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This episode is sponsored by one of my favorite companies - Just Thrive Health. They have several products that are a part of my regular rotation and absolute staples in my house. I know I’ve talked about it before, but I’m a huge fan of their probiotic, which has patented strains of spore-based probiotics that survive longer in your gut. So you actually get the benefit of them. It’s a good rule of thumb that if a probiotic can’t handle room temperature and needs to be refrigerated, it’s probably not going to handle the temperature of your body very well. And many probiotics, while they might have a lot of concentration in the capsule form, aren’t surviving well in the gut. And this is what makes spore-based probiotics different and why I use them regularly. These are great to get all the way into your gut and provide the benefits. And it's the first probiotic I've really actually felt a difference from.

They also have a new strain with a patented formula called Just Calm that is a gut support for healthy neurotransmitter function. And I noticed feelings of calm and better sleep from taking this one regularly as well. I also want to highlight a new product they have, which is a probiotic gummy for kids. I love that their regular probiotics are heat stable, so I can easily add these to even baked goods that are baked in the oven or to smoothies for the kids. But my kids are a huge fan of the new gummy formula, and I highly recommend it for kids as well. You can check out these and all of their products, including their K2-7, their prebiotics, their immune support, and much more, by going to justthrivehealth.com/wellnessmama. And if you use the code wellnessmama15, you will save 15% site-wide.
Katie: Hello and welcome to The Wellness Mama Podcast. I'm Katie from wellnessmama.com. And this episode is all about vision and all the things that we have wrong about this and including the misdiagnoses and uncommon information. I had so much fun recording this episode and I learned so much.

I'm here with Dr. Bryce Appelbaum, who is on a mission to change the way that the world views vision. And we speak especially from the lens of parents and how this relates to our kids at various stages of development and to us as we get older. And breaking down the myth that vision is just going to naturally get worse as we age. He believes there's more division than just 20/20 eyesight, and he's developed programs to retrain the brain to improve the eyes. He's been featured all over the internet and the news world for his work.

And he's a pioneer in neuro optometry and he's passionate about unlocking life's potential through vision. His expertise includes reorganizing the visual brain post-concussion to return to and learn to return to life, remediating visual developmental delays that are interfering with reading and learning and enhancing visual skills to elevate sports performance. He works with a lot of pro athletes and teams actually on this very specific thing.

He's the Founder and CEO of VisionFirst, which is a private practice specializing in vision therapy, which is a topic we go into in depth today. He's also the Founder and CEO of a program called ScreenFit, which we also talk about and is a tool that families can use to help with vision problems at home.

And in this really in-depth episode, we go into the misdiagnoses and missed opportunities of vision and eye care and why healthcare has it all wrong when it comes to the eyes, why eyesight and vision are different and they need to be treated differently, how eyesight refers to how well you can see on a chart or in the classroom, but vision refers to how our eyes work together and derive meaning from the world around us. Why vision problems are brain problems and what the fix is, why most doctors are reactive rather than proactive when it comes to vision, why all functional visual skills are learned skills and why screens and even early reading might be contributing to eye issues in kids.

We talk about things like motion sickness, trouble with eye contact, resistance of reading and how these can be symptoms of underlying vision struggles and how vision therapy is physical therapy for the brain through the eyes. We talk about the connection with vision and sports performance, how over 80% percent of what kids learn in the classroom comes from their visual inputs why he believes that things like ADD, ADHD, and dyslexia are incomplete diagnoses unless vision is also evaluated. Why it has estimated that by 2050 half of the world will be myopic. How the vast majority of motion sickness has a visual component that is treatable.

Why vision should not get worse with age, unless there are functional problems and how to address these and how even if someone does need glasses, the prescription should not get worse every year. And we go into depth about exercises that can help with all of this. Finally, ending on the note that a brain at any age can be taught and that neuroplasticity is lifelong. A lot of information in this one, probably some you have not heard
before. I certainly learned a lot and it lines up with some of my personal experience as well. So without any further delay, let's join Dr. Appelbaum. Dr. Bryce, welcome and thanks so much for being here.

Bryce: That's a pleasure to be here. Good morning to you, Katie.

Katie: I'm so excited for this conversation. I think it's going to be extremely relevant to everybody listening, especially to the parents listening. And I know there's many directions we're going to get to go in this episode. That might be a lot of new information for many of the people hearing it for the first time in this episode.

So to start off broad and for some context to begin this episode, you make the statement that there is a lot of misdiagnoses and missed opportunities when it comes to vision and that the industry has a lot of things wrong in this area. So I would love for you to give us some background about what you mean by that. And then from there, we'll build into what can be done differently.

Bryce: Love this, and love that we're getting to this right down the gate here. I truly believe healthcare has it all wrong with the eyes. Most doctors are solely focused on seeing the tiny letters on the letter chart and the pursuit of this 20/20 eyesight. But eyesight and vision are separate entities and they need to be treated like that.

So the biggest take home from everybody today should be eyesight and vision are different. Eyesight refers to how well you can see, whether that's letters on the letter chart or street signs when you're driving or if the teacher writes on the board in the classroom. But Vision is so much more complex. Vision is how our eyes move together and converge and track and focus and process information and really how we derive meaning from the world around us and then direct the approach to action. So really we should think of eyesight as just glasses. It's a symptom. Vision is brain, which then means vision problems are brain problems. And I'm here today to inform everyone, empower everyone, that there is a fix for brain problems. There's something called Vision Therapy, which I'm sure we'll get into, but it's really a treatment designed to rewire the software of the brain to change how somebody takes in the world around them and processes visual information.

Katie: This is such a fascinating concept to me. And one I'm really excited for us to get to go deep on today because I would say my mindset shift started on this actually in an unrelated area, which is that years ago I was told I had several small cavities but I was pregnant at the time. And I didn't want to have any kind of oral surgery or anything while pregnant or fillings. And so I chose to wait. And during that time we ended up moving. So I went to a new dentist who did a new evaluation and said I had no cavities. And often by dentists
we’re told you can’t fix cavities. You just have to get them filled. And when I realized that wasn’t true I started researching why that wasn’t true and what had happened in my mouth and why it got better. And it made me start to ask better questions hopefully in many areas of life. And I realized a lot of the things that were told are static might not be at all.

