to have a teaching certification. This was, god, 20 years ago now. Things were a little bit different in the education system.

This little school that hired me to teach was a school that was kind of a charter school for kids that weren't really fitting into the regular public education system and so that was my first exposure to kids that weren't typical. Whether it was a disability or behavior disorder, any of those other kinds of things. To teach science in that environment, I had to get really creative. I was doing that and doing the paramedic thing at night.

Steph G (host): Wow.

Allyson C: Ironically, one of the things that they kind of tasked me to do was, "Okay, these kids aren't really going to be into biology and chemistry. Come up with a science ish topic that you can teach to these high school kids that hate science and make it interesting." I formulated a food science curriculum which now looking back it's like, wow, that was kind of predicting what was going to happen later. Anyways, the medic thing I loved but I was that paramedic that would call the hospital the next morning and go, "You know that person we brought in? Are they okay? Can I come see her? Is everything good?"

I quickly learned over those two years that the medical model of kind of meet, treat, greet, repeat was just really not in my heart of hearts what I wanted to do. I had developed this love for kids that were different. I went into OT with the idea that I really wanted to work with kids and have that kind of long term relationship with patients and clients that wasn't just the one time or twice a year kind of a thing. I specialize in pediatrics so I have a doctorate in occupational therapy and I've worked exclusively in peds in a bunch of different settings and it's been a really interesting, awesome, illuminating journey for a lot of different reasons.

I will say that I always kind of felt like that medical model still apply. The allopathic kind of kids would come to me because there's a, "symptom or problem," and my job was to fix and send them on their way. Even though that it's certainly wasn't that simple and there was a lot of amazing miraculous transformations that happen in the partnerships I had with patients, I still felt like there's a piece that just I was missing in my practice. Several years ago I got really, and this is a whole other conversation but got heavy into body building competitions which was not a really healthy thing.

Steph G (host): Oh, wow.

Allyson C: Yeah, but through that learned kind of the hard way about I mean, that was my first introduction like macros and nutrition and all these kind of stuff. Once I figured out what wasn't working for me I started doing research into maybe a more healthful way of living and found Dallas' first book, "It Starts With Food," and found you, and found Robb Wolf and

went, "Okay, these are folks that are looking at this whole nutrition thing a different way," and at the same time in my OT practice I was like, "Yeah, and I need this other piece to kind of fill in the gap." Functional medicine is kind of the glue that brought all those things together.

I actually initially found it several years ago through my own journey with cancer and that kind of woke me up to like, "Okay, things have to be a little different." When I started the masters in functional medicine I was like, "Okay, at some point I'm going to take off this OT hat and I'm going to put on this functional medicine hat and that will be my happily ever after." What I have found through the groups just as you described like AHS and some of these other paleo ancestral conferences and gatherings is that the combination of what I'm doing in OT and what functional medicine and the ancestral health all kind of stand for really form this amazing combination that has actually been pretty transformative in my own practice with kids.

A long circuitous route but ultimately my passion is treating kids from a very ancestral health model and looking at the big picture and guiding them to health and wellness. It's coming full circle which is amazing and awesome.

Steph G (host): That's fascinating. Working with kids, right, it's probably a bit different from working with adults who may seek you out if you have a website or you speak at conferences or whatever and they are like, "Oh, I really like what she's doing. I'm going to seek her out," you know, work with you or whatever it is but working with kids where you have to have such a buy-in from the parents because a child and especially if you're working with younger kids, they're not going to necessarily self-advocate. How is it challenging? You're working with two clients almost, right? You're working with the kid and the parents. How do you navigate that?

Allyson C: [inaudible 00:10:15] question. To be honest, I would say that it's probably one of the biggest challenges that folks in the pediatric [allied 00:10:21] health world really face because parents are inundated with information about what their kids should and shouldn't be doing. What are the milestones? When are you supposed to seek therapy because something is abnormal? Especially in today's parenting, I think parents spend a lot more time worrying about what could be wrong rather than really focusing on what's going well. That's just a product of our society, that's not saying they're bad parents by any stretch because everyone's doing the best they can.

You're right, when parents come to me, it's very much like, "Okay, I've heard you're good at fixing this about kids," my challenge is really to help parents understand the whole child. The first thing I say in my parent and

child interviews is I just want to understand the story of your kid, not what's wrong. Yes, obviously, concerns and issues but more importantly and definitely first let me understand who this child is and then we can get into what is best and most helpful that they need to be pursuing. I've actually gotten a lot of buy-in once parents understand that my goal isn't to look at a symptom and treat, it's to look at a whole child and balance, if that makes sense.

