The Neurogenesis Diet & Lifestyle

Heather Sandison, ND
with Brant Cortright, PhD

Heather Sandison, ND
Welcome to the Reverse Alzheimer's Summit. I am absolutely thrilled to have Dr. Brant Cortright, PhD here with me today. He is going to break down these connections between depression, anxiety, and dementia. We know we can not completely unwind them, but he really makes a case for why, if we are not taking care of our mental health, we are only focusing on the physical, we are really leaving half of the potential benefit on the table. Dr. Cortright is a Licensed Clinical Psychologist, Professor, and Bestselling Author. His recent book, "Functional Psychology for Anxiety, Depression, and Cognitive Decline," integrates the principles of functional medicine, diet, and nutrition with psychology. His previous book, "The Neurogenesis Diet and Lifestyle," was an international bestseller. He practices Psychotherapy, coaching and conducts consultations from his office in San Francisco and via Zoom. He is available at brantcortright BRANTCORTRIGHT.com. In this book, "The Neurogenesis Diet and Lifestyle" is the one that I am most familiar with. And I recommend it to absolutely anyone who has an interest in preventing or reversing cognitive decline. It is foundational for understanding the mechanisms, and the science of why these things work, and also very practical in laying out how to do it. Dr. Cortright, welcome.

Brant Cortright, PhD
I am happy to be here, Heather.

Heather Sandison, ND
Let us dive into why the psychology is so important to cognitive function.

Brant Cortright, PhD
Yeah, a good place to start. I think beginning with the sense that we are multidimensional beings is where we need to start. We exist on different levels of consciousness, physically, emotionally, mentally, and spiritually. We exist on all these planes. These are different vibrations or different frequencies, different levels of consciousness that all get integrated into the brain and into the self. Cognitively, intellectually we know certain things, we are self-reflective, we have language, and we need a certain kind of mental food to develop mentally. Same emotionally. Emotions give us information about the world that we do not get any other way, they motivate us. Everything we do comes out of a feeling. If our feelings are blunted, our sense of aliveness is

blunted. Physically, we have a brain, we have a body, and we exist at this sensory-motor neural level and spiritually also. The world's spiritual traditions are unanimous in saying that we are fundamentally a spirit, a soul, a spiritual being at the core.

The brain integrates all of these, and another way of talking about it is that we have a psyche and a brain. The psyche, mind, emotions, senses, spirit, and we have a brain. And there is a split in the health professions. Mostly the one, either medicine focuses on the brain or psychology focuses on the psyche but the two do not really talk to each other very much. And it seems to me that only really a holistic approach, one that involves both sides of this conversation is gonna be helpful here, because Alzheimer's, dementia, and mental health for that matter, is a psychophysical process, we are psychophysical beings. I think that is the place to start, that we need to involve both sides of this equation because neither one can be reduced to the other.

We have a self, a psyche, and we have the brain. They actually are not separate, it is one whole being that we are but we have these two dimensions. And the psyche we can talk about is the mind, emotions, and spirit as well. We live in an environment that is incredibly polluted, that is incredibly toxic. I do not think most people appreciate just how toxic the environment is that we live in. That old story about the frogs in the water that slowly boils and they just sit there and they eventually get boiled, they get used to it. We've gotten used to an increasingly toxic environment over these past 50 years, that is unlike anything we have ever seen before. Rates of anxiety and depression and Alzheimer's and dementia, in general, have skyrocketed in the last 50 years.

Heather Sandison, ND
And I want to clarify here that you mean chemical toxins, heavy metals, mycotoxin, chemical toxins, not just like the toxic sort of polarization in the political climate or the kind of toxicity of what we see on social media or in the news.

Brant Cortright, PhD
No, meaning both. That there is an emotional toxicity that exists right now that has never existed before. There is a kind of mental toxicity that also exists, there is a spiritual vacuum that exists now. It is both this dimension as well, and it is physical. And when I think of what we need to do to grow and get us to develop a strong self and brain, both in terms of we need to avoid toxins, we need to avoid physical toxins and neurotoxins. And we need to avoid emotional, mental, and spiritual neurotoxins, and we need proper nutrition. We need to be fed, engaged, stimulated, mentally, emotionally, physically, and spiritually, all of these ways. We suffer both from toxicity and from malnutrition. Spiritual malnutrition, mental malnutrition, and emotional malnutrition. When we do not get certain emotional nutrients that has a big impact on our brain, as well as how we feel. With something like Alzheimer's, which is a physical process that can be measured, we often tend to neglect the psychological dimension of it. And to think that it is purely physical.