And before we started recording I shared the story of my daughter who when she was five and got her eye exam that’s recommended before school starting was told she had all these problems and that she needed glasses and would need them her whole life until she was old enough to have contacts or corrective surgery. And thankfully she refused adamantly to ever wear those glasses. And so I sort of intuitively went on a process of saying like, okay, we homeschool, we can work with this. How do we adapt to her? If she’s not gonna wear these glasses, how do we, can she spend more time outside, not look at screens? Is there movement stuff that’s gonna help her? And a few weeks ago when she got her learner’s permit she had 20/30 vision by their testing. So I know that even in this category things can absolutely change. And I would guess probably changed much more rapidly than in that five years old to 15-year old time span but I found this so fascinating.

And I feel like people are often told that either Vision this is static and your eyesight is gonna stay the same or that often I hear from people who it’s as you get older it’s just going to get worse. And that’s how things are. And I would guess from all that you teach and do neither of those are true statements but can you explain why maybe that assumption is so widespread and some of the reasons that may or may not be true?

Bryce: So as silly as this sounds, you know more about eyes and brain than many eye doctors do because we’re all taught in school to intervene once there’s disease. We’re all taught about structure, but very little about function. And especially in my world, in the eye care world, most doctors are reactive rather than proactive. And I kind of view myself as a functional medicine doctor for vision. So you brought up so many points there with your daughter, but I think we should start by just recognizing that all functional visual skills are learned skills. When your daughter was born, when every child was born, we don’t have the ability in place to converge our eyes and focus our eyes and track our eyes. And we don’t have depth perception and things are blurry. And through our life experiences, we developed the ability to use our eyes together as a team.

So we developed the ability to use both sides of our body and get the motor foundation, the core foundation, which is the foundation from which we then learn how to develop our visual system. And I would say now more so than ever, vision problems are everywhere because kids are being exposed to technology at early and earlier ages and often being asked to read earlier than ever before, before they're visually ready.

And when our brain and our eyes are under stress, we really have two options. We adapt or we avoid. So many vision problems are maladaptations. They’re functional, they’re preventable, they’re treatable. And hopefully everyone is going to lead this conversation today recognizing that vision problems are literally everywhere. but they’re hidden until you know what to look for. And then when they’re no longer hidden, they're really right inside.
So as simple as motion sickness, avoidance of reading, difficulty maintaining eye contact, a child being smart in everything but school, meaning they're relying on so many other sensory systems because their brain can't process visual input as efficiently as they could. And this labels so much of a vision, there's so much of life can be unlocked through vision when vision is no longer interfering and when it's guiding and leading like it really should be as our dominant sensory system.

Katie: That is so interesting what you just said, because I would guess most parents are at least aware that too much screen time, especially early on, can have a negative impact on kids in a lot of ways. And as you just mentioned, including on their vision and how that develops. But you also mentioned early reading, which I find even more fascinating because this is something I noticed with my kids. I never pushed reading when they were young. And because we homeschooled, I had the ability to not do that.

But I had read before we even started homeschooling that in many countries, they don't push early reading to the same degree that we do in the U.S. and that all kids tend to equalize by about third grade anyway, even if they're not pushed to read at four or five, they still all have about the same reading level when they get to those older grades. So I just didn't feel the need to push them early.

But I would, to that point, I would guess most parents are aware of screens potentially being an issue, but maybe haven't considered that pushing early reading might also be stressful to that vision development. Like you talked about, is there kind of any good rules of thumb for making sure that when they do start reading, it's an easier process and that they don't have that resistance to reading?

Bryce: Love that you bring this up. So I hope most parents recognize that screen time is the new pandemic and that that is influencing our children's development socially, emotionally, cognitively, but of course visually in a really negative way.

But from a reading standpoint, I see so often parents who come in so proud that their child is reading chapter books and they're five or they're in kindergarten. And in every single case, there are functional vision problems as a result of that. And it may be something simple. It may be that they're so locked into the book or what's in front of them that a parent could come in the room and there could be something in the periphery that they completely ignore because their brain can't process what's in front of them and what's around them simultaneously. But also it can really lead to the behavioral signs, which we should all be looking for, where with anyone learning to read or anyone in school, if we're noticing that the child's skipping words or losing their place or skipping lines, that's a red flag very likely for a tracking problem.
We're noticing the words are blurry or going into and out of focus or becoming double. That often is an eye coordination problem or a focusing problem. So really watching your child's behaviors, I think is key. If we're noticing that performance decreases with time, if we're tilting our head, if we're tilting the page, if we're leaning on our arm or covering an eye, that's a clear sign that vision is not operating at the level that it should be.

And what we're seeing now, especially with screens, the most common symptom I'm noticing is that parents are saying when my child has a tablet or a book or anything up close, they're bringing it so close to them and leaning in so much, What is that? What's going on there? And from a vision standpoint, or from a functional vision standpoint, our focusing system, the internal muscles in our eyes are responsible for clarity. and our eye coordination system, our outside muscles responsible for where our eyes are pointing, they should be working in synergy. They should be working together. But very often when the demand exceeds where we're functioning, when we're on screens for too long or reading for too long, when a child leans in, that's really, you can view the focusing system almost like as an old school camera, that focuses stuff on a local this rather not a focus on that compensate in the end for what our visual system not able to do is naturally or unconsciously as it should And that's usually a clear sign that stress is in the situation.

And then all of a sudden, things start to get blurry far away. And then we have this new epidemic with nearsightedness that is increasing at a dramatically fast rate. very often is from too much screen time, too much near visual stress, and not enough time getting outdoors.

Katie: That's so, so interesting. And I've noticed I have one kid in particular, he loves to read. He's now so he's older and he will read in the summer without any other commitments. I'm finding him reading eight plus hours a day, but I noticed something interesting about the way he reads. He's choosing to want to go outside and sit in the shade. And I noticed he takes breaks and like looks around and looks at things at different, and then he'll take breaks and get on the slack line, get on a swing, get upside down on the pull-up bar and do all these movements and like reset and like get all his energy out and then he'll go back to reading. And I'm curious if that's like almost an intuitive response on his part to kind of counteracting some of those problems or what would be some steps that would help someone be able to like enjoy reading and not fatigue as early? Are those things that are actually helpful? Are there other things that are helpful?

Bryce: So your son is either trained really well by a wonderful mom or he's very intuitive and has recognized what his body needs to function with time. I always recommend a 20-20-20 break at a minimum for anyone reading or on screens, which basically means not more than minutes of near engagement without taking a break for at least 20 seconds and resting the eyes and look at something at least 20 feet away. But really, that's kind of the maximum. So our break should be as often as possible.
I mean, if you can think about our visual system in general, it's intended to guide movement and to help us engage with our three-dimensional world, and to expand in the horizon and in the distance. But nowadays, so many of us are now making these very careful eye movements that should be in the distance, that stuck up close, and it's creating extra tension on the system in terms of how the eyes are pointing and focusing and how the brain's processing that information.

