

## Radical Remedy - Dr Robert Melillo Transcript

0:00:01 - Dr Chloe

Hey guys, it's Dr Chloe and you're listening to the Radical Remedy Podcast. Today's guest is none other than Dr Robert Melillo, so he is the founder of the Brain Balance Program. He is an internationally known chiropractic, neurologist, professor, researcher and expert in neuroscience, neurology, neuropsychology and rehabilitation. So Dr Melillo's system of working with the brain is truly unique and incredibly fascinating and effective.

I find it really interesting to see the potential, not only for children with neurological disorders, but also for adults who are dealing with neurological quirks that we're starting to learn about later in life. Please check out this episode. I think you guys are going to find it as interesting as I did. Let me know what you think and check out his books. He has the Disconnected Kids book line and it's really, really phenomenal. Again, it was such an honor to speak with him and it's an honor to have you sharing this conversation with us. All right, Welcome everybody. I'm Chloe here and I'm here with Dr Rob Melillo. He is the founder of the Brain Balance Program, the author of multiple books which are really awesome Some of them I read at the beginning of me and Remy's journey and we're really honored to have you here. Welcome, Rob.

0:01:12 - Dr Robert

Well, thank you for having me. It was great and it was such a pleasure to meet you and Remy the other day.

0:01:18 - Dr Chloe

Yeah, now it was really fun. So tell us a little bit about how you got into this field.

0:01:24 - Dr Robert

Well, I got into it as a parent. It's like you, basically meaning that my interest clinically was always neurology and rehabilitation. That's kind of how I started my journey. I started out really as a chiropractor really interested in working with athletes, because that was my background and I had had really good experiences with that. When I was in chiropractic school I got exposed to the fact that chiropractic is really based in neurology and I really got into that. And then after I graduated I got my Diplomate subspecialty in neurology and then also in rehabilitation and I just wanted to focus my career on looking at merging neurology and rehab and I started getting into academics and I started doing research and teaching and was pretty successful in that by the time the early mid-90s and then 1995, I walk in my house and there's a woman sitting at the kitchen table with my wife and she's crying and I'm walking in late there's a lot of us practitioners do and it's nine o'clock at night and three small children and she says Rob, this is Denise, her son has severe ADHD and mild autism and she doesn't know what to do.

And in my office I had started one of the first multi-specialty practices in the country. I had acupuncture, chinese medicine, nutrition. I had MDs, pts, ots, I had psychologists, I had all of it in my actual office. And so she knew that I knew a lot about a lot of different things and especially a lot of different non-mainstream alternative approaches. And she had only tried really medication and some basic behavioral intervention. And she was kind of at her wit's end. And so I grabbed my wife aside and I said I see what you're doing, this is great, but I already don't have any time. I'm not home. So I don't know what ADHD is, I don't know what autism is, and she says well, this woman's in pain, she needs help. And I have this feeling that you are meant to do this. You can help her, I know you can.

0:03:49 - Dr Chloe

It's definitely a calling yeah.

0:03:52 - Dr Robert

And I said to her well, okay, and I just kind of couldn't deny my wife, and so I talked to Denise and went off. And then, two days later, I go into my son's parent teacher meeting. He's about six years, five, six years old, he's in first grade and he's like I'm going to get down and teacher says to me you know, don't know how to tell you guys this, but I think your son has ADHD or something like that. And so now I'm hit twice in a matter of two days with this right. And first I feel I feel like, you know, I'm embarrassed. I'm embarrassed as this professional who's out there teaching neurology and I don't even know what it is. And then I feel like, like most parents do, I feel like I'm to blame somehow for my child's issue. I'm like how?

did I not see this and as a professional, I feel even more responsible, right. But at the same time I hear my wife saying she had this feeling that this was meant to be. And I'm getting these two things and I'm saying this isn't a coincidence. And so I just say, you know, all I know at that point is I'm going to try to help my son and I'm going to try to help Denise's son, and that's how it started.

And you know, the first question for me was you know, really, neurologically, what is ADHD, what is autism, what is happening in the brain? And I went to all the people around me that I thought would know and they all came back with the same answer they had no idea. So that started me on my journey was first and foremost because I knew I couldn't. I couldn't even know if I could help my son until I really knew what it was. But I knew a lot about the brain, I knew a lot about neurology and I had already been doing research. So you know, I had the tools and so I just dove into it and spent the next, you know, as long as I could really figuring out what, what that problem was.