Steph G (host): Absolutely. Wow. I just want to be a fly on the wall and peek into what you do, so I'll ask you a little bit more about that in a minute but you just breezed over something that could be important which is you mentioned your cancer journey. I'm wondering if you can elaborate on that a little bit and what that was like for you and maybe how some of the stuff you've learned through functional medicine has either helped or you've realized later on that you've made some own shifts, some shifts in your own lifestyle or way of approaching nutrition and health.

Allyson C: Most definitely. I think looking at hindsight is always 20/20 obviously and I always say if I knew then what I know now, I probably would have approached my treatment differently. I probably would have held off on surgery and some of the radiation and some of the treatments but at the same time I understood that the place that I was in, I was a mom. The most important thing was to make sure that I was always going to be there for my kids. That mindset kind of comes in where just give me whatever is guaranteed to make this better kind of a thing. Now that I'm looking back at the trends of my lifestyles and some of the things that I did to my body in the nature of trying to look a certain way or fit into a certain size of clothing or whatever.

I made some really, really unhealthy choices and I can't say definitively that that caused the cancer but it definitely helped me look at things through a more wide lens and look at what were the combination of maybe genetic factors, lifestyle factors, nutrition factors, environmental factors that certainly put me in a prime spot to be ill and to develop cancer. I think going through and getting a lot more knowledge in ancestral health and especially functional medicine, it's helped me come to terms with some of the lifestyle factors that I can absolutely modify to make sure that I'm healthy for the next 40 years but also help without saying this is cancer prevention, also understand the correlation between again environment, sleep, stress, nutrition, all of those things.

Even when I'm dealing with my own children or my pediatric clients. Obviously, I'm not approaching it from a let's make sure you don't get a life-threatening disease but just from this is the picture of what real health, and balanced, and intuitive movement, intuitive nutrition really looks like.

That ultimately is what's going to put you in a much better statistic for being healthy on the long-term.

Steph G (host): For sure, for sure. Thanks for sharing that. I want to jump back to what you do every day, so I'm right on your website and you talk about focusing on helping children with sensory integration and self-regulation.

Allyson C: Yes.

Steph G (host): I'm like, "I think I know what she's talking about there," but to the layperson who's reading that, can you break that down? What do you mean by those two terms in a practical sense?

Allyson C: Right. I would best describe kids that have maybe sensory integration disorders as kiddos that kind of don't feel comfortable in their own skin. When we think of the senses, it's like those five senses we learned about in kindergarten but it's also the sense of vestibular sense or the sense of movement. Your body's awareness of how you're moving and the proprioceptive sense which is your body's ability to know where it is in space, or to know how much pressure you're putting on a pencil, or how much pressure you're putting on another tool that you're using, or how hard you're jumping on the ground. All of those come together so that we can function in our environment and not fall out of our chairs and not trip over things.

When it's working well, we look successful in our environment and we are able to adapt to our changing environment. When those things aren't integrated well so when the brain is taking all that sensory information and not necessarily making the connections efficiently, then we start to see outcomes in children that might look like behavior, or aggression, or withdrawal from other kids, or difficulty writing at school, or paying attention, or moving adequately in space so that they might have, you know, be more prone to injury, or sensitivities to what they are eating, or how their clothing feel. I would say, one of the things that parents will come to me with or teachers or other caregivers will say is he's either way too sensitive about certain stimuli in his environment whether it's noise, or the feel of things, or the taste of things.

As a result, he's not adequately fulfilling his role as a kid, or student, a peer, all those kind of things. Sensory integration dysfunction is really kiddos that need a little more help connecting those wires in their brain to be functional in their [entirement 00:16:32]. I think that kind of ties into self-regulation. One of the things that I've become really passionate about especially in looking to the research and looking at the evolutionary biology pieces this idea of self-regulation. Kids that are able to be resilient in their environment and kids that are able to adapt their behavior given

the different environment like we don't yell in a library but we yell in a playground kind of a thing.

That's a really mechanical example but kids' ability to adapt and to socialize and to have behavior that's appropriate to the environment in a way that allows them to be successful socially and learning and in their relationships with their family and that kind of a thing. What it looks like as dysfunction in those areas can be really, really varied but ultimately what it comes down to is making sure that those connections are there and that we support the development of those so that kids can be more comfortable in their own skin.