So movement breaks are huge, and I recommend getting up, moving around as often as possible for kids. Being homeschooled is a huge advantage for lots of reasons, but also you can separate an hour of work in three hours if you'd like, and every 10-20 minutes asking, let's go outside, let's do some jumping jacks, let's move around, and that can help so much with our ability to focus and sustain ocular focus, which very intimately correlates with overall cognitive focus.

Katie: And you also mentioned the term Vision Therapy. And I want to be able to delve into this as well, because I had not actually heard of that particular term. And I would guess many people listening haven't either. So can you explain what that is and why we haven't heard of it?

Bryce: And that is a problem, and that is why I'm on this mission here to change the world's viewing vision because Vision Therapy should be much more well known than it is. So I think a simple way to view it is it's almost like physical therapy for the brain through the eyes with the attention of raising to somebody's awareness what they're doing so they can learn how to self-correct, self-monitor and essentially allow eyes to work together as a team and eyes, brain and body to be an efficient coordinated unit. Vision therapy has been around for over a hundred years, but it's not like physical therapy, let's say, where if you have a sprained MCL and your knee is sore and you need a dozen sessions and here's what it looks like, there's not as much consistency as there should be and definitely not even close to physical therapy.

Because with Vision Therapy, there's old school models, which are just about straightening eye turns and helping with lazy eyes. But now new school models and what our profession is evolving to has a lot more to do with sensory training and performance training. And so that's something where anybody's visual skills and abilities can be improved. It's a matter of whether improving them does anything to improve life.

I work with four main populations in my practice that really benefit from Vision Therapy. The first, kids with visual developmental delays that are impacting reading, learning, or academics. And so often these children are mislabeled as having ADD, ADHD, Dyslexia, other problems because so many of the visual symptoms associated with these visual developmental delays make it hard to sustain focus, make it hard to sit comfortably and still with the desk work. And then in a classroom that can be somebody having trouble copying off the blackboard or looking up when they're supposed to be doing work because they're relying on their ears for what the teacher's presenting rather than their eyes.
The second area would be concussion and brain injury. That's completely pushing our profession in a positive way into mainstream medicine because there's so much more now that we know about head injuries and so much more that we need to know. Vision therapy can very often be the missing piece to get your life back to return to learning, returning to work, to return to life. We do work with a lot of individuals with eye turns or lazy eyes as an alternative to surgery to learn how to straighten their eyes, to even develop depth perception for the first time. You mentioned your daughter not wearing glasses. Another key take home, if we put glasses on at any age and they don't seem right, they're probably not right. And most doctors are going to tell you, oh, just wear them. You'll get used to them. Our brains will get used to them. There is incredible neuroplasticity and malleability at every age.

But any prescription, any glasses, in my opinion, should be the weakest lens possible that gives the most improvement. most balanced between each eye, so we're not pushing a competition over which eye to use, and we should be seeking 20/happy rather than 20/20. Not everybody needs to see HD clear at every distance, and very often if you're seeing much clear at one distance, that tilts the scale and makes it a little bit more challenging at another distance.

And then that fourth area that Vision therapy can really benefit from is sports performance. I work with a lot of professional athletes, teams, individual athletes. Anybody's visual skills and abilities can be improved. It's a matter of whether improving them can do anything to improve life. From a vision standpoint, in terms of how that impacts sports, I mean, we're all taught at an early age, And we're all told to keep our eyes on the ball, but very often are not really taught how to do that. And that's something that can be taught. We can train an athlete's ability to optimize the critical components of their visual system so that they can be more consistent in their play, they can have improved play. And so often there's overlooked areas of opportunity within the visual system that limit somebody's ability to achieve at their potential. So, so much can be done to unleash all of our visual potentials through Vision Therapy.

Katie: Oh, so many more directions I want to go with this based on that answer. The first thing you touched a little bit on ADD and ADHD, which is another whole area that I feel like I've questioned and I don't really buy the answer that those things are static either. And I don't buy the idea that medication is the best or only option for those things.

But I would love to hear more about how Vision Therapy relates to those, because I know this is a growing segment of the, especially childhood population and that this is top of mind for many parents. So can you kind of delve into how Vision Therapy might relate to ADD and ADHD and how parents can use that to help their kids who might be experiencing those?
Bryce: Absolutely. So as we all know, there’s not a blood test that we can take that says, oh yes, you or your child has ADD or ADHD. And so often those labels are slapped on behaviors when in fact, we’ve not even looked at the root cause of the behaviors. It’s estimated that over 80% of what a child learns in the classroom comes from the visual processing of information. And sadly, one in ten kids has a vision problem significant enough to impact learning. So like we spoke about previously, when a child hasn't developed visually the foundation to support what's being asked of them in the classroom, very often their behaviors mimic a child who's squirmy, who's not paying attention, who would love to be read to, but really avoiding any reading on their own. And not having the tools in place to be able to support those demands.

And unfortunately with an ADD or ADHD diagnosis, so often it's based off of symptoms and a lot of the symptoms for developmental visual delays are completely parallel with the symptoms of ADD or ADHD. And I'm a big believer that ADD, ADHD, Dyslexia, and many other learning differences are incomplete diagnoses unless functional vision problems are ruled out first. And the only way to know that is obviously test and know what to look for.

But then, there's many people who have a biochemical imbalance in their brain as well as visual deficiencies. And so from a vision standpoint, this is all treatable, this is all improvable. And so I always argue if we've identified other holes in terms of somebody's ability to achieve at their potential, absolutely let's fill those holes first to avoid any medication or invasive treatment when we can.

And as you know better than most doctors as well, nutrition and supplements and lifestyle have a huge, huge impact on our overall functioning, but specifically how our brain is functioning. And so often with ADD, ADHD, even Dyslexia, there can be a dramatic improvement and even an elimination of those symptoms if we have the low-hanging fruit addressed and we can talk about two quick tests that everybody can do here just to recognize whether they would suspect a vision problem with their child.

Katie: Yeah, let's do that.

Bryce: It's usually better if we do it with another person. So pretend like I'm talking to you and you're doing this to your child. I want you to hold a pen or pencil up at about a foot to inches away from your child. and slowly move the pencil side to side. And you just want to ask your child to look at the finger or look at the pencil and watch it as it moves around. We should see smooth tracking of our eye movements beyond age seven or seven and a half. We should see the dissociation of eye from head movements, meaning we shouldn't see your child moving all around. They should be able to use their eyes and separate it from their heads as they're following something.