0:05:44 - Dr Chloe

Yeah, and well, you've started such an incredible program that's helped so many I mean thousands and thousands of children and families. It's really incredible. So you're. The book disconnected kids was one of the first books that I read when I was starting my journey with Remy. Remy wasn't diagnosed till he was two and a half, so obviously very, very delayed, and so I found it really. It was a really interesting program where you're looking at the different hemispheres and how they're communicating. Do you want to dive into a little bit of that and how that sort of works and how that affects children?

0:06:19 - Dr Robert

Sure, well, that was, you know, as I started really diving into the research and spending every spare moment I had really in medical school libraries and copying papers and getting books and staying up till you know two or three in the morning when everybody was sleeping so that I could kind of have some time to read and write. In the, you know, mid-90s there was interesting time because that was declared the decade of the brain by Bill Clinton, and so all of this new brain research came out and also new ways of imaging the brain in real time that had never really existed before. So all this information about how the brain actually functions. Before that the only way you could really get an idea of what was happening in the brain was after somebody died. You could look at an autopsy of their brain. But, you know, looking at a brain in real time was not something that was really very feasible. So you know, all this brain imaging came out and it started to the concept of functional connectivity really started to become in the forefront, meaning that how the brain communicates, that it was becoming pretty apparent that most issues that are neurological, whether children or adults, are really not structural, they're not chemical, they're not necessarily genetic mutations, but they're just something about the way the brain is communicating and connecting and the way networks communicate and connect. That really are the foundational problem. That's the issue. And so

you know I was fascinated by this and it made a lot of sense to me. And so the problem really is that different networks in the brain aren't really communicating, and especially between the two hemispheres, and the two hemispheres how they mature and how they develop. So that was really important, because the problem was about this functional connectivity where areas of the brain weren't communicating, but it wasn't clear as to how that happened.

And then later on I was able to understand and figure out that it really was a product of improper development and growth. So now in psychology and psychiatry and mental health and education, we realize that almost everything in adults really starts in childhood, that it's all developmental, either in the womb, in the first, you know, three to six years of life, something goes awry, and so I was able to figure out that. You know what happened is that during the growth, early on, that there's this kind of developmental imbalance where certain areas, certain networks on one side of the brain are slowed in their development because environmental factors are basically inhibiting the expression of genes, and the right brain develops first in the womb for the first two to three years of life. So when that happens, the right brain slows down and then the left brain tends to speed up. And if there are, especially in people that are gifted in their left brain skills, this kind of creates this developmental imbalance where we have areas of the brain that are actually overactive and maybe even hyperactive and you have other areas that are underdeveloped and immature and once this is in place it stays that way.

And depending on whether the delay is in networks on the right side and overactivity on the left or vice versa, you have completely different types of presentations. So, like ADHD, what you have is, you know, attention deficit, hyperactive disorder. The attention deficit is the delay of development and immaturity on the right side of the brain where there's certain networks, especially a network called the dorsal attention network is underdeveloped and immature, and then you get overactivity of networks on the left side of the brain that are related to motor activity and motivation and emotions and thoughts. So you get hyperactivity of the left brain or even obsessive or compulsive or hypermotor activity, so you can get ticks, and so the combination of the two is what we call ADHD.

Dyslexia and learning disabilities typically are the opposite, where we have an overactivity on the right side and under on the left, and the makeup of it. You know all the different networks, all the different areas of the brain. It's unique to each person, so no person has the same combinations of hyperactivity and underactivity, but the bottom line, the problem, is the same and this is the core issue now, and in understanding that and coming to that and you know I wrote a textbook in 2004 called Neuro Behavioral Disorders from an evolutionary perspective Neuro Behavioral Disorders of Childhood from an evolutionary perspective where I really, you know, put this down and took me about 10 years to really compile all of this. But you know that book is used in graduate programs, medical schools, psychology programs, and now that you know that understanding is really at the highest level of research, really what we understand is happening with these issues, and once you understand that, then it opens the door and says okay, now what can you do to try to help or even fix these issues?

0:11:55 - Dr Chloe

Well, yeah, definitely I have. I actually have that textbook in my Amazon cart at the moment. I was debating whether to do that or to just jump in and try one of your courses, but I've loved reading the work that you've done and it was really cool meeting you and seeing how you assess children also with working with Remy this past week. So tell us, let's, let's go into sort of how you figure out the imbalances and then where you take it from there.