There are a lot of physical causes, no doubt, and I think that is really important but there is also a really important psychological dimension as well. The whole field of Psychoneuroimmunology has really opened up just how profound our emotional state is and our physical state. Stress, for example, chronic stress, which probably most people experience to some degree is profoundly neurotoxic. It is when we get chronic stress, the chemicals that come into our system. Cortisol, a number of chemicals like that. That has an effect on our hormonal system, it has an effect in creating diabetes and insulin resistance, it creates inflammation. And we know that inflammation is behind most of the major chronic illnesses, cancer, heart disease, and Alzheimer's. Go ahead.

Heather Sandison, ND
There are so many components of this toxic environment that directly impact cell function in the brain. And then to add on top of that, this recent history around COVID where then everyone is isolated from each other, and there is the toxicity of fear around being exposed to this virus. I would love for you to put this in that context.

Brant Cortright, PhD
Okay, good. Because we are suffering not only from an epidemic and a pandemic of COVID but also from fear. In some ways, fear may even be more toxic than the COVID that has been washing through society, and the world. What happens when we isolate? This has a huge impact on our brain functioning. One of the drivers of stress is loneliness. People who do not have contact have high levels of cortisol and high levels of anxiety, and the self begins to fragment. The self is relational, fundamentally relational. And if we do not have contact with people or a very limited contact the self begins to fragment, it fragments along its fault lines. So we experience shame, we experience anxiety, early wounds get activated, and the self begins to really shake. And as a result, we get high levels of stress hormones. When that happens, we get. I talked about insulin sensitivity, changing hormone levels, osteoporosis, it causes heart disease, just stress. They do experiments with monkeys where they put them under high levels of stress, and many of them die of heart attacks before they can even finish the experiment.

It has a big impact on heart health but also brings about depression, anxiety, and cognitive decline because high levels of stress actually are neurotoxic, actually can kill cells in the Hippocampus. And the Hippocampus is really important for regulating, particularly anxiety and depression, and has a big impact on cognitive function. Because the Hippocampus is where memory is processed. It is not where memory is stored, but it is where new memories are processed. And so when the Hippocampus begins to go, new memories stop being able to be formed, and the bottom drops out of the self. Memory undergirds the whole sense of self. It undergirds executive function, being able to do several things, and hold several things to our mind at once it undergirds much of our functioning. High levels of stress can actually reduce your Hippocampus by one quarter, by 25%. That is like saying, you only have three of the four chambers of your heart. That is huge.

Heather Sandison, ND
Caregivers, I wanna underscore that for all caregivers who are listening here because caring for someone with dementia, particularly is orders of magnitude higher in terms of stress when that patient with dementia has Lewy body or frontal temporal dementia. But just caring for somebody who is losing their mind is highly stressful. And making sure that we are prioritizing self-care, putting your own oxygen mask on first. Not trying to serve from an empty vessel, but really taking care of ourselves. Not really in the most profoundly unselfish way, because we have to do that in order to care for someone else. And just hearing what you are saying, that impact, that physical impact of atrophy in the memory processing center of our brain that happens when we are under stress, we need to be cognizant of that, we need to be aware and just set that as foundational. This stress is not good for us. Then I wanna know what do we do about it. We all experience stressors. How do we cope, or is coping even the goal? How do we make sure that this does not have that impact?

Brant Cortright, PhD
Great question. Can I just say a couple more of the things that cause it? Because we have just touched the tip of the iceberg here in terms of the impact of stress on the brain and on our emotional functioning. Cortisol and the glucocorticoids that go along with that they not only kill the cells of the Hippocampus but they kill some of the cells of the Hippocampus that regulate glucocorticoid levels. When the glucocorticoid levels get out of control and start killing off the Hippocampus, the very mechanism that is supposed to regulate that spins out of control even more and they get higher and higher and higher. Depression and anxiety also come directly as a result of this. One thing that we need as relational beings, we are constantly reading each other emotionally. And a big way that we read each other emotionally is through facial expressions. We are always telegraphing each other what we are feeling and picking up from other people. And when we are masked it adds a level of anxiety to what is happening because we can not really interpret what is going on. When kids are told in school, if you do not do this right you are gonna take COVID home and you are gonna kill your parents.