A lot of times you're going to see your child overshooting or undershooting or looking away, or there's a delay in terms of how they're initiating that eye movement. That's looking at the ocular motor system or the tracking system. If you're noticing any of that, I can almost guarantee your child is skipping words or skipping lines or losing their place with reading.
And that's important, but I think an even more important test that we can do is take that same expensive piece of equipment, your pen or pencil or finger, slowly bring it towards your child's nose and tell them, as soon as you see two, I want you to say stop. And it should be effortless to our nose where we're able to see one image as it's approaching us, all the way to our nose. The norm is for that are by six months of age as babies are taking toys. And when you're starting with solids and you're bringing them towards their mouth, they're able to keep their eyes pointing on that target the whole time. So this is looking at somebody's convergence ability. And so if they cannot converge to their nose, it's a convergence insufficiency, which by the language would make a lot of people think, oh, they can't cross their eyes. But in the majority of cases, it has nothing to do with eye muscle strength or length. It has to do with coordination and a perception of that pen or pencil or that finger being in a different position than where it's located.

There's a very high correlation with convergence insufficiency and kids who have difficulty attending or AD or ADHD-like behavior. And about a mile from my office in Bethesda, Maryland is the National Institutes of Health. They've recognized this. There's a study from many years ago that essentially means about of the population is gonna have some sort of difficulty converging their eyes. I think post-COVID now that, or post-pandemic, that number is probably twice as high. But again, this is something that if we can't get our eyes to point and focus and work together, if we can't explore near space, how can we possibly achieve at our ceiling with desk work and with classroom work and with sustained near concentration work?

Katie: And you mentioned that number is higher since COVID. Why is that?

Bryce: There's so much has changed during COVID and that's true from so many areas. But I think especially, you know, screen use has been on the incline for decades. That's nothing new. But I think what's changed over COVID is screens have been catapulted into the classroom and into learning and to many adults' lives as well.

And if we can think back to when you and I were kids, we were outside all day long, we were playing ball, chasing our friends, we were climbing in the woods, and our parents would have to drag us inside by the end of the day, because it was dinnertime, it was dark out. We now fast forward to 2023 and it's the complete opposite. Parents are really having to drag their kids outside, away from screens, away from social media, away from all this tech up close. And I think during the pandemic, pretty much all of us really found ourselves spending more time than ever in front of digital devices. And they've taken over work, learning, grocery shopping, dating, even talking with your neighbor. But again, for so many of us, this is creating these symptoms like headaches, and eye strain, and blurry vision, and dry eyes, and light sensitivity, and disrupted sleep, and the list goes on and on.
Screens are everywhere, they're anywhere you turn. But they present a very unique visual demand than when we're engaging with three-dimensional space, like a book or a page. And we can go into all the differences between screen reading or engaging with the screen versus in free space. But this is, has created significant challenges moving forward and countries that value technology and education have a dramatic increase in the rise of nearsightedness from myopia. You know, it's estimated that by 2050, 50% of the world will be myopic. And in America, we're about 40%. And that number has increased from about as early as when we landed on the moon in the 70s. And there's a lot about nearsightedness that is environmentally based. There's some that's genetically based. But what's really interesting is if two individuals were to have a child today and both parents were nearsighted, their child would have a one in two chance of becoming nearsighted. If only one parent was nearsighted, that child would have a one in three chance. And if neither parent was nearsighted, a one in four chance.

And that's because environment plays such a big role in terms of how we function and how we adapt. And the less amount of time we're spending outdoors, the more amount of near time we're spending in the dark reading on screens and the prolonged near work that we're doing with screens, creating big challenges for all of our kids and for really the whole world.

Katie: Well, and I'm a big fan of the idea that kids should get bored once in a while so that they have a motivator to go play outside or to clean their room or whatever the thing might be. Especially in the summer, I try to limit, but actually through the lens of helping encourage them to limit screen so that it's an internal motivator, not an external motivator.

But it brings me to the question, what are good ratios and do they vary by age if we could get it optimal with our kids for how much time they're spending on screens versus outside or movement? What would be a great ratio if we were trying to set them up for the best possible outcome when it comes to their vision?

Bryce: So the average American spends seven hours and four minutes a day on the screen. That's average, which means many of us are way more than that. I always recommend, especially with a screen use, at least as much time as we're spending on a screen, with at least that same amount of time outdoors, hopefully longer.

So for a child who is, let's say, less than 18 months. You know, we really should be limiting screens to video chatting with a loved one who they're not seeing because you want them to have a relationship with that loved one. But other than that, there's really no time or place or reason for screens at that age.

We then move forward to like 18 months to 24 months or so. We should also be limiting to high quality engagement, but not more than 30 minutes a day and let's make it worth it. From age two to five, I say not
more than an hour a day. And from six to like 12-ish years old, not more than two hours a day. But again, balance is so crucial. So same amount of time, if not longer to be outside and to get away from these devices.

And it's really interesting that your son you shared, you know, prefers to read outside on his own. There's actually studies, not in the US, that say there's a much lower risk of developing nearsightedness with reading outside and with engagement outside because of how much that balances our brain's ability to process information and the blue light that we could spend hours talking about. But that's, you know, I think we gotta get away from as much as we can inside, get outside, and apply our visual system to sports and the fast moving space and to movement. So we can develop the ability to process information in front of us and around us simultaneously. When we can't, that leads to so much motion sickness and overall symptoms associated with how our brain is using our eyes.

Katie: That makes so much sense. And I do have another follow-up question, but you mentioned motion sickness and also car sickness. Can you talk a little bit more about how this relates to those? Because I would guess many parents listening have had the experience of a child having motion sickness or car sickness at a different time. So how does that relate and what are the remedies for it?

Bryce: So I'm of course biased, but the vast majority of motion sickness has a visual component and a visual component that's treatable. And that's going to sound crazy for most people, but the child or the individual who gets motion sickness when there's near engagement with a tablet or when they're reading or when they're in the back seat. But as they get older, if you're able to sit up front or this is an adult we're talking about here, it's way better in the front seat or when you're driving. That has to do with the faulty integration of two different systems within our brain. Our visual system, which we're talking all day today about, but then also our vestibular system, which I described the vestibular system as kind of like the internal roadmap in life, which the system that lets us know which way is up and down and left and right, and where we're located and where other things are in relation to us.