Steph G (host): That's actually fascinating. My teacher brain is like thinking back as you're talking I'm thinking back in my mind and I taught high school science as well so I had the older end of the childhood spectrum there with 15 to 18 year olds for the most part but I'm like thinking back in my brain as you're talking like identifying kids in my mind even four years later. I started teaching I think my first year was 2001 so there you go. I figure out that was a long time ago. I'm casting my mind back to the last 16 years and thinking like, oh, who in my mind may have had some of these challenges.

At least from being a classroom teacher, you've got students who are identified with learning disabilities, students that are identified with emotional disabilities, just such a wide range of different challenges that students have and then we have to customize everything that they're going to do. How would you toss this out to just any teachers maybe that are listening or even parents? How would you distinguish this from amongst the myriad of other things that maybe you have a student in IEP or your child is going through some difficulties? How do you cast that net? I know you described some of the things that these students may have challenges with but then what if they're overlapping challenges on top of that? Right?

Allyson C: Yes, that brings up such a good point I think is that sometimes especially in older kids like many of those that you probably taught, their initial integration dysfunction or their initial feelings of not being comfortable in their own skin, they quickly develop these strategies to divert from that. What really is a difficulty with auditory processing so they can't listen and hear and understand at the same time may end up looking like a kid with an attitude, who's not compliant, who doesn't listen to the teacher, because they are basically just trying to get out of what their systems aren't able to do successfully yet. Did that make sense?

Steph G (host): For sure.

Allyson C:

A lot of times when, your question was like how do you tease out what kind of how do I address those things. I think part of what I really want to do initially is figure out what the root cause is. That's a big functional medicine catch word but looking at my method of approaching kids is picturing these Venn diagram overlapping circles of child task and environment and then the school setting. It could be that we need to just simply modify the environment and building some supports to best meet that kid's needs before we start trying to fix the kid. It could be that we need to change the task a little bit which are things that obviously I'm sure you did in your sleep on the daily basis modifying and adapting things for different learning styles.

Ultimately, what I do one-on-one with the kids is really look at, for the most part, what level of self-regulation is going on and what are the skills that they need to help determine what their body needs and how to get that. For a kiddo maybe that had a really difficult time listening in a classroom because they're wiggly and moving and kind of knocking pencils off the desk and trying to talk to the person next to them and all that kind of thing, I want that child to be able to understand more intuitively internally what am I feeling, what are the behaviors that are telling me I need to do something differently and then advocating for it.

Maybe I need to ask to take a walk around the hallway and get a drink of water or maybe I need to stand up in the back of the classroom to listen to the rest of the lesson. My goal is always to help kids understand the way that they are feeling and how to make decisions that help and support what they need rather than just teaching parents and teachers to do it for them, if that makes sense. That's really that self-regulation piece.

Steph G (host):

Absolutely. What in your experience or opinion are some of the most common misconceptions that people have about kids that struggle with these things?

Allyson C:

Honestly, that they are brats. I mean, especially I think when I speak to caregivers or teachers that are just really overwhelmed with 35 kids and all these other thing, it's really easy when you're only seeing this little window into what makes up a child to perceive the behaviors as non-compliance or I don't want to because I don't, you know, I'm not going to because I don't want to kind of a thing or an attitude. I think the most common misconception is that it's a behavior problem. Certainly, there are kids with straight up behavior problem.

I'm by no means denouncing that but I think especially with the kids that I see, so many times that's really the tip of the iceberg and it's about helping teachers and parents understand that and kids really at the forefront of everything understand that those behaviors are really just a

symptom of a very, very dysregulated internal system. There's a lot of reasons why the internal system is dysregulated. That's one of the things that I will go into a little more in New Zealand. In terms of the daily practice, just helping folks to see beyond just the behavior that looks really maladaptive and understand that there's really a root cause.

Steph G (host): Yeah, absolutely. Again, I'm casting my mind back as you're talking like oh my gosh, what did I miss or were there definitely students who their outward behavior was a reflection of their internal world or how they were trying to adapt to the environment. These are very fascinating.

Allyson C: I think if we look around at the people we know as adults, I think there's a lot of folks that are intuitively seeking activities that help them feel regulated even without knowing that's what they're doing. I mean, for me it's weightlifting, that feeling when you get out of a really good lift and it's that special kind of grounded and exhausted and there's science behind all the proprioceptive stuff that's going on. I think that ultimately, as we get older we intuitively know how to choose things that are appropriate for the environment like a sport or an activity or something in nature. Whereas kids struggle with how to get that input in adaptive ways rather than ones that are not appropriate for their environment.