0:12:22 - Dr Robert

Sure. So you know I do as you said. I have a clinical course. I've been teaching to doctors and therapists and teachers for over 20 years, since 2000. And so you know it's really looking at my exam and how I train people to do it. It's understanding that whether you're looking at kids or

adults, what I do is really what I call developmental function or ology, which means that you know we work with adults and I train people that work with adults. And it's, you know, understanding that all of us have brains that develop this children, and if those brains didn't develop in an optimal way, it may not be affecting us, obviously, or we may even be extremely talented or competent at certain issues, because people that are extremely talented or even more likely to develop an imbalance on the other side, that it's all developmental. And so, looking at a developmental exam so whether an adult walks in complaining of adult types issues, you know everything in psychology now is looking at developmental and realizing that it all starts early on.

0:13:36 - Dr Chloe

And so it's a little daunting as a parent.

0:13:40 - Dr Robert

Yeah, yeah, exactly. But you know the good news is that it can all be changed at any point in someone's life. For the most part and of course I mean you have Remy who has some, you know there aren't that many percentage of people that have true genetic disorders. It's a bit more challenging, but most issues are not genetic mutations or brain injury, they're these functional imbalances. But even in genetic disorders you can have functional imbalances superimposed that you can make a really big difference.

So you know I'm always teaching people how to look at anybody from a developmental perspective, to really go back in time and say, did this adult's brain develop the way it was supposed to? And the way to do that is to go back and look at, first and foremost at what we call primitive reflexes. Primitive reflexes you know, when a child's born there's only about 25% of their brain there and you know, by the first three years it grows to 90% of the adult size. So there's a lot of growth that's happening and most of that growth again is this functional connectivity in the brain. We're not creating more cells or anything, but when the child is born they're bombarded with all of these stimuli.

But the main thing that causes the brain to grow is movement. Motor activity is the single most important thing in a child to stimulate growth of their brain. It engages their muscles and it engages their senses and creates this massive feedback into the brain which turns on genes, which then starts to build connections in the brain. And the more the child moves, the more they move in a sophisticated way, the more feedback we get. And then you know when we're first starting out, the child really doesn't have a brain, they really don't have a motor cortex yet.

So we're born with these reflexes that start in our brainstem, at different levels of the brainstem, that allow us to do things like the rooting and sucking reflex, which allows a child to latch on and feed themselves. Grasping reflexes, which allow them to protect themselves from hold on and falling and grab things, the orienting reflexes, the writing reflexes, labyrinthine vestibular reflexes, the asymmetric and symmetric tonic neck reflex that eventually lead the child to roll over and then crawl on their belly and then on all fours and then eventually walk. We believe many of these reflexes are there to help the child birth themselves. So, like the asymmetric tonic neck reflex, when they turn their head it literally causes them to twist, like they twist out of the birth canal.

0:16:27 - Dr Chloe

It's just a funny personal note Remy and I had. Remy was two weeks late. We ended up being induced. We had 72 hours of labor but he just was not going anywhere and then we ended up with a C-section and in hindsight I really think a lot. You know, with the labor never progressed because he didn't have any reflexes, so he wasn't moving anywhere.

0:16:49 - Dr Robert

Exactly exactly, and you know, we know, that going through it's kind of like, you know, caterpillar coming out of the chrysalis to be able to turn into a butterfly right. Coming through that birth canal is a similar thing to a baby that there's this massive feedback and stimulation and there's, you know, all this good bacteria from that the baby gets. That, you know, coats, their gut and their stomach lining. So these reflexes are really important and they really help the child to move and engage their senses. They should all be gone by the first year, which then should be replaced by walking. Children should walk at 12 months. 11 to 13 months is what I consider normal.

Anything beyond that or before that is abnormal and it shows that already there's some sort of, you know, non-optimal way of the brain developing. Children need to crawl. They need to crawl in the right way. If they scoot on their butt or if they roll or if they, you know, drag one leg, it shows that these reflexes are getting stuck. You know the fact that you know they have, we have these reflexes and they're there and they help us to move and interact and then they should go away. And if a child doesn't crawl or if they have asymmetric primitive reflexes. If they go away on one side and not the other, they create this imbalance of muscle tone, and an imbalance of muscle tone and these persistent reflexes that don't go away is what ultimately produces this developmental imbalance in the brain and that is what leads to almost every major issue that we see, and it will last a lifetime.

So I just use this analogy on Instagram the other day that you know, when you're getting a child to ride a bike, let's say you, they may have training wheels on their bike and what would happen if you never took the training wheels off and they always relied on these training wheels? They probably never would learn how to ride independently. They couldn't be able to do really sophisticated tricks, they couldn't ride real fast and you know these training wheels would always hold them back. And that's basically. You know, primitive reflexes are essentially training wheels for the brain to help the brain develop until we can take those training wheels off and then the brain can really grow and soar and become really complex and what we see is that if they don't go away in their first year, they never really go away on their own.