And I think a nice parallel is if you go to the mall and you see that and you walk in and you see that map that says with the red star, you are here. And then it says Macy's is here, and Nordstrom's is here, and the Food Court is here. The vestibular system is that internal orientation system that lets us know where we are. In our brain, our visual and vestibular systems send feedback that our brain has to filter and process. And when they're on the same page, we can tell what's moving versus what's not, what's static versus what's not. And we have the ability to understand space, then anticipate movement that much more efficiently. so much emotion sickness, especially again, when we're reading on screens or overriding the central input. has to do with our brain not using our focal central visual pathway and our peripheral ambient visual pathway and almost like a seesaw going back and forth.
And what happens is we get this signal that there's motion or vestibular systems activated where... We're feeling the motion, we're noticing with our windows all the trees flying by, but then we're overriding that central input and it's literally your brain freaking out not able to use those systems together. That can be desensitized, that can be trained, that can be taught, and I would say about to of motion sickness, in my opinion, does not have a visual component. And that's when there's, let's say, a challenge with the inner ear or Meniere's Disease or certain vestibular problems, which many of them have at least a visual component, that's a portion of it.

But from a motion sickness standpoint, you know, that is also why adults will notice when they're driving and they're going over a bridge, that all of a sudden, all of this anxiety comes into play and there can even be panic attacks with, or even extending this as far as to claustrophobia, when we're having to... awaken this peripheral awareness, but not able to make the eye movements to what's around us to gather more information and more feedback, it leads to this kind of tunnel vision effect, which when our autonomic nervous system is under stress, the fight or flight response kicks in from a vision standpoint, that is our pupils widen and us locking in centrally, almost like we're looking through tunnel vision or paper towel holders.

When we're under stress, we become even more central, and that actually exacerbates the problem. So there's a lot that can be done with a formalized program with office-based Vision Therapy with a neuro-optometrist board certified in Vision Therapy and rehabilitation. But there's also a lot of exercises that we could talk about today in terms of how to open up periphery and things that we can all start even today just to implement into daily life. to help facilitate a better balance in life.

Katie: I definitely want to get into those, but I also never want to miss a chance to talk about the importance of natural light. I know many long-time listeners know this is a soapbox for me, and I've talked for years at nauseam about how we need natural light, especially in the morning, especially a little bit at midday light for so many signaling things happening within the body and for proper sleep cycles. And it sounds like from what you've already said, there's also a vision component to this as well, and that natural light is very much different from the light we're getting indoors. Would you say that too much indoor lighting is also a contributing factor to some of these issues? And what is, from a vision perspective, the optimal amount of outdoor light we should be getting?

Bryce: Love that we're talking about this here. I've heard you speak. early and often about the importance of setting circadian rhythms and getting outside and how important that is for so many reasons. Blue light in general has become the new sexy topic, especially post COVID. And blue light is not bad for us. Blue light is actually really important. It promotes alertness and it regulates our circadian rhythms and helps with mood.

But blue light that's... too much that's blasting our brains throughout the day can cause eye strain and fatigue and light sensitivity and disruptive sleep. And although we don't really have evidence that blue light can harm
the eyeball itself, per se, there's very compelling evidence that circadian rhythm disruption may be a driving force behind metabolic disorders and even some cancers.

So the reason for this, we have these specialized cells in our retina in the back of our eye that only respond to light. And their job is to release melatonin when they're stimulated. But if these cells are constantly over and over stimulated, that can disrupt the sleep-wake signaling because exposure to light suppresses the secretion of melatonin, which is needed for balance. And we know that this overstimulation... is intimately related to migraines and to headaches. And so, we now have studies that support this as well, but I think... Blue light is something that is important for us to get in the morning and in the evening and natural light.

But again, if our brain is exposed to blue light for seven hours and four minutes, which is the average time that Americans spend on a screen or even longer. that can really disrupt our ability to function and how our body regulates hormones, how we can recover without sleep. And that can be a driving force that even people who are dealing with systemic inflammation, vision is a big piece to that puzzle that we need to be addressing now with appropriate visual performance lenses, which are glasses that have blue light protection and not just one specific nanometer but a large range that blocks a large chunk of wavelengths, but then also with the right type of of lenses in there, whether that's plus lenses, prism lenses, filters, tints, that allow us to achieve at our highest level for extended periods of time and to allow for prolonged screen time without a negative influence on function.

Katie: Got it. And then last topic I want to get into before we start talking about some of these exercises that I'm really excited to learn. I touched on it briefly, but many people just assume that vision gets worse as we get older and that prescription will just sort of increase with age and that that's the course of how things are just going to happen. And it sounds like here too, there are some things we can do to mitigate that, but maybe start off, is that true that vision tends to decline with age? And if so, what are some solutions to that if it's possible to avoid?

Bryce: So I'm gonna keep this kind of short but powerful here. So a prescription really should not change every year, especially in our teens and as adults, unless there are functional vision problems that are impacting our ability to use our eyes together. And very often, far away becoming blurry is a symptom of a near problem. The near problem being poor focusing of the eyes, poor convergence of the eyes, poor tracking of the eyes, some sort of functional problem. And if we can address the root cause, the problem at near, then that symptom of distance blur no longer exists.

So... really our eyes should not be deteriorating unless we don't have the visual skills and abilities in place to meet the demands of life. You know, it's a joke in my profession that attorneys or people who are spending countless amount of time on screens and studying, their prescriptions are constantly evolving and changing. And like we touched on briefly initially, any pair of glasses or any lens or any setup we can adapt to. That can
become our new normal. And then we need something stronger to maintain that same clarity and we go down this vicious cycle.

And unfortunately, all of the vast majority of eye care, again, addresses the symptom of distance blur and here stronger glasses. But if we're not hitting that root cause, we're gonna keep cycling and it's gonna keep changing until either visual stress changes or our eyes change. For most of us in our 40s, and you'll probably be there in about 10 years or so, as we pull our arms, as we start trying to engage with something up close, we notice we have to start to pull our arms away and hold things farther away.

There are anatomical changes that occur to our focusing system based off of just life where the inside muscles, the ciliary body and the accommodative system become more rigid and less flexible. And usually that starts to change more drastically in our mid 40s or so. But just like any muscle in our body, if we stop using it, we lose voluntary control. And so the need to get reading glasses should not be something that we jump to as soon as possible and we shouldn't be getting the highest amount possible. We should be getting the weakest amount possible, but really so much can be done if it's caught early enough to establish better focusing flexibility, better focusing stamina with the eye muscles so that we can lock into that system much more easily up close.