Steph G (host): Yes, I was going to ask how does this stuff play out into adulthood if maybe it left me untreated or it's just not understood well enough it's like we just think, "Oh, that's just how he or she is. He's always been that way." We don't even really understand. If this continues into adulthood, what are some of the things that you might see playing out with somebody who struggles with this?

Allyson C: That's a great question. I've actually treated several late adolescence and adults and I can say that probably what I see most is depression and social isolation because in early childhood, they had behaviors in their quest to seek what felt good and regulated to their body. Their behaviors probably seemed impulsive or negative to their peers and so naturally through the years, they kind of decided that it's just more comfortable to do my own thing because people don't really appreciate how I operate in my own little world. It's amazing how years and years of those patterns developed the sense of isolation and lack of being able to take risks socially.

There might be some awkwardness in a personal kind of relationships and relationships at work with adults. I think as some of those dysregulation pieces don't necessarily get noticed or addressed. I think in adolescents and adulthood, if folks don't get dialed in to something that really we see a lot of disconnectedness and isolation and folks that kind

of live through maybe social media but not necessarily through in person three dimensional interactions.

Steph G (host): Fascinating. I want to ask you about your talk that you gave last year at AHS 2016 in Boulder, it's called Proprioception and Play. My husband was there watching and a few other people and they are like, I was in a different talk unfortunately at the time but I went back and I've watched most of it and they're like, "Oh my gosh, mind blowing like so, so good." I was like, all right I'll check this out. I wonder if you can, not obviously give us the whole talk, and we'll link that in the show notes if people want to go click and go back and watch it. Give us a quick little primer of proprioception and then how play comes into all of this because I think that's one of the things in the ancestral health community that we hear about a lot more than we do in the paleo sphere. It's like the importance of play and not just for kids but how we interact with the environment. How does all that stuff come together?

Allyson C: You have awesome questions. My wheels are turning. The play conversation could be like an eight hour conversation but I will do my best. Proprioception is basically you have proprioceptors in your tendons and muscles that allow your body to know where it is in space when you shake someone's hand, proprioception is the sense that allows you to know how hard you're gripping their hands. It's what gives you that with the vestibular sense gives you coordination and so proprioception in some ways kids understand it as pressure. Pressure of their body on an object, of their hand on someone else, that kind of a thing.

That sense is developed as we are infants and we're kind of in that developmental stage rising against gravity where we're rolling and we're sitting and we're falling and we're falling and we're learning how to balance everything. In the ideal setting, kids are exposed to lots of different movements that's natural and not contrived and their proprioceptive system integrates very well and they have a really good handle on that and proprioception has a lot to do with the stress response. Getting really nerdy, that sympathetic parasympathetic so we think of stress fight or flight sympathetic nervous system.

We know that when folks are in that like super high cortisol, high adrenaline stress fight or flight moment, proprioceptive input can completely regulate and kick in the parasympathetic nervous system so that that stress response decreases drastically. What does that look like in real life? When you're super upset or super anxious or freaking out and someone gives you a really long tight hug, and yes there's that personal connection part of it but on a very kind of micro physiological level there's actually receptors in your skin and in your joints that are saying, decrease

that sympathetic stress response, this is good input and now we can exhale and breathe normally.

The same reason we swaddle babies. It's the same reason why massage feels good, all that kind of stuff. In kids, if that sense is not necessarily integrated well, they might seek out proprioceptive input as a way to regulate themselves. One example might be a kid in a classroom who's really having a difficult time paying attention for a gazillion reasons and has been yelled at by the teacher, and he's having this fight or flight response, the stress response internally and he might, "accidentally," fall off his chair on to the ground in the classroom.

Of course then his situation gets worse according to the teacher but in his subconscious, his body was seeking that pressure, that proprioception in order to help that stress response. That's obviously an example of a way his little body is seeking it out that's not adaptive to the environment so if we can help kids understand how to through play climb and jump and explore and move their bodies and get that input then that stress response kind of globally decreases, if that makes sense.

Steph G (host): That's absolutely mind blowing to me. I was think back to your presentation. You had a little picture of the kid with the book over his head. I was like, I swear I've seen that so many times even in the high school classroom and it just stuck out in my mind like you're saying this way to introduce that pressure and can you talk about mechanical hugs?

