



THE FATIGUE SUPER CONFERENCE

How trauma causes fatigue

Guest: Niki Gratrix

Alex: So welcome to The Fatigue Super Conference and this is one of the interviews that I am the most excited about, it's with Niki Gratrix who is going to be talking about Adverse Childhood Experiences. Really how childhood big traumas, small traumas, what happens when we are younger the enormous impact that can have on the trajectory of, not just our lives ore generally, but specifically our health and the key role it can play in fatigue.

So I'm excited for this conversation partly because it's a fascinating and crucial topic but also Niki and I have known each other for a very long time. Niki's probably worried what I'm going to say at this point so I will choose my words carefully (laughs). Niki played a crucial role in cofounding The Optimum Health Clinic, we've known each other since then and I think part of what's fascinating for me about this conversation is Niki was working on the nutrition side, she founded the nutrition side at The Optimum Health Clinic, I was working primarily on the psychology side although also working with her on the development of the organization and it's kind of ironic at this point that I'm doing all these interviews on functional medicine and then I'm interviewing Niki around the psychology piece. It's funny how things evolve.

To give Niki's professional bio before I welcome her, Niki is an award winning nutritional therapist, functional medicine practitioner and transformation coach helping people to optimize energy. In 2004 she cofounded The Optimum Health Clinic, one of the world's leading integrative medicine clinics specializing in fatigue related conditions. The results of work there were published in the British Medical Journal Open, a prospective preliminary study in 2012 and in August 2015 she hosted the largest ever free online health summit on 'Overcoming Fatigue', interviewing 29 world leading experts on optimizing energy with over 30,000 attendees.

Niki's also played, I should say, a crucial role in helping bring together this online conference so in some ways this is some ways Part 2 or evolution of what Niki did originally.

That's probably enough introduction, Niki welcome, thank you so much for joining me.

Niki: Thank you so much Alex for being here it's good to be here and yeah it's good to have a role reversal happening.

Alex: Yeah and it's also I guess interesting that last time you were doing a specifically online conference for fatigue you were asking the questions, so there is quite a lot of role reversals and switches that are happening here.

Let's open up at the beginning for people that haven't heard the term Adverse Childhood Experiences, or ACEs as they are sometimes called, what do we mean by that?

Niki: OK. So I will just take a step back, I think most people understand that stress is a life shortening experience, it's a very anti health, stress is bad for you, but what most people don't realise is that the majority of stress we experience originates in childhood. Also what happens in childhood sets us up for how we perceive events in adulthood as well, whether we have resilience or not.

So that's why, people often ask me you're always talking about childhood experiences, and the reason is because it sets you up for how you're going to respond to stress in adulthood as well. It's really vital and I'm not minimizing or playing down trauma or stress that can happen in adulthood as well, obviously that's important, but the early life experience is absolutely critical.

So let's talk a little bit about Adverse Childhood Events, that term came from some famous very important studies, I think the most important study done in medicine is the Adverse Childhood Events study. It was done by the CDC in Kaiser Permanente back in the mid 1990's and they were surveying over 70,000 adults. They were asking some very simple questions about people's early life experience and then they correlated with adult onset chronic complex illness. The results were profound and stunning and the researchers weren't expecting it and it instigated a whole explosion of research in that area. So, for example, they found that 80% of everybody had, had at least one ACE, one Adverse Childhood Event, if you had a moderate level say 6 ACEs and we'll talk about what they are by the way in a second, if you had 6 ACEs that's a 20 year reduction in life span. If you had a high level of ACEs you had an increased risk in 8 out of the top 10 causes of death, a dramatic increased risk.

So this is huge and we'll talk about the correlation with things like chronic fatigue, it's like the poster child really for adverse childhood events is how I

looked at it and how I got into this work. If you have early life stress you have a six fold increased risk of Chronic Fatigue Syndrome in adulthood, it was the same with Fibromyalgia as well.

Okay so what is an ACE, I'll just jump ahead because I know you'd have jumped in and asked me that, what are we talking about. This is not an exhausted list, the ten categories the researchers came up with that was kind of a little bit ad hoc, it's things like parent's separating and divorce, physical, sexual or emotional abuse, physical or emotional neglect, domestic violence, mental illness in the family, substance abuse or incarceration by a family member. So those were the ten and the one thing I would just say about those 10, I've interviewed world leading experts on trauma who are very aware about that study and they have said it's the tip of the iceberg the results just the tip of the iceberg because people were not able to often self report they'd had trauma in childhood because it was actually very superficial questions.

So, for example, most people think trauma is big things like being in a natural disaster or being in a car accident, things where there was a real perceived threat to your physical body, wellbeing and life. Now in early life stress the majority of it does not qualify for PTSD, which is Post Traumatic Stress Disorder, it's the much more subtle ongoing attachment relationships. It's relational trauma, the majority of trauma from childhood is how you are getting on with your key caregivers, so it's not these external events, these discrete events like being hospitalized with an illness or something like that, which can be very traumatizing as well. And it's not to minimize PTSD as that's very important and it has a big impact it's just that it's not the majority, it's the minority. It's this relational trauma which is much more subtle and you might look back on your childhood and go I think I had a pretty good childhood and there wasn't any physical abuse, there was no sexual abuse, and it's that invisible emotional neglect. We have an epidemic of emotional trauma, emotional neglect and it's much bigger than people realise and very few people are getting out of their childhood without being impacted by some level of trauma.

Alex: And as you'll remember when we used to talk about this, without the level of understanding which I know you've gone into over subsequent years, we used to talk about this at The Optimum Health Clinic, we talked about trauma with a big T and trauma with a small t. Those kind of big events where it's clear and obvious but these subtle traumas as you're describing in a strange way can be more damaging because they don't get labeled and picked up in the same way at the time right?

Niki: That's absolutely the case. Its people are getting to adulthood, they know there's something wrong and something not quite right and until they start to

learn about, for example, the symptoms of emotional neglect, or some of these other more relational attachment aspects, until they learn about that in adulthood they didn't know they'd experienced trauma. You know it's even things like a continual withdrawal of love from a parent whose not expressive or being shunned at school, being bullied at school, some of these more subtle things, which changes how the child perceives themselves, how they feel about themselves, and their core sense of safety. Kind of the emotional diet that they learn to cultivate that they take into adulthood gets set up in these early very imprintable stages, when the brain is the most imprintable is when we're below aged 18 and the brain's still evolving and growing.

So that's why it's so critical and in a lot of people there's a lot of attachment trauma that happens before the age 4, which is before the cognitive brain even comes online. Only about 50% of children bond with the key caregiver below aged 4, only 50%, which is incredible. That's mainstream research backing it up.

So how could you even self-report that if it's before aged 4 so you might not remember there was trauma but your body remembers. Professor Bessel van der Kolk's book is called 'The Body Keeps the Score', time doesn't heal it conceals. So there's a whole set of changes that happens when we have this so we'll talk more about that as well.

Alex: I think one of the things that has happened numerous times over the years with my patients and I'm sure it's been true with your as well is that it's only when they do an in depth clinical questionnaire that they're asked to answer these questions to describe what happened when you were this age, what were the key things here, what was your relationship like with your parents. That it's only in answering those questions it can be quite an emotionally impactful experience to suddenly realise the kind of number of things that happened which actually were quite damaging in their own way.

Niki: Yeah exactly. Some of the experts in trauma took