So as we get older, you know, it is the type of thing you have to be intentional with and you have to do work. We have plenty of patients in their 60s, 70s even avoiding the need for reading glasses or pushing the magnitude way farther down the road, but they're doing work just like you work out your body every day or often and you work on your mind with meditation and so much can be done for our visual system to establish a better balance and equilibrium so that we can not be as dependent on glasses and especially with kids. Glasses become your new normal and then that really kind of creates a path that you're on where unless you have somebody who's board certified in Vision Therapy and rehabilitation who understands this functional approach to vision. That allows you to reroute things, but if not, you go down this vicious cycle where the prescription just keeps increasing and changing, and it can lead to even a lot of health risks as well.

Katie: Well, then let's talk solutions then, because like we already established, most people have never even heard of Vision Therapy or even can figure out if they have access to that where they are locally. But I know you have a lot of resources to help parents and just people in general have access to this. Let's talk about some of the solutions. You mentioned some exercises that people can do. I would guess there's a whole range of strategies that help in different ways. But what are some of the like low-hanging fruit that parents especially could work on?

Bryce: So let's start by just giving a resource for parents. It's covid.org, which is the College of Optometrists and Division Development. That's an international organization that board-certifies doctors in Vision Therapy and rehabilitation. You can put in your address or your zip code and set up a search radius, and it can tell you all
the providers within that search radius. You'd want to find somebody who is board-certified in Vision Therapy and rehabilitation, ideally, which basically means they have the letters F, COVD after their name. But if they're on that website without those letters, you're still in better hands than you would be if you're just seeing somebody for a 10-minute eye exam where you're in and out and barely even talk to a doctor because they're gonna be looking at the functional skills necessary for life, and they're gonna be recognizing the importance of that.

Like I touched on previously, Vision Therapy isn't as consistent as it needs to be yet. And we're doing a ton to help raise awareness and to set up protocols and trainings for doctors to make it so it is more consistent on what vision therapy looks like. I see a ton of patients from out of state or out of country come in for boot camps or intensive programs because our model is so integrative and we're incorporating cognition and balance and vestibular input and movement from day one or essentially as soon as the patient allows it because our visual system doesn't operate in isolation from other systems in life.

But so often, what we talked about with that convergence insufficiency a little while ago, it's not as soon as we can converge to our nose that the problem is gone and we're free to go crush the world. We got to make sure that depth perception is developed and old maladaptations or bad habits are no longer options because once our brain is rewired and we're changing how we're using our visual system, as long as we continue on the appropriate path of vision development and we don't introduce huge changes in visual stress from day one to day a non-reader to then somebody who's reading the dictionary for fun, let's say, vision continues to improve and climb the mountain of development in which it's not needed to be revisited down the road. But in term and so office-based Vision Therapy is the gold standard with home reinforcement where new learning takes place in office, reinforcement of that learning takes place at home. Just like any newly learned process, the more you practice, the faster you see changes.

My practice, our models always have a doctor either working with the patient or overseeing the session. It allows for great quality control. There's no surprises through this on is this working or how is this going? And we want motivation and compliance. Hopefully those are the two limiting factors for success if we identified the right areas.

So I would definitely urge anyone here where there's you're suspecting a concern with yourself or your child. Please seek out somebody who's board certified or please reach out to my team. But let's go over a few practical exercises that we can start implementing right now into daily routines to improve vision.

So we'll maybe talk about the top three if that's okay. The first one would be a near far focus activity. So we'll pretend like we're doing this. I'm talking to the adults here, but you can guide your child as they're doing this as well. So that would be covering up one eye with your hand and pretend that's a patch. You're gonna take a pen, pencil or finger, bring it as close to your child or you as you can, what's a little blurry. Then you're going to stop and make it clear and really think about looking close, stimulating the focusing system, locking into this focal processing. You'll notice watching your child do this, their pupil gets smaller because the pupil constricts with up close. Hold that for five seconds. and then relax the focus, look as far out into the distance as you can,
and hold that for five seconds, ideally about 30 feet away, but as far away as we can out a window across the room. Think about relaxing that system, opening up periphery, looking soft, and then back up close for five seconds and looking hard, and then back far away for five seconds looking soft. So we're going to essentially be going back and forth like that, almost like push-ups for our focusing system. We're going to do the same amount of time right eye as we're doing left eye, so that when both eyes are open, neither one has the opportunity to take over.

We'll notice that for some people, it's closer in one eye than it is the other because our eyes have adopted a new plane that is comfortable to use the eyes together because maybe there's a competition over which eye to use. The sensory input and we're adapting so that we don't have to use both at both distance. Maybe we're using one more for near, one more for far away. We have two eyes for a reason. We gotta make sure things are as equalized as possible. So that's the near far focus activity.

Next, let's talk about an eye stretches, which is essentially having you or your child sit down, face straight ahead, wear an eye patch, cover your hand with one eye. And we wanna look as far up to the ceiling as you can. Hold that for five seconds. Don't look too far, that it's hard to hold fixation. If the eye's darting, then let's start a little bit lower. And as far down to the floor as you can for five seconds. And then the left, the right, the diagonals as well. And parents feel free to use a target if your child's eyes is unable to stay in that position for more than five seconds. And again, same thing, right eye as left eye. And we wanna equalize that as much as possible.

Third exercise, I'd love to talk about peripheral pointing. So what that is, is again you're sitting or standing facing straight ahead, cover up an eye with one of your hands, have you or your child look at let's say a doorknob or a corner of a window, something in the distance, you're going to focus on that target straight ahead. And then without looking away, you want to actively open up periphery and use the side vision. So maybe there is a chair in the room or a light switch. Without moving the eye away, I want you to point, have you or your child point to where that target is. and then they're actively opening up periphery on that side. And then when they're ready, say, okay, I want you to move your eye and see how close you are to where your finger is pointing. If they got it locked in right on target, amazing, then we're gonna go farther out. If not, come back to center, try it again, and then refocus and open up to that side as well. And so we're gonna be progressively opening up that periphery in different positions. Again, same amount of time, right eye as left eye. For so many of us, we can actively open up periphery. but it's really on one side or the other. And you can notice this when you're walking down the street, you can see the mailbox to the left, the house to the right, but without intention, it's hard to see them both simultaneously. Actively opening up periphery is probably the best thing we can all be doing to balance centrally and peripherally what our brain is filtering or processing.