Allyson C: Oh my gosh, yes. Temple Grandin is a woman with autism and a professor at Colorado State and she's been this huge advocate for folks with autism and their needs. She really has kind of the corner on this proprioceptive self-regulation thing so much to the point where and again, a huge topic and I mentioned it in the talk as well. She's actually very involved with farming and different methods of basically slaughtering. What she has found is that giving pressure to animals before slaughter actually changes the result of the composition of the meat because the stress response is less. She developed with that knowledge, she developed this mechanical hug because she recognized that herself as someone with autism and sensory integration problems are very common in kids with autism.

She felt better when she was being squeezed and so she made what looks like this torture chamber like plywood and mat and basically you can with a lever control how much pressure you're giving your body. That was her way when she was feeling completely out of her gourd and dysregulated and really, really stressed, she would go to this little mechanical hug thing and give herself pressure. It was like she could exhale and kind of function. That concept has been, I don't want to say

exploit, well, I'll say exploited, it's become a cornerstone of lots of different products that are out there for kids. There's weighted blankets, there's squeeze machines that we use in the schools.

There's the slew of contrived stuff that gives kids proprioceptive input. While I think that's amazing, I also think that we need as humans to understand how to seek that in our natural environment rather than depend on something we order from a catalog to put in the corner of our playroom thing. The concept is really amazing and the science behind it is really steadfast, but I think the action of actually making it happen in real life needs to be a little more natural rather than contrived.

Steph G (host): That's such a good point. That makes me think about whenever I go to the dentist and I get x-rays and they put the little lead dust on you and it feels amazing. I'm always like, "Can you leave that on there?" It's fun.

Allyson C: Right.

Steph G (host): It must be they're on the same lines of the proprioceptive stuff, is that-

Allyson C: That's exactly what it is and actually some of the first science that showed us that pressure decreases stress was done in a dentist office.

Steph G (host): No way.

Allyson C: Yeah, measuring all the biomarkers and the cortisol and all the other good stuff for folks, because that's a high anxiety thing like I don't know a lot of people that just love the dentist. They would put these weighted blankets kind of full body weighted blankets and they tested folks when they had procedures with and without them, and what they found is that when they had these weighted blankets on, their stress responses were much more different. Even if the procedure took longer, their perception of how horrible it was was much less when they had these weighted blankets on. Now, you can actually see, there's lots of kick starters, there's commercial stuff.

There's squeeze things for dogs that you can put on if there's fireworks. There's a little bit of everything but I think there's so many examples when we really think about it in our own even day-to-day lives where we're giving ourselves that input as a means of self-regulation that we're not even thinking about it as such. It's cool to see how we can use it intuitively but also therapeutically.

Steph G (host): For sure. This is a meta question but do you think that this goes back to being in utero and being so tightly squeezed and that's just part of it? I mean-

Allyson C: Absolutely. Absolutely, because in fact, so many of the kids that I've treated that have really severe sensory integration dysfunction were either multiple so they had two or three others hanging out in the womb with them, or they were born exceedingly prematurely. When you think about with a big, among other things, one of the greatest kind of things that they miss in those last let's say ten weeks of gestation is that proprioception of kind of the baby ticking and the baby is flipping and doing all these stuff in utero. They're starting the development of that proprioceptive system in utero but when they are crowded or when they're born too early, that really doesn't happen. So many of the kids that I've seen with sensory integration dysfunction kind of fit into that category of not having that full 40 week experience.

Steph G (host): Wow. Okay, that's also mind blowing. I remember [Zee 00:35:22] always says this because [Zee 00:35:23] was listening to your talk that day and he talked about why people hunch or shrug their shoulders up, can you talk about that?

Allyson C: Absolutely. If we think of our posture when we're really scared or we're really stressed and both of those are situations where again it's fight or flight, our sympathetic nervous system is going haywire. We can give ourselves proprioceptive input by pushing on things in the environment or we can give ourselves proprioceptive input by tightening and putting pressure on our own muscles and joints actively through our own systems. When we think of shrugging our shoulders, and a lot of people get that tension when they're stressed in their upper traps or lower neck or whatever.

If they really broke it down it's because what they're doing is giving themselves lots of proprioceptive input by squeezing their shoulders really tight which then is an intuitive way to decrease the stress response. It's the same reason why you look at people watching horror movies, they are not like lounge lizards, they're like all rolled up in this fetal position and squeezing their hands to their face and all that kind of a thing. It's why when we see or hear something traumatic, our hand goes over our mouth and we're squeezing over our mouth. We're giving ourselves that input.