I mean, I can show you videos after videos of adults with full-blown infantile level, primitive reflexes in really really bright, competent people but who also have struggled their whole life with certain issues, and we can get rid of those reflexes pretty quickly usually, and when we do, it's life changing. I mean literally life changing right in front of you. You can see these people like anxiety. They've had their whole life goes away. You know they've had chronic digestive issues their whole life and they go away. Or all of a sudden now they can read where they've never been able to read. I mean it's really pretty amazing stuff.

0:20:08 - Dr Chloe

It's crazy. I thought it was interesting. Also, my dad had heart surgery a couple years ago and ever since his startle reflexes come back and I'm always like, can we work on that for you? And my parents just think I'm a little crazy, but it is, it's pretty profound. So that happens too, also sometimes if there's like an injury or if there's surgery. Have you seen that happen?

0:20:32 - Dr Robert

Yeah, absolutely. Well, it's actually there's a name for it, it's called frontal release signs. So what happens is ultimately, you know, with this feedback from muscles and again going up the brainstem and looking at the brain builds from the outside in and then from the bottom up, and then, as it builds up from the bottom up, going from the medulla to the pons, to the mesencephalon midbrain, then to the limbic system and then to the brain, and then ultimately in the back, we get something called the temporal parietal occipital area, which is the major association area for sensory integration, and then in the front we get the most impressive association area called the prefrontal cortex, which controls all human behavior and function,

and it literally grows out of the motor cortex. I mean, that's literally where it grows from. So if anything affects motor development in any way, it is going to affect the development of our prefrontal cortex and therefore it will affect our ability to think and behave.

I'm going next, in two weeks, I'm going to be lecturing this is the third year in a row on the keynote speaker at a conference called movement and cognition. Two years ago it was at Oxford, last year it was at Harvard Medical School, this year it's in Tel Aviv, and this is some of the top researchers in the world. Over three or four days They'll present about four or 500 papers and experiments really showing that cognitive development emerges from movement, from motor activity, from motor development, and so primitive reflexes is where that movement really all starts. But then ultimately the frontal lobe comes down and inhibits all these reflexes. So once the brain builds from the bottom up, it then comes from the top down like a puppet master and controls everything. The brain controls everything, not just motor activity, but how we process sensory information, how we regulate our immune system, our digestive system, our autonomic system, our autonomic system, our hormones, our detoxification system. All of that is regulated by the brain. And this is what most physicians have no idea that they think. The immune system, the hormone system, the digestive system operate independent of the brain, and they can, but for them to operate optimally and properly they need the brain to do that.

In the right and left hemisphere control all of those systems differently. So if there's an imbalance in the brain we don't get appropriate top down regulation, and that also includes the primitive reflexes. So if anything affects the frontal lobe in the brain either a brain injury or concussion or neuro degeneration or Alzheimer's or dementia, or if they're really sick, like you said, then the frontal lobe can lose its inhibitory control and these reflexes sometimes can come back and in fact that's what we see. I mean there's a classic reflex called a Wabinski reflex that I think most clinicians know of. That is called an upper motor neuron lesion sign. So when someone has injury to the brain, the cortical spinal tract of the spinal cord, we see the return, we see the Wabinski sign. Well, most people don't realize is that is a primitive reflex that goes away exactly at one year, which allows the child then to walk, and when it comes back it means that you know we've lost that control from the frontal lobe.

0:24:10 - Dr Chloe

Yeah, that one's super interesting. That's the one where you do along the bottom of the foot and then the toes sort of splay out right.

0:24:18 - Dr Robert

Yes, exactly, exactly. And you can see. Like you know, like on Remi, we saw that it was more on one side than the other, right? So you can see in children that should go away at 12 months. If it doesn't, which often we see, then usually this delays walking. But it also shows that their brain has immature and you know that may persist into adulthood.

If it happens on one side and then not the other, that means that there's an asymmetry of development where one side of the brain or one side of the brain stem is maturing at a faster rate than the other. And this is representative of this developmental imbalance which I believe in my research has shown is really the core issue in almost all neuro, behavioral, mental health and education issues and many health issues Because, like I said, when the brain is out of balance, it affects every system. So that's why kids with autism or ADHD or they don't just have, you know, attention problems or social problems. They also have digestive problems and food sensitivities and chronic inflammation and eczema and autoimmune issues and asthma, you know, and hormone imbalances and all of those things. Digestive enzyme problems, because thyroid issues.