I do want to bring up one point of clarification here. We're using our hand to cover an eye or a patch. This is not patching. This is not the treatment that is kind of the old school treatment for amblyopia or the medical term for lazy eye where one eye sees better than the other, let's say from an eyesight standpoint. We now have research to support what my profession has known for a very long time in that amblyopia or lazy eye on one side is really a two-eyed problem manifesting or showing up on one side. So unless it's addressed or
trained or rewired on a two-eyed basis, patching only makes a small improvement for many people, if any. And it really only makes a small improvement if there's a huge discrepancy where you can barely see the big E, let's say.

But what's needed is more advanced treatment, which teaches the brain how to engage that eye in the presence of the other eye. So there shouldn't be a good eye or a bad eye because that has terrible emotional implications, but really it's the good eye that's taking over and the bad eye that's just hanging out. So we need to set up the conditions in a Vision Therapy setup with virtual reality or eye tracking or even something low tech, like with filters where we can control what each eye sees, how the brain is using both eyes, so that we can teach the brain how to pick that eye that it's been avoiding in the presence of the other. And with enough work and motivation and compliance and repetition, almost all amblyopia can be dramatically improved or eliminated.

And again, there's still plenty of doctors stuck in medicine that they learned decades ago in terms of what is needed to help something like this. And that's saying patching and after eight, the brain can't be retaught anymore. It's completely not accurate. We even have research to support that's not accurate. There's neuroplasticity at every age. It's greater when our kids are birth to eight years old, as we can all attest to by seeing how quickly our kids learn new things, but any brain at any age can be taught.

I currently have a 97-year old and 92-year old in office-based therapy right now, developing depth perception for the first time. So we're never stuck with that diagnosis. And unfortunately, we often have to do a little bit of outside the box work on our own if it's not recommended to us.

Getting back to exercises, we have one other program that's been really effective in terms of helping support screen engagement and really the challenge that we're all facing with the screen time being kind of the new pandemic. And it's a program called ScreenFit, which is a revolutionary online vision training program designed to help minimize the damage of screens on vision. And it's essentially a vision wellness program designed to reduce symptoms and promote healthy habits during extended screen time. So if you suffer from headaches, fatigue, lack of energy, decreased productivity at work, can't wait to close the monitors after all those back to back Zoom calls, ScreenFit then is for you. And it's a program that is essentially like doing body weight exercises for working out, but instead for your visual system where there's 30 lessons in each course, each lesson should take 10 to 15 minutes.

And it's designed to be activities and learning and lessons that you can apply to on a day to day basis. You can do it in between back and breaks for your kids at the stoplight when you're driving in a car, even when you wake up in the morning and evening. And it's had dramatic influence on reduction of symptoms for everyone who's gone through it. And you'll be hearing a lot more about ScreenFit because we have a couple large government organizations about to mandate this for their... For the employees, we have other big corporate and HR programs and corporate wellness programs using this. This is a wonderful way to get ahead of what's happening and what we're all experiencing on a day-to-day basis.
Katie: And I know from your bio, you do even work with pro athletes and top reformers in this area, because like you mentioned earlier, this can convert into those areas as well. And as you were explaining these exercises, I was thinking, how amazing would it be if these things were foundational in aspects we taught our kids at a young age, so they actually got to start school or homeschool with these foundational abilities that would help them avoid some of these problems. So I love that there’s an at-home option that parents can use, even if they don’t have access to these therapists close by, at least as a starting point for foundational. It seems like almost anyone can benefit from this, and certainly there’s no downside to it.

This podcast is brought to you by Purity Woods, which is one of the best skin care formulas I have found. I’ve struggled for years with trying to find the right skin care for me. And as I’ve said before, with formulating my own products, I feel that non-toxic should be the absolute bare minimum baseline, but also because our skin is one of our largest organs, it’s also a great chance to put beneficial things in. And this is exactly what Purity Woods does.

They have skin care products that effectively combat aging and wrinkles and help restore the appearance of my skin. And it’s one of the first products I have tried that really makes a noticeable difference. I know we’ve all experienced skin care products that are labeled as clean and organic only to find out that there’s other unsavory ingredients in there. And Purity Woods is the opposite of that. They are on a mission to provide the cleanest and most effective anti-aging and longevity products available. And everything is certified organic, non-GMO, and free of everything toxic. They use amazing revolutionary ingredients, including one called maple leaf extract, which contains an anti-inflammatory antioxidant, which helps with the hydrating properties of the skin, and it can really soothe skin while also brightening and nourishing the skin. Their age-defying cream is a game changer. It definitely makes you feel like you’re going back in time and reduces things like fine lines, wrinkles, and age spots. These were formulated by skin care chemists at the top of their field to create products that really support collagen and elastin production without any irritation or drying of the skin or hormone-disrupting ingredients. Turn back the appearance of your skin with Purity Woods Age-Defying Dream Cream. Go to puritywoods.com/mama10 and enter the code MAMA27 at checkout to save 10% on your first order.

This episode is sponsored by one of my favorite companies - Just Thrive Health. They have several products that are a part of my regular rotation and absolute staples in my house. I know I’ve talked about it before, but I’m a huge fan of their probiotic, which has patented strains of spore-based probiotics that survive longer in your gut. So you actually get the benefit of them. It’s a good rule of thumb that if a probiotic can’t handle room temperature and needs to be refrigerated, it’s probably not going to handle the temperature of your body very well. And many probiotics, while they might have a lot of concentration in the capsule form, aren’t surviving well in the gut. And this is what makes spore-based probiotics different and why I use them regularly. These are great to get all the way into your gut and provide the benefits. And it’s the first probiotic I’ve really actually felt a difference from.

They also have a new strain with a patented formula called Just Calm that is a gut support for healthy neurotransmitter function. And I noticed feelings of calm and better sleep from taking this one regularly as well. I also want to highlight a new product they have, which is a probiotic gummy for kids. I love that their
regular probiotics are heat stable, so I can easily add these to even baked goods that are baked in the oven or to smoothies for the kids. But my kids are a huge fan of the new gummy formula, and I highly recommend it for kids as well. You can check out these and all of their products, including their K2-7, their prebiotics, their immune support, and much more, by going to justthrivehealth.com/wellnessmama. And if you use the code wellnessmama15, you will save 15% site-wide.

I would love two follow-up questions. First of all, how quickly might someone start to see a reduction in symptoms when they start doing these kinds of things? And then secondly, we haven't talked about it yet, but I know often eye surgery is recommended for various different types of conditions, and many people have had corrective eye surgery. Are these things still beneficial, even if someone has had laser eye surgery or something similar?