Steph G (host): Fascinating.

Allyson C: Yeah, it has such global implications. The more that I talk the language and the lingo with folks through this presentations, the more I really see how both the health benefits have not just to with pediatrics but really like all of us in general.

Steph G (host): Fascinating. You were talking about these contrived ways to introduce that proprioceptive input. Can you give us some more on the flip side

natural examples like you're maybe making that connection to play or as adults. I mean, if we're in an office situation and we got stressed out and there's no squeeze machine.

Allyson C: You can ask somebody for a hug.

Steph G (host): You don't have a jungle gym to go run around on, how are we going to navigate that in a more natural way?

Allyson C: Right. That's a great question. One of the things that I think is really interesting when we look back at how we look at ancestral health to inform us of how we answer that question is the way that paleolithic kind of times, kids develop those senses really effectively where climbing and jumping through their natural environment. Obviously, you can't go climb a tree on your lunch break, maybe you can, that would be awesome but I think looking for either a quick and kind of dirty exercises if you want to be contrived during a workday thing. Especially with kids, I find that the best way to give input is to encourage exploration and even a little bit of risk-taking, healthy risk-taking which I'll talk a lot about in AHS this year.

Not necessarily on a jungle gym or something where it's a very finite situation where they have experienced every feeling of every part of that jungle gym before because then their nervous system isn't like surprised and the effect isn't as great but encouraging a few ... In one of my treatment rooms I have a few small tires and I have this Lycra thing and then I have a couple of things hanging from the ceiling and when you look at it, it doesn't look like, "Oh, well I climbed those monkey bars and I swing from A to B." You have to use your brain a little bit to map out your own course.

I think for anyone wondering how to wake up their own proprioceptive system, it's a combination of opportunities for that deep, heavy movement but novel opportunities and a little bit of exploration that doesn't involve anything maybe you've ever done before. Trying a new activity with new stuff in a new environment is probably ideal.

Steph G (host): Very cool. It's so fascinating. It's absolutely fascinating when you start to break it down and really think about it, oh wow.

Allyson C: Yeah.

Steph G (host): Very cool.

Allyson C: Insane.

Steph G (host): With that in mind, again, we'll link to that talk because people are like, "I want to go hear that." Can you give us a little preview about what you're going to be talking about in New Zealand, in Greenstone?

Allyson C: Sure, and I'll actually be at AHS in Seattle this year coming up like three weeks as well.

Steph G (host): Wow, okay, double duty this year.

Allyson C: Yeah, exactly. The talks will be a little bit similar but my main focus this year is kind of as we look at our kids in crisis, right, all of the kids with these diagnosis and taking medications and aggressive kids and kids with behavior disorders, we're really finding that we're in a really bad place when it comes to the number of kids that are, for lack of a better term just in crisis. While we can put band aids on all those things, whether it be medication, not that that's a bad thing. I'm not demonizing it but sometimes it doesn't allow us to see what the real issues are. I think that we can really learn a lot from looking backwards and understanding what some of the big things are that have changed in the way we grow up.

Two of that at least in my clinical experience I found to be probably the most impactful in terms of the dysregulation piece is the idea that we aren't as children taking risks and having free and creative exploration. We also aren't using social connections in a healthful way. I think those and there's a million reasons why each of those things are occurring but I think those two if I had to pick two big topics that really have the most influence on why we're seeing all of these things crop up in kids' health, those two are the ones that I'm really going to unpack at the conferences this year.

Steph G (host): So cool. These are going to be from the risk taking perspective like my own example will be, I mean when we were kids it was like go and play and come back when it's dark and we would ... I clearly remember this, this memory just popped into my mind, the neighbor's house had this wooden trim around the base of the house and we would go, we would climb on to this trim and do this obstacle course where we would ... There are shrubs around the base of the house and stuff too so we would see how far we could get and hanging on to window sill and stuff. It wasn't that high off the ground but we would see how far we could get before we touch the ground. Like I said, jungle gyms, monkey bars, that sort of stuff, do you think it's just less playtime in general or people are like, "Oh, that's too dangerous. We have to protect you. We don't want you to get hurt."