Right, because the brain isn't regulating it.

0:25:36 - Dr Chloe

Well, it's interesting with Remi. So Remi's disorder is mutation in the syntax binding protein, so it's basically how neurons communicate. So when you look at Remi and everything in his body, everything's essentially perfect, especially, I mean, he's just very good looking. I'm totally by. But you know, but it's funny because everybody you know, it is sort of challenging having a child who's pretty severely disabled, who actually looks really neurotypical. I get really obnoxious comments all the time like oh, he's so big, he should be pushing you in that chair. Oh, and I'm like, hey, thanks, hi, you can't walk, um but um.

But with Remy, like everything has developed well, but it's his neurons can't communicate, so everything in his entire body is affected by that. So it's interesting to watch. And it's interesting also for me as a practitioner. It's been interesting to watch development in uber slow motion. So Remy continues to move forward but it's very, very slow. So it's given me the opportunity to look into all of these things and reflexes are definitely a huge, a huge part of it. So once you once you sort of look at these kids and check which reflexes are active and which they're which are more active on which side, then then sort of what's the next step for that?

0:26:57 - Dr Robert

So you know, again, taking people through a developmental perspective at any age, going back in time and basically looking at them and doing a. I look at you know muscle tone and asymmetry. So people come in and you know, with infants, the first thing you look at neurologically is their tone and symmetry. They should be balanced, they should have perfect, you know, balanced tone and symmetry at the right level. And you can see that in adults too. So you look at things like do they have a head tilt? Is there a facial asymmetry, which is really very important, you know? Is one eye bigger than the other? Is they? You know, the crease between their nose and their mouth? Is it deeper, much deeper on one side than the other? Does their mouth droop down on one side, you know. And then I look at their arms and their legs and see if they have, you know, like bending and angulations, or do they have a body tilt, and these can be very subtle or they can be very dramatic, but most people don't even know that they have them. And then looking at primitive reflexes which may be the source of a lot of this imbalance, and then looking at their overall core stability a lot of people and adults that have chronic back pain. It's because they never develop the proper balance of muscles in front and back or right to left, and this, you know, imbalance of tone, or their brain being unbalanced, is creating different tone and this ultimately leads to things like neck pain or dizziness or headaches or back pain. But it really, you know, may go back to their childhood. So we look at core stability and then part of that. So, as a child develops, the first thing they do, obviously is they roll over and then they start to crawl and then they stand up and you know, to do that they have to have get rid of the reflexes and have proper postural stability as they stand up. Now they engage, their they're really their vestibular system, their inner ear and the first part. There's two parts of the inner ear. One is called the otolus, which really helped to balance the head on the body. So if we see body tilts and head tilts, that usually means there's an imbalance in the otolus. Then we develop the semicircular canals, which helps to regulate what's called the vestibular ocular reflex, which helps to control and stabilize the eyes in the head so that when we move our head our eyes aren't and we're walking and our head does a figure eight movement. Our eyes aren't bouncing up and down, so the whole world doesn't look like it's bouncing up and down. You know, when we move, our eyes stay steady and this is a. You know, this is something that is a developmental reflex and if it doesn't develop appropriately, then you know we see that and then we go into the eyes and look at the eyes and how we're able to regulate our vision and our movement of our eyes.

And then we start looking at how we are able to perceive sensory information like sound and light and smell. I mean most of the kids, a lot of the kids I work with, have completely abnormal sense of smell. Many kids with autism don't even know how to sniff. So that area of the brain

that is associated with smell is hugely important. It's the basis of social development. I mean animals socialize through smell, right, so the basis of a lot of our social networks in our brain start with smell. This is also why most kids that have these issues are incredibly picky eaters. It's really because they have an abnormal smell and taste.

So, looking at sensory and then looking at sensory processing so how do we process auditory information and high level visual information and then how do we integrate that together?

And then looking at, obviously, high level motor activity, and then ultimately looking at the prefrontal cortex and how we regulate attention and thinking, how we regulate social behavior, how we regulate high level complex movement, how we regulate eye movements, how we regulate our emotions and motivation levels, and all of those things are ultimately what create human behavior, learning and all of the high level functions that we do.

So we need to look at it literally in that way, and that's how I do my exam, that's how I train people to look at an exam, and that's how I look at anybody, no matter what age they're at, and usually what we're able to find is that somewhere along that way you know that didn't happen, and when we do, we need to go back to that stage and then work with them, whether it's doing specific exercises to get rid of primitive reflexes.

But what I've overall found is that all of it, ultimately we have to create balance between the two hemispheres and between these networks. That's ultimately what we need to do and if we do that and as we're doing that, we get rid of primitive reflexes much faster. We create course, stability and balance, tone. We create, you know, more appropriate balance between the inner ear and the eyes. So that all of this, really, when we're doing that? So you know, initially, with most families and most kids, we start with getting rid of the primitive reflexes, building up their course, stability, and then stimulating one side of the brain exclusively to start to create this balance. And then from there, as we start getting changes, then there are more and more complex things we do till we ultimately really get their brain to where it was supposed to be all along.

0:32:24 - Dr Chloe

Yeah, no, it's so cool. Well, it's two things to touch on, one I think it's interesting and I'm curious to hear what you think. So one thing that I've always sort of felt, which some people agree with me and some people don't. So obviously this is to Remy again, but Remy is significantly disabled. He's not walking, and so I've been pushed so much by a lot of his therapists to put him in a gate trainer or a standard or things to try and force him to walk. But to me I've always sort of been like let's work on him crawling, let's work on him, you know, working on the reflexes, because my instinct was, and what I've worked with some other practitioners Once he starts walking, if he hasn't integrated his vestibular system and other and some of these other things, then he's just gonna. He's just gonna hurt himself and fall down all the time.

0:33:14 - Dr Robert

Absolutely correct, absolutely correct and that's true with I'm just working with this, this man right now he's an American hero. He was a Navy SEAL and when he was home from deployment he got into a severe car accident and suffered severe brain injury. And his wife is just this amazing person that is, a Pilates instructor that has dedicated her life to try to help him. And you know he really wasn't getting much help. And you know, one of my colleagues, one of my students, went and worked with him and made a huge difference in their life. But then they asked if I would be willing to go down and work with him. So I was, you know, honored to go down there. And you know, they had these parallel bars, you know walking bars, and they were kind of forcing him to try to walk on these bars, where she was like literally holding him up with a strap right, and I, and the first thing I looked at it, I said you know he



doesn't have any basic core stability. So with kids, with people with brain injury, like all of his primitive reflexes are back right. He speaks like a child. He, you know, understands things in a very limited way. He's essentially gone back to being a child, and so what we need to do is when I said to her was we need to go back and really start working on the floor and on crawling and on core stability, and she got that because she's a Pilates instructor. So she started doing that and within a couple of weeks, literally, he was able to stand by his bed independently for the first time. All of a sudden, he's also starting to now not need a catheter to pee, because now his pelvic wall is coming back right and he's starting to actually know when he has to pee, which he had no idea before. And along with that higher level language and but you know, the idea is exactly what you're saying I said to her you know we can't get him up walking until he's actually stable on the ground. You know children don't just go from, you know, rolling on their belly, and then stand up and walk. They got to, they got to crawl, they got to build those systems first. If you don't have that foundation, you know, and the goal is obviously to get him to walk independently, and I believe we will. But again, what happens after baby walks? Then they start to talk right, really. So you know the high level cognitive issues like talking and thinking and all the things that we want to get back for him is not going to happen until we go back in time and build him back up. And it's exactly with Remy, you're exactly right. You know, getting a child.

I hate the fact that when they throw braces on their legs and do that rather than really work on and they don't realize that the reason why the child isn't walking appropriately, doing this because they have these primitive reflexes, they don't have core stability. And you know, no one looks at these reflexes, even though they're part of a normal pediatric neurology exam and have been for decades. You know, pediatricians never look at them, almost nobody ever looks at them. And they are so key and foundational in everybody, not just kids, as I said, but adults.

And when you get rid of them, you know you have to be able to build them back up. And I totally agree with you, Remy, we have to get rid of his primitive reflexes, we have to build his core stability, we have to build him on the ground, where he's stable and he can, you know, be on all fours and sit up and be good, and then naturally he'll start getting up and walking and be able to walk in a more stable way. And so you know, getting him up and getting him in a trainer or a walker is absolutely the wrong thing to do, and you're right.

0:37:03 - Dr Chloe

Yeah, it just blows my mind that it feels like all of this is so logical and makes so much sense. There are so many people who are doing this and doing remarkable things and making, like you know, huge changes in people's lives with neurological conditions. Yeah, it seems like most of the therapists in this country, at least that I've met, really don't know any of this at all. So I'm so happy that you have a training program, training other practitioners, because it's so important.

0:37:34 - Dr Robert

Remember I said from the very beginning that most of the time the parents know more than the people that are actually out there doing it. And it's not that the professionals aren't bright and intelligent and dedicated they are. It's not that they're doing this and not aware of this because they're lazy, it's because what happens is that very few people actually really understand the brain. I mean even what people don't realize is most neurologists, most psychologists, most psychiatrists. They really don't know a really high level, at the high level of the way the brain really functions. They know clinically how to be able to assess and treat issues, but they really don't know how it works and they really don't know how it develops and they don't understand how it doesn't develop. And the average paediatrician knows nothing about neurology. So the idea is that there's very few people out there and they're getting these basic training on how to be a clinician, and a lot of the way we approach a lot of these neurological issues is we approach them as an adult. We think about okay, as an adult, we would want to get somebody

up and walk, and we think like, okay, a kid can't read and they're dyslexic, so what do we do? Well, make them read more To an adult. That kind of makes sense, but really, when you think about it from a developmental perspective, it makes no sense.

You're trying to get the child to use an area of their brain that hasn't even grown yet, but you're going to force them to try to use it even when it's not there. It's like saying I'm going to force you to use your right arm even though you don't have it Right. So do this right at arm exercise every day. And you sit there like I don't have an arm. They're like well, do the exercise, and if you do the exercise enough, your arm will grow. That's not the way it works, right, it's a top down approach that we use to almost all of these developmental issues. So we're basically saying well, use your brain and use your reasoning. Let's modify your behavior and let's sit down in front of a computer and try to make you concentrate, or let's make you read books.

0:39:48 - Dr Chloe  
And just try harder.

0:39:49 - Dr Robert  
Just try harder Instead of saying, no, the foundation hasn't been built yet, so let's go back to that and then build it back up, and then we can add the more high level cognitive based stuff, and then it'll work.

0:40:05 - Dr Chloe  
One of the things that we talked about the other day that I just haven't studied much of. That I'm really that I want to study more on, so I'm going to pick your brain on it a little bit. Can you tell me a little bit about how vision affects the brain and how the brain affects vision and just speak to that for a couple of minutes?

0:40:21 - Dr Robert  
Sure, well, again, I look at everything from a developmental perspective. So when you look at the development, obviously the three systems that the brain and the nervous system is really built on is really the postural motor system big muscles especially along the spine, the inner ear, the vestibular system and then the ocular motor visual system. So those three systems really form the basis and those three systems, if you look at them they're bilateral right, so they're the only systems really that you know. They're on both sides of the body equally. We have two eyes, we have two ears. You know we have two ties, two sides of our spine and our posture, and then they end up being the foundation of the brain which has two sides, so that it's all in this alignment and vision.

You know, children don't really see clearly until they're really about six months of age, when they're born first. Obviously they don't see a lot in the womb, but then, when they're first born, they only really have more peripheral vision. They can see the outline which is partly. You know, during that period of time in the womb, in the first two to three years of life, the right brain is forming. So the right brain visually will always be more specific and better at looking at peripheral vision, at movement, motion detection and at looking at the big picture. So the right brain just kind of gets the outline of things. It doesn't look at detail. Later on, after three, when the left brain starts kicking in, then the visual system and different receptors called parvocellular receptors, as opposed to the initial magnosellular receptors, which really only, which have a large receptive field. So that's why, again, the receptors that are forming the stimulus that's available and the side of the brain that's developing. Well, this is how it dictates and this is how it creates one side of the brain being a little bit better at certain things than the other. And then the parvocellular receptors, which is really more in the central field of vision, develop after three years, primarily two and a half, and that goes, you know, more to the left brain and we get. The left brain is all about detail, it's about very clear vision and color vision. So you know this shapes the way the occipital lobe on the left is different than the right, but

obviously the idea is that we need to blend both of those together. So it's always about using the whole brain. But the right side is, you know, develops better for certain things and the left brain becomes better at other things, the whole brain can become anything, but the fact that the brain becomes asymmetric and lateralized is absolutely true. You know it's crazy.

Sometimes you read on the internet some. There's a person wrote an article in Psychology Today a few several years ago. In the title of it was at the right and left brain thing is a myth and when I read that I was like where's that coming from? Because that's completely wrong. Based on what we know with, you know, decades of research and you know it turns out that he really was. You know, in the article he talks about how the right brain and left brain are different and asymmetric and but he talks about how he didn't believe the idea of a right brain or left brain kind of personality type or style was right, because there was this article that came out in the university of Utah that kind of supposedly, you know, showed that it wasn't true. Turns out you know that I that article is not, is not accurate and the whole idea is wrong.

But the idea that the right brain and the left brain, you know, work and can become anything, but ultimately they become more specialized and this gives us great advantage and but ultimately we need to blend them together.

So you know, the left field of vision and the right side of vision we get, you know, motion detection, big picture, peripheral vision.

You know, from the right we get the left, we get detailed, very clear central vision, we get more, you know, looking at the colors, and we merge them together and that's how we get appropriate visual processing. So it's a very, very important foundational system and you know, if there's a lazy eye, if there's an imbalance, and it starts also with the ocular motor system. So the muscles are really what develop first. And then we develop a reflex called the optokinetic reflex, which remember I showed you at the other day, where you look at, let's say, moving lines or anything moving and the eye jumps back and forth or up and down, and that's a basic reflex that eye movements and vision are built on. And again, that has to develop appropriately and if it doesn't, then you know we may get problem where we have imbalances and eye muscles or a lazy eye, or you know we can't really follow or track appropriately. And then this obviously affects the visual acquisition and you know how we're able to merge our images together to form 3D vision in the brain.

0:45:41 - Dr Chloe

So cool. Yeah, it's been really interesting watching Remy's vision change as he gets older. He still does the side eye, so I'm excited to work with that a little bit more.

0:45:54 - Dr Robert

Well now you can understand why he does the side eye, because he's still he never really completed developing his right brain and so the right brain sees out of the side of the eye. So he kind of turns his head to kind of favor the side which helps him engage more in that right brain system. You know, and then eventually you know you look at things straight on with our macula, but you can kind of understand why autistic kids and kids like Remy will look out of the side of their eye. What is that all about? Well, it's all about you're actually using either the right brain or the left brain more. You're favoring one side or the other Very cool, all right.

0:46:38 - Dr Chloe

Well, I know you've got a lot going on. You're going traveling.

0:46:41 - Dr Robert

Yes.

0:46:42 - Dr Chloe

So I'm super grateful that you took the time to talk with me. Is there anything else that you feel like other parents or other practitioners should know, or where that can they reach you?

0:46:53 - Dr Robert

Yeah, I think you know there's a lot of different things. My website is really very active, so there's a lot of stuff on there. I have a lot of different programs educational programs for professionals, for parents I do, you know, coaching programs to help people like bring a lot of this information out to the world and also bring it into their families and into their lives. I have a group, you know coaching and therapy programs that I do with parents around the world if they want to really incorporate a lot of my work into their home. All of this can be found on my website, [drrobertmelillo.com](http://drrobertmelillo.com). I also just created an online course for adults with ADHD and different types of brain imbalances. That's completely online that they can also go to, where they can assess themselves, find out about their own brain and then basically follow this course and see if they have primitive reflexes, and then I give them specific exercises and activities and a lot of the information. There is something that they can do at home on their own. So I think you know, if somebody's really struggling and adults obviously can't always get it's harder to get to an office or something this is something that people can do on their own. And then, obviously, my books are also available through there and I have vitamins and supplements that I created, so anything that's out there really on my website.

I'm also pretty active on my Instagram and what I try to do is a lot of people ask me about what are these primitive reflexes look like, or what does it look like, how do I assess it in my child or myself, and so I'm always putting on little videos on my Instagram.

So at [drrobertmelillo.com](http://drrobertmelillo.com) is my Instagram and it's connected to my professional Facebook page as well, so I'm always putting a lot of educational videos out there. I do have, like I said, my professional course. I'm starting to teach it live down at Life University in Atlanta in September and I'm also going to be teaching it in Bulgaria for European and people around the world starting in September as well. So you know all that information is on my website. People can go to that, people can check it out if they want to do that and they can reach out to me. I usually try to answer questions, especially on Instagram, but you know I try to just whatever get this information out in any way possible to people and you know, just anxious to talk to anybody that wants to know more.

0:49:31 - Dr Chloe

Well, awesome it's really. You know, to me again, getting this education out there is so huge. Not only have you developed a program that seems to really really work and look at the whole brain and really help support neurology and development, you know, the fact that you're doing so much advocacy and education around it really is amazing. I've met a lot of doctors who are brilliant but who sort of keep their stuff in their practice and to me, the more, the more we can get this out there, the more we can empower and educate parents and families, you know, the better we all are. So thank you so much for that and thank you so much for your time. We'll let you get back to your family before you go travel. Thank you again. I hope you have an awesome day, okay great yes.

Thank you.