Bryce: So let me start with this, the latter question here. So just like there's missed diagnoses with lazy eyes and the brain not being able to see as well with that eye. Eye-turns, which is the medical term for that, is a strabismus. Very often are not eye muscle strength or eye muscle length problems, but they're eye coordination problems. Kids who skip over crawling, let's say, which now some people say shouldn't even be a milestone, as crazy as that sounds. Crawling is so crucial for developing both sides of the bodies used together as a team for developing core control and bilateral integration. That's how we learn how to use our visual system.

So very often kids who walk too soon or the world goes from static to all of a sudden dynamic, they don't have the visual foundation in place and they develop an eye turn in or out or up or down as a way to kind of pull in the world which is out of their control. The vast majority of strabismus or i-terns can be dramatically improved with Vision Therapy. And I would say best case scenario with a surgery would be a cosmetic cure. I would strongly argue there is never a functional cure because functional cure means learning neurologically that has to occur where the brain has to develop the ability to use the eyes together and develop depth perception which requires cells in our visual cortex in the back of our brain that are not there when we're born that come through life experiences.

And so we now have studies that say with each strabismus surgery, each one when you have thereafter, the success rate dramatically decreases. And just like we would always do PT after some sort of muscle surgery and then hopefully before as well, we absolutely should be doing VT or Vision Therapy before surgery to avoid surgery in many cases. And of course, after surgery to allow the eye and body integration to take place. eye muscle surgeons or pediatric ophthalmologists who are. let's just say more evolved and more open to what's best for the patient and practicing medicine that they're learning and challenging themselves on now, not from what we all were taught in school decades ago, this is standard of care for them. And of course, some sort of protocol is incorporated to after surgery.
So that's something that really is one of the many missed diagnoses and missed opportunities out there for people because without the ability to use the eyes together as a team, so much in life is limited. And then with your first question, I think ScreenFit and even just more, even more so Vision Therapy. This is something that can benefit every single person as crazy as that sounds, because screens are impacting all of us and we should not, we don't, humans should not be staring at screens as often as we are. So from a ScreenFit standpoint. you should be able to see a reduction of symptoms within a week. And as crazy as that sounds, it depends on where the starting point is. And we've done very careful quality control with how we programmed the learning that's in there and made sure that individuals with eye turns and lazy eyes and massive concussions and lots of other substantial problems who need way more than ScreenFit have gone through the program. And in every single case, it has not disrupted symptoms. It's only improved things, but it may be in those cases, it's not life-changing.

For others, I mean, the improvement in productivity and sleep and headaches or eye strain. And so often, especially with headaches, you know, we go down the scary battle of pumping medications and Botox injections and so many things to inhibit the brain's ability to feel the pain. The pain is there for a reason and especially headaches that are in the front part of the head or above the eyes or the temples, that's absolutely our wheelhouse in the vision world. So screenfit.com goes over all of these different symptoms and talks about different testimonials and things there. But as crazy as that sounds, it would literally help every single person who went through it.

Katie: And I'll make sure to put a link to that in the show notes for you guys listening. All that will be at wellnessmama.fm, along with all the notes I've been taking this whole episode. And that's so interesting that you mentioned about kids who don't crawl for very long, tending to have potentially more issues because of all of my kids, the two that walked very young, one walked at seven months, one walked at nine months, were the only two that seem to have any vision struggles, and they both have seemed to resolve that now. But I had never thought about that connection, but it makes sense. And it seemed to get better when they started doing activities that involved a lot of cross body movements. And so that that lines up perfectly with what you said.

And I feel like I've learned so much in this episode, I'm excited actually to check out ScreenFit and see if we can integrate some of those things in our homeschool program daily just to further helpfully help them not develop any of these issues as they get older. And I think the idea of developing their peripheral vision is fascinating and makes sense. It's helpful in so many areas of life and sports. So I'm really grateful this program has been so helpful. And a couple last questions I love to ask at the end of interviews. Is there a book or a number of books that have personally impacted you, and if so, what they are and why.

Bryce: So I would say the book that has impacted me the most is the one that I keep coming back to on a essentially on the regular. And it's called Shift Your Mind. And it's written by Brian Levenson, who's a sports psychologist by training. Shift Your Mind talks about the nine mental shifts to thrive in preparation and in performance. So it really has taught me how to kind of harness the power of shifting between these different
complementary mindsets. One for prepping yourself effectively for life and preparing yourself for life, and the other for when it matters how to deliver essentially. And it's been my Bible that I revisit before important speeches, opportunities with sports teams, and honestly it's even helped me become a better dad because it's allowed me to really train my brain as much as I train my visual system and learn from all of these wonderful suggestions and recommendations he has in there.

Katie: I will add that to my reading list. And lastly, any parting advice for the listeners today that could be related to everything we've talked about or entirely unrelated life advice that's been helpful to you.

Bryce: So I would say if you have a headache, you may go to a neurologist or if your child is squirming in the classroom, you may go to a psychiatrist or a learning specialist or like we talked about, if you're motion sick, you may see an ENT or an Otolaryngologist. But with almost any symptom, we need to consider that vision could be a part of the problem at least and recognize hopefully after today that very likely it's the missing piece to the problem. And that's why I always advocate putting your vision first and that goes way beyond going to your eye doctor and seeing if you need glasses.

When you're getting an eye exam, you should be asking, okay, after I hear my eyesight, what about my vision? You should be asking for functional tests. You should be asking about what doesn't seem to make sense for you because so many of us get glasses or contacts that try and solve the problem. Very often there's no solution other than retraining the brain and glasses just make things different. So definitely let's seek out 20/happy like we talked about, not 20/20. And let's not jump into the deep end as we age as well. Relying on help with over-the-counter readers, the first chance you get, there are other alternatives to train the visual system just like we train our bodies.

Katie: Well, this has been such a fun episode. I definitely learned a lot. I'm excited to have more resources in this area for my own family and for everybody listening. Thank you so much for your time and for such a fun interview.

Bryce: Such a pleasure to be here and to engage with your audience and I love what you're doing. And wellness extends to so many aspects of life, but visual wellness is a big piece to overall Wellness. So thank you for educating your tribe in the way that you do.
Katie: Oh, thank you. And thanks as always to all of you for listening and sharing your most valuable resources, your time, your energy, and your attention with us today. We're both so grateful that you did. And I hope that you will join me again on the next episode of the Wellness Mama podcast.

If you're enjoying these interviews, would you please take two minutes to leave a rating or review on iTunes for me? Doing this helps more people to find the podcast, which means even more moms and families could benefit from the information. I really appreciate your time, and thanks as always for listening.