Allyson C: Right. That's a really good question. I think it's a combination of those two things. I think we are wired as humans to seek thrill and thrill is really the combination of fear and joy. Right? When we were kids and we didn't

have and me, back in the day, there weren't electronics. It was literally just like you said, no one texted you and told you to come home. You went outside, you play in the woods, and when it got dark you knew your butt needed to be in for dinner. I think the combination of the society where parents are a little more disengaged out of necessity because we have much more prevalence of two working parents or single parents who are working.

I think from an early age, our goal is to protect and not necessarily to facilitate. That's not because we're bad parents, that's because that's the environment we live in. I mean, a really interesting kind of thing is to Google vintage playground and you will see playgrounds from 1950 that you look out through the lens of 2017 and you're like, "God, that's a lawsuit." There's a really interesting history which I'll go into at the presentations about the lawsuits that changed all of our playgrounds and how it has actually correlated with more physical dysregulation and lack of empathy in kids.

I think part of that is this we're baby-proofing, kid-proofing, teenage-proofing everything and I think that inborn kind of genetic wiring for us to explore and to risk in a healthy way is what really teaches us about resilience and self-regulation. Even our own bodies, when we take that away by like an entire room of Fisher-Price for five years, I think sometimes we're at that mismatch point where we're wired to seek these things but our environment isn't allowing us to and so then we get that core imbalance which lead to issues later on.

Steph G (host): Fascinating. Then, in terms of the social piece, I know you mentioned that. In my brain, that going towards like there's more screen time and less interaction time. Is that sort of where you're going with that piece?

Allyson C: Absolutely. Absolutely. It starts again in early infant hood and toddler hood where we're really putting kids in environments whether that's day care or preschool or any of those things which are all very positive things but it's very contrived in terms of social exploration. It's circle time, it's table time, we're made to share with the kid across and all these things which are done with brilliant and amazing intentions but we're not allowing kids to take risks socially. When they get to middle school and high school and they don't have that sense of resilience and self-regulation and that you put on top of that social media and disconnectedness and all of those evil things that can come from social media. Even though obviously there's positive things too, then I think it's a recipe for disaster.

Steph G (host): Absolutely. I guess the last thing I'll ask you about is we sort of hinted out some of these underlying factors. I can imagine it's about like providing the therapy that you do is provide an opportunity for kids to have this self-

regulation and better management of the sensory integration and stuff like that. From a root cause perspective, I mean, what are you seeing as some of the biggest movers or the biggest impacts for why this stuff develops in the first place. I mean, do you have a sense of some of those things maybe?

Allyson C: I do and I think probably the most immediate one rather than going totally ancestral health because that's a really interesting discussion of how we raise kids hundreds of years ago. I think the most immediate concerns are the very basic things that I think you and I and everyone in this paleo movement are striving for and trying to find balance in a daily basis which is nutrition, intuitive nutrition, sleep, play, nature, healthy social relationships and opportunities for exploration. From okay, how do we help these kids and how can I better help the kids in my current life kind of thing, I think it's adding in as many opportunities for novel play, for unstructured play, for time in nature, for non-contrived social connections.

I think there's great merit to being thrown in and sink or swim kind of a thing with obvious nuances but I don't think we're as good at getting comfortable with being uncomfortable as adults. I think that really translates into how we're raising our kids and how we're setting the bar for kids to avoid that feeling of being uncomfortable whether physically or socially or anything else. Embracing the uncomfortable is pretty huge.

Steph G (host): Yeah, I've always thought that one of the biggest, when I look at people who inspire me I guess if you will like adults in older folks if you will. The ones that inspire me the most, some of the most fascinated by are the ones who go back to college when they're in their 60s or they take up a new sport or new hobby or whatever it is and it's like they're just always learning.

Allyson C: Yes, that's it. I know you can speak from personal experience as I know you've talked a lot about risk not even in career but also just I think most recently the jiu-jitsu thing and that feeling of putting yourself and your body and your mind in a situation that is completely novel is rewarding in ways that nothing in your daily routine ever could be, you know what I mean?

Steph G (host): Absolutely. Yeah, that was one of the very conscious intentions that I had with trying and still doing jiu-jitsu now. I love lifting and I lift every week and it's like my home. It's like I'm home with the barbel like everything is good in the world. That's really awesome to me and then on the same token, I was like, wow, you know what? I really am feeling like there's a lack of sort of problem solving and novelty almost with some of the stuff that I'm doing. Let me try something that's totally brand new. I think it's one point in my adult life where I've actively sought something out

thinking this is going to make me extremely uncomfortable and that's why I'm doing it.