Can you imagine, what an impact that has on children? This COVID thing has been so enormous in its emotional impact and on the stress levels of everybody. Just to throw out some more of those, it has been huge. And we not only get it just through COVID but the news. You turn on the news and the music, it is designed to elicit an adrenaline response. And that the business model of the internet and of the news media dictates that the more eyeballs you can get the better and the easiest way to get that is through fear, through generating fear. It is almost like the business model of generating fear is enormously successful and it is creating an environment on the internet, in the media, in the world around us, that is keeping this fear epidemic going, more and more and more. Now, there is a physical dimension to these two but there is an important psychological dimension, which is how do we get out of this? How do we not become dependent on our phones or Zoom calls for contact with people? One thing is we need to have real contact that is nourishing, that is emotionally satisfying, that is loving.

It is quite clear that certain types of relationships, we need relationships, actual, in the room, in-person relationships. But not just any relationships, we need those that are emotionally nourishing. Because if the relationship is fear-driven, if we are in a relationship with a bully, if there is anger involved, this simply creates more stress. People who are at the bottom of the economic hierarchy experience a lot more stress than those at the top of the hierarchy. And issues of equity come into this as well. How do we organize our society in a way that makes stress a little bit more equitably distributed here? That is a big question, but there is a lot that we can do personally in lieu of that before these societal changes occur. One of the biggest things is, making sure you have got nourishing, plenty of good nourishing supportive relationships in your life. People who really see you for who you are, who value you, who love you, who affirm you, where you do not have to put on an act in some way, we can just let it all hang out.

We need numerous relationships like that. Most people also thrive in some kind of romantic, intimate relationship as well. Family relationships. If they are not abusive, if they are genuinely nourishing because we also know that toxic relationships create exactly the opposite. We also need mental stimulation that is not overstimulation. Part of the problem with the internet, with looking at our phones all the time is that we are bombarded with so much information that we are not really absorbing it is just sort of washes over us, and that also creates a kind of stress when we are overstimulated. It is like the brain and the self need optimal engagement. Too little stimulation or too much stimulation raises these glucocorticoid levels, and that is a disaster for the brain and for cognitive functioning.

We really need this multi-pronged approach. We need to physically support the brain through diet, exercise, and getting enough sleep. We need to emotionally support the brain by getting adequate emotional nourishment. And that means also not just relationship but also having a relationship with ourselves, with our own deeper psyche, our own deeper self. Therapy can be really helpful for that, journaling can be really good for that. A certain amount of time alone for most people is also important to really just tune into yourself, to sort of connect to yourself in a deeper way. We need optimal mental engagement, which means really lifelong learning. We need to not just get stimulated all the time by reading the news, but we need to be learning new things, learning new skills, engaging the brain in many different ways, reading, writing, learning new things, going to new places, taking a different way home, and physically also being in nature, being in not just a sealed room. Just a walk in nature has been shown to reduce stress really significantly, with glucocorticoid levels going down with that If you are in a city if you can take a walk in a park, if you can have some plants around if you can look at the sky, very helpful and stimulating to the brain. We need this kind of optimal stimulation. If we have too little stimulation. One reason that solitary confinement is so damaging is because the person does not get mental stimulation or emotional stimulation. And people go insane with that. People can go absolutely insane with too much solitary confinement. If you are confined to a bed or confined to a hospital room, then having the internet, and having a certain amount of stimulation like that, of course, is important. But even there, too much TV watching, meaning over three hours a day, and there is a noticeable drop in cognitive function at that point.

Heather Sandison, ND
TV really does rot your brain.

Brant Cortright, PhD
It does, yeah.

Heather Sandison, ND
I really appreciated how you sort of pulled back into this meta-crisis conversation because dementia almost feels like a very clear symptom of that. Society is set up basically to create more dementia, and that is what we've seen. We are poisoning the water and so we have toxins in our brains, we are polluting the conversation sphere and we are isolating people where the food systems where we get the majority of the food in the US. It comes through these mono-crops and through highly polluting Big AG and all of the cows, the farms, and highly concentrated single-animal farms that do not support the animals and really does not support the people eating them on the other side. And then the government systems. There is no safety net for seniors who are struggling with cognitive decline if they do not have plenty of financial resources. And so when we look at all of these pieces that play into why those struggling with cognitive decline as they age. We are just like set up to fail which is so depressing, and I do not wanna get too stuck on that because there is so much hope in what you offer in this really comprehensive way of approaching it by putting the mind, body, and spirit back together.

And then you have a clear path forward, and really things like getting out outside in nature. These are about healing ourselves but also they start this ripple effect where when you can maintain your cognitive function when you can retain that as you age at the height of your wisdom and experience, then now you have more to give back to finding solutions to this meta crisis. And also just in engaging and in eating a healthy diet and getting outside, and having plants in your house that have a ripple effect to your neighbors and out into society, when we sort of reject that we are gonna spend our days on Facebook or binging on Netflix. All of a sudden that starts to be part of the solution to a bigger problem. I just wanted to sort of come back to that because I think it is so important to the conversation that all of this fits into the bigger hole.

Brant Cortright, PhD
Very good, that is absolutely right. And when we talk about changing the whole societal structure, the whole world structure, in some ways a big part of what it comes down to is how am I in my relationship with the people in my life? How am I in my daily relationships? To my physical world, to my emotional world, to my mental world. And as you say, that then begins to ripple out to the larger world around us. I can be working for societal change but if I am a jerk in my relationships with my family, what am I changing? Not much, probably.

Heather Sandison, ND
What are the first steps to showing up in a positive healing way with others? I would love some insights. I think off the top of my head I was not really prepared to go this way in the conversation. But off the top of my head, things like curiosity, like really looking to understand the other person's point of view even when it is different from your own, looking to understand their experience and avoiding, just advice giving and always talking about yourself. Because we think about it, you mentioned not being in toxic relationships, but that kind of is this one direction, there is toxicity or abuse coming at you. But how can we take some responsibility and show up in relationships so that we are not the toxic ones?

Brant Cortright, PhD
Great question. It is like, how do I become a nourishing person? And you have hit on some of it, a big part of it is empathy. Empathy is being able to really get what another person is feeling and experiencing, to really grasp their experience more deeply. And that is what we all want. We all want, we all need to be seen, we all need to be heard and we all need to be affirmed, have our self affirmed. And if we do not get enough of that and almost nobody does then we begin to fragment. The self begins to get shaky. That is right, having a kind of heart-centered, open-hearted relationship with people who we really can trust, we can trust being vulnerable around, we can trust having an open heart around and we can freely love, we can freely admire them, appreciate them, see what they are all about. It is like, what nourishes a plant? Well, sunlight, water, nutrients, attention. For people, it is attention. What nourishes a relationship is full presence, when I really show up. Emotionally, mentally, and curiosity-wise. When I show up sensorily, I am really taking them in, I am really there, I am really present, and I am not glancing down at my phone half the time. And spiritually, when we have a deep presence, when we are connected with our loving center inside. When we bring that into a relationship we have a lot to offer because we are then really present for the other person and we are responsive. We can sense our own reactions, we can share those and we can really kind of get where the other person is and meet them there.

Heather Sandison, ND
Yeah, I want more of that. I think most humans do. And this is maybe the role of a therapist or a coach, somebody who is trained in being there. So that we can be reminded of what that feels like. If that is been absent in other relationships. Many relationships become transactional, that someone who works for you or someone, the teller at the checkout, that they are doing something for you or you are doing something for someone else and getting paid for it. So many of our relationships become transactional whereas what you are describing is really just about being together.

Brant Cortright, PhD
Yeah, that is right. And I think that a therapy relationship can be an initial step into that. Where you can begin to feel safe, you can begin to really feel some of this stuff. But a therapy relationship is not the whole thing because it is still a one-way relationship. It is still focused on

the person and the therapist themselves is not sharing in the same way that a friend would or a lover would because it needs to be a back-and-forth exchange. But to have someone at least really be there for me, I begin to see, this is what it is like, and I can begin to then bring that into my relationships. I can begin to have a model for that.

Heather Sandison, ND
I wanna jump back into a few. Unless you have other psychological factors that you wanna dive into because we are kind of going back and forth between this tension of the psyche and the physical body. And so we wanna hold both and we have a ton of great experts talking on the Reverse Alzheimer's Summit about the diet, about exercise, about the physical space. And so you really, I think exemplify the expertise in the integration of them but your focus, certainly the psychology has been a big part of your practice long term. And I wanna make sure that we have a complete conversation about that.

Brant Cortright, PhD
Well, I would bring in the spiritual dimension because there are a number of spiritual practices that have been shown to have quite a profound impact on the brain and on cognitive functioning. The two major types of spiritual practices that have had an impact are heart-opening practices and mindfulness practices. These come out of the two great spiritual traditions of the world which are traditions of the personal divine and traditions of the impersonal divine. Much of the West has been influenced by traditions of the personal divine, Christianity, Judaism, Islam, also the Bhakti traditions of India. Much of the East has been influenced by traditions of the impersonal divine, Buddhism, Daoism, and Advaita.

In traditions of the impersonal divine, the divine is seen as this vast impersonal consciousness, Satcitananda, existence consciousness bliss, pure emptiness, the emptiness that contains everything, and we are that fundamentally. And in traditions of the personal divine, the divine is seen as this infinite personal being, not just being itself, but a being. And we exist as a portion of that divine being, a soul, a unique individuated soul, that exists in a relationship of love to this divine being. The divine being is imaged in the West, primarily in masculine terms. In the East it is imaged as masculine, feminine, masculine, feminine at the same time, neither both, but as a being. So, the traditions of the personal divine tend to focus on heart-opening practices because the soul is often seen as existing, deep in the heart, actually behind the heart chakra in some of these traditions. On an inner plane, not a physical plane, can not open up the heart and see it but on an inner plane.

And spiritual practices tend to focus on opening the heart and calling on the divine for union and using love, devotion, gratitude, and appreciation. These practices, open the heart, and as the heart opens the soul begins to come forward, and this luminous center of love begins to open. And those practices have a profound effect on the brain. In some ways, this makes perfect sense. When we are loving our brain is functioning better, when we are not loving, when we are afraid or when we are angry, when we are stressed, the brain does not operate as well.

It is interesting that science has really shown that the insights of spiritual traditions are true. That optimal health involves loving states of peace. Heart-opening practices such as devotional prayer, compassion practices, and practices that focus on the heart and seek to direct it, directly open it through aspiration, love, and surrender. But also mindfulness practices because the traditions of the impersonal divine tend to focus more on mindfulness practices. Both traditions really have both but they tend to see the other as more preliminary. The impersonal divine sees heart-opening practices as preliminary to mindfulness. Because you can only be as mindful as you are heartful as your heart is open. Mindfulness practices involve concentration practices or open awareness practices. Concentration practices are things like focusing on the breath, just tuning into the subtle sensations of the breath in the belly for example. Closing your eyes and just tuning more and more into these subtle sensations. Doing that for 20 to 30 minutes a day, twice a day over eight weeks brings about measurable brain changes. It increases the neurogenic rate after only eight weeks, they were shocked when they discovered this, they thought it would take years. Eight weeks will do it.

Concentration practices such as that or focusing on listening to sounds or some other sense. The other is open awareness practices where you are simply aware of whatever arises in consciousness, watching thoughts arise and pass away, watching feelings arise and pass away, and watching sensations arise and pass away. And as that happens the noise begins to settle down. We have first of all see how noisy it is, see our monkey mind, and then it begins to settle down, we become more and more awake, more and more tuned into this present moment. These practices also have been shown to have measurable impacts on the brain after a very short period of time. They are also life-enhancing because we wanna be more in the present, we wanna be more loving. These are wonderful practices for everybody, but they have been shown by neuroscientists now to positively impact brain health. To increase cognition, to increase empathy, to increase our feeling for other people.

These are also just important practices apart from psychotherapy. We also, most people, pretty much everybody in this world is wounded to some degree. You are not born in this world and you do not get wounded. The best we can hope for is minimal wounding but most people have some degree of wounding. Healing that, healing kind of those early wounds and the defenses that protect us from them and the fear that holds those defenses in place that also is important for reducing the general level of stress, the general level of fear, and for opening the heart, opening the outer heart. Spiritual practices open this inner heart, this inner chakra, this inner dimension. But psychotherapy opens this outer heart of emotion, the ordinary heart of emotion. And so psychotherapy and spiritual practice work in complementary ways I think. Spiritual practice opens the heart directly through love, through compassion, through disidentifying with negative emotions in many of these traditions. Psychotherapy, on the other hand, opens the heart by seeing how it is closed, and by going into those contractions around the heart, and by going into the negative feelings that so constrict the heart's possibility. When the old expression of you can not go higher than you can go low holds here. That if I can not go into my pain I also am limited in how high I can go, the joy I can feel. As we go into our pain and begin to heal it we

open up the whole range of our heart's capacity to feel. And as that happens, we open to a relationship in a whole other way. The two together, a spiritual practice for opening the heart and the psychological practice for opening this closed, defensively contracted part of the heart. I think they are both really helpful for becoming a nourishing person and for nourishing ourselves.

Heather Sandison, ND
I am curious about your thoughts on neuroplasticity here. And even going into the realm of psychedelics. So when I think of them as almost a catalyst to getting to those places, those heart-opening places but they are also associated with neuroplasticity. And being in that space of awareness, of presence is also associated with neuroplasticity. And just to define that, that is when we are creating new connections between the neurons, and then neurogenesis, like in the title of your book is then creating, kind of adding all of these things together and actually creating new cells. So many times when we are talking about dementia, we are talking about the degradation, the breakdown of connection, the breakdown, atrophy of the Hippocampus. And so the breakdown of parts of the brain and that there is less and less and less. And what we are oriented towards when we are doing these types of heart-opening practices, getting psychotherapy, meditating regularly, and maybe potentially the science will show using the catalyst of psychedelics we can start orienting in the direction of neurogenesis and neuroplasticity growing new connections and new brain cells.

Brant Cortright, PhD
Exactly right. Synaptogenesis or creating new connections, neuroplasticity, and neurogenesis, creating new brain cells is our neurogenic rate. And our neurogenic rate when it is high we feel good, we feel alive, we feel mostly positive feelings, and if we are feeling something negative we are able to bounce back pretty quickly, we have high cognitive functioning. When our neurogenic rate slows and goes down then we get all of these symptoms, in Alzheimer's, in dementia, the neurogenic rate goes way down. Actually, the hippocampus is dying at that point. In anxiety, in depression, the neurogenic rate goes way down, and so we wanna increase this neurogenic rate. And these meditation practices will do this, these therapeutic healing practices do this, having positive nourishing relationships does this, having optimal mental stimulation does this. And there is this other side of the physical side. Exercise, particularly aerobic exercise, also weight training, there is sleep, we need to get a good night's sleep because when we reduce sleep, we slow the neurogenic rate down, and diet. Diet is hugely important. And in the recent book I talk about the four pillars of optimal brain health. The optimal brain diet. And these are it is neurogenic, ketogenic, anti-inflammatory, and gut friendly. And I think if you can hit all four of those your brain is gonna be firing on all cylinders.

Heather Sandison, ND
So what is for dinner? Tell us what we can eat.

Brant Cortright, PhD
Let me describe each of these, then they will become pretty clear I think. Neurogenic, there are certain nutrients that increase our neurogenic rate quite dramatically. There are other things that decrease our neurogenic rate quite dramatically. Deep-fried foods, and sugar, decrease quite dramatically. Healthy fats, moderate protein, good. Things like curcumin or turmeric, green tea, apigenin, luteolin, and aspartame. There are a number of Polyphenols that are very helpful, blueberries, Omega-3s, probably the most important nutrient for anybody to take. A low omega-3 diet produces monkeys with very simple brains, and a high omega-3 diet produces monkeys with very complex, richly differentiated brains, almost like humans. Everybody needs a good amount of healthy, meaning non-oxidized and non-polluted with mercury, and omega-3s every day. So, that is neurogenic. Ketogenic, one of the biggest problems as we age is insulin resistance, almost everybody develops it and it is a kind of carbohydrate intolerance. And with gluten intolerance, we do not eat gluten, with lactose intolerance, we do not eat lactose, with carbohydrate intolerance, we need to reduce our carbohydrates in order to regain insulin sensitivity. The Hemoglobin A1C, the snapshot of our insulin levels over the last three months, the higher that is, the more rapid the rate of cognitive decline. Anything over five point zero, five point one you are on a descending path, a rapidly descending path of cognitive decline.

Heather Sandison, ND
And just for people who are listening, who have seen their hemoglobin A1C lately, and your doctor told you it was normal, your doctor is not gonna flag that until it is about five point seven. What you are saying is that you really wanna aim to have that below five-point one, five-point zero.

Brant Cortright, PhD
Yes, exactly right. Almost no physicians will spot this for you. You need to do this, take responsibility for this yourself. That is right.

Heather Sandison, ND
And maybe a fasting Glucose from my understanding is around, what you wanna aim for is 85 or below so that you are not having any of the damage being done from too much excess blood sugar, and again that is not gonna get flagged on a test until it is at 100.

Brant Cortright, PhD
Good point, thanks for saying that. Yes. The diet does not need to be ketogenic unless you have high blood sugar, which most people do. 80% of the population of America has some degree of insulin resistance. A standard American diet is a recipe for dementia, for anxiety, for depression. The third one is anti-inflammatory. The American diet is a highly inflammatory diet, with high amounts of linoleic acid, seed oils, carbohydrates, and simple carbohydrates like sugar. It is a disaster for the brain. A high-sugar diet will cut your neurogenic rate by 50%. So again, deep-fried foods are highly inflammatory, these seed oils, are highly inflammatory, most commercial meat, are highly inflammatory, grass-fed meat, no. That is anti-inflammatory. Wild-caught fish,

anti-inflammatory, pastured eggs, anti-inflammatory. So, we need healthy fats, not doing unhealthy fats, and low amounts of carbohydrates. Unless we are young and our insulin levels are easily managed. But again, for most people, limiting carbohydrates is probably going to be important. And moderate protein. If you are older, or if you are in sports, probably a little more protein, again, getting older, you wanna retain muscle mass because frailty is one of the big problems that you will know. And then the last is gut-friendly because our gut health is hugely important, not only for the immune system but for brain health as well. I know there will be other people talking about this in greater detail, glyphosate for example, which is an antibiotic and wipes out the microbiome, also opens the tight junctions of the intestines which lets in even small food particles, all sorts of toxic stuff, which then creates inflammation, which also triggers opening up the blood-brain barrier. Also letting in toxins, creating inflammation, and oxidation. Eating organically is probably the single most important thing anybody can do to increase their brain health, increase their overall health.

Heather Sandison, ND
I wanna connect the dots between one of the things. A lot of what we have been talking about here. But you mentioned blood sugar and insulin and how it can be very stressful to be on that blood sugar ride, and we have already talked about how stress can be so impactful, and negatively impactful on the brain. And often by being on this blood sugar ride where you have low blood sugar and then you have something like a Coke or a bag of chips, or very simple carbohydrates, ice cream, a candy bar, whatever it is, and then you're blood sugar spikes and then it drops again, and then it spikes again and then it drops. And that alone is highly stressful. And then what you just discussed around glyphosate and toxins in our food, that it is another stressor that we are putting into the body and at a very simple level. This is complex but at a very simple level the idea is that in our body, in this organism, or even in every cell, what we wanna do is keep the crap out, keep the junk out, and put good stuff in. And that is what I hear you describing.

Brant Cortright, PhD
Yeah, that is a good summary of it. Keep the junk out and put good stuff in, that is exactly what we wanna do. That is right. The brain needs to be nourished and it needs nutrients that actually nourish the brain rather than interfere with the brain's functioning. And the standard American diet, again, the incentive structure for Big AG and for organized commercial food industry is to make food that is cheap, that is tasty, but health does not appear on that metric. You can sell a lot more things if you are selling them with sugar and with cheap bad fats, and the tongue just goes for those things. American society has really stumbled into this and all of Western society has really stumbled into this innocently and we are only now really realizing the incredibly powerful impacts is having on our brains, on our environment, and on the body. Glyphosate, the most heavily used herbicide in the world, with 300 million pounds of it in the United States every year, it is in the air, it is in the dust of the Midwest, in the South, in the Central Valley, in California, it is in the rain. So it is not just in the food. If you are in an environment where there is a lot of heavy agriculture that is not organic it is not good for your health.

Heather Sandison, ND
For those who are interested, Dr. Stephanie Seneff is on the Reverse Alzheimer's Summit. So, head on over to her talk and you can take an even deeper dive into that. And we also talk a bit about how to avoid it, but certainly eating organic is step number one, whenever possible.

Brant Cortright, PhD
Yeah, that is great you are having her on, she is fabulous.

Heather Sandison, ND
She has contributed a ton. These are key elements of the diet. What did you have for dinner last night?

Brant Cortright, PhD
I had some pulled pork from pastured pork. I had some asparagus and I had some wok-fried veggies that were non-low-carb veggies. Onions, broccoli, spinach, mushrooms, bell peppers, couple of other things like that.

Heather Sandison, ND
Yeah, let us see if my meal passes the test. We did have quinoa, which has some carbs in it. I am curious how you feel about that maybe it goes into one category of the diet but not the other. And then with grass-fed beef, we basically put a tomato sauce like almost you would do with spaghetti. But a grass-fed beef with a bunch of veggies in it. We sauteed spinach and threw that in there, lots of spices, and then just put that sauce on top of the quinoa. And we also had asparagus on the side. So, how are we doing?

Brant Cortright, PhD
That sounds really good. The quinoa, I think just depends on your hemoglobin A1C and how you handle and how many other carbs you had during the day. It all adds up. I think it is hard to say unless you really know the person's blood sugar levels. That is really the key. Do you know yours?

Heather Sandison, ND
I know mine. I usually end up right around 87, so it could be my last blood sugar and then my A1C is five point one.

Brant Cortright, PhD
Oh, you are doing great, your A1C is fine.

Heather Sandison, ND
You know what really helped me was a continuous glucose monitor. That was when I got control of it because I realized I would drink my oat milk with my matcha in the morning. I am getting

my green tea in the morning but the oatmeal in it would spike my blood sugar. And so I noticed a few things that were spiking my blood sugar that were unexpected. And I was able to get rid of those kombuchas, which I kind of knew but I really could not deny it anymore once I had that continuous glucose monitor on and saw what happened afterward. That was really helpful. Do you have any other hacks or tricks that people can use at home to establish where their blood sugar is and how to get all of this done?

Brant Cortright, PhD
I think testing is the only way to really see. Either you can do a blood test, get an insulin to monitor yourself, or you can get a continuous one like you have, that is ideal. And certainly, the hemoglobin A1C is hugely important. Also, I think the high sensitivity C reactive protein is a really important marker of inflammation, a general inflammatory marker. And if you are over one point zero for a woman and zero point five for a man, you wanna get that down as soon as possible because inflammation is the slow killer. It just chooses up the inside blood vessels, creating heart disease, it is bad for every organ in your body, chronic inflammation.

Heather Sandison, ND
Maybe looking at infections potentially as well, because that sometimes we see that driving up inflammation over time. If you are not aware of a dental infection or some other self infection. This is so exciting. Dr. Cortright thank you so much for your time and the thoughtfulness that you put into your books and how you present it is just always a pleasure. I always learn so much, I am always inspired by you. I am just really grateful for your time. I know you are still currently taking patients. We talked about you might be going in the direction of retirement but we are lucky enough that you are not there yet. And so people can find you at brantcortright.com and you are available for online coaching and consultations, is that right?

Brant Cortright, PhD
Yeah, that is right.

Heather Sandison, ND
And where can people buy your books?

Brant Cortright, PhD
Amazon is the easiest place to get them.

Heather Sandison, ND
That works, alright. Well again, such a pleasure. Thank you so much for joining us.

Brant Cortright, PhD
Oh, it is been my pleasure. Thank you, Heather.