Allyson C: Right, it's not like you chose pottery, you chose a physically and mentally demanding thing and do went all in.

Steph G (host): Yeah, that tends to be a little bit of my personality so I did.

Allyson C: Going to do it, do it big. Right?

Steph G (host): Do it big. Yeah, it's humbling every day it sort of humbling and sometimes I feel like I want to cry and sometimes it's fantastic.

Allyson C: Right, but that resilience piece is huge.

Steph G (host): Yeah, absolutely. Oh gosh, I feel like I talked to you for three hours but we're going to move on to the quick rapid fire questions. I always include these just because I love to see what people are going to say. It's just always fascinating. Okay the first question we'll start off with an easy one. Coffee or tea?

Allyson C: Definitely coffee.

Steph G (host): Okay. I have met few people who've said tea but hey, you never know.

Allyson C: Right.

Steph G (host): What's an area of self-development that you're interested in lately?

Allyson C: Yoga. Is that considered self-development? Trying to get comfortable with recovery exercises.

Steph G (host): Interesting. Okay. How do you play?

Allyson C: That's a really good question. Travel and exploration. Throwing myself into environments that I know nothing about and going in with zero agenda other than just to enjoy myself. I think that's huge whether it be a hike I haven't done or a mountain I haven't climbed or a city I haven't been to, I think my form of play is really that idea of play is basically activity without an agenda, that's where I find most of my fun.

Steph G (host): I love that. What would be your perfect meal?

Allyson C: Oh, wow, I would say a huge juicy steak and some really good roasted broccoli and probably some awesome sweet potato puree thing.

Steph G (host): See, this is why you and I get along. [crosstalk 00:50:53]

Allyson C: Not pizza.

Steph G (host): No. An advice you would give your teenage self.

Allyson C: Wow, take risks, get uncomfortable with being uncomfortable.

Steph G (host): I love it.

Allyson C: I say that to my teenage kids all the time so that's an easy one.

Steph G (host): I can't believe you have teenager kids because-

Allyson C: Yeah, it's crazy, either can I.

Steph G (host): You look like you're about 25. We'll put a picture of you at the show notes and people-

Allyson C: Oh, so sweet.

Steph G (host): Then, the last question, what in your opinion is the most important ingredient in building an unbreakable human?

Allyson C: Resilience. I think that's huge. The ability to fall down and get back up.

Steph G (host): I'm not surprised that you said that given the topic of this conversation but I love that. I love that, so great. Well, you passed the rapid fire lightning round with flying colors.

Allyson C: Yay.

Steph G (host): You're officially Harder to Kill stamped and certified. That was awesome. Thank you so much for playing along. That was great.

Allyson C: Super fun.

Steph G (host): As we wrap this up, just give folks a sense of where they can find you online.

Allyson C: Sure, my website is evolutionarytherapies.com and they can get in touch with me that way. There's some information about my up and coming things. I will be at AHS in Seattle in early September and then AHS in New Zealand with you at the end of October. Some cool stuff coming up.

Steph G (host): I can't wait. That's going to be-

Allyson C: So excited.

Steph G (host): I mean, we were both there two years ago.

Allyson C: Yeah, life-changing.

Steph G (host): It's just the most beautiful place on the planet.

Allyson C: Yeah.

Steph G (host): That I've been to.

Allyson C: Absolutely.

Steph G (host): I've heard there's other amazing places.

Allyson C: I agree with you. I'd move there in a heartbeat if we could.

Steph G (host): Absolutely. This has been so fun and just so incredibly eye-opening and whoa moments. We will link up as many things as we can in the show notes so people can go and learn more and just go get their own knowledge bonds and explore what you have to offer so Allyson Chrystal, thank you so much for being on Harder to Kill Radio.

Allyson C: It was my pleasure. Great discussion. Thanks, Steph.

Steph G (host): Thank you. Okay, wasn't that the most fascinating show that you've heard? Absolutely mind blowing stuff from Allyson Chrystal. If you're interested in hearing her other talks, the things we talked about in the show, I will link that up in the show notes. Head over to stupideasypaleo.com to get that. Again, this is episode number 69. One final request. If you would please subscribe to the show on iTunes, it helps new people find the show who would otherwise not know about Harder to Kill Radio and all of these absolutely mind blowing incredible guest that are coming on the show and sharing their expertise. It really is the more the merrier. All right. Next week we have another awesome guest coming on. Until then, be well, be healthy, happy, and harder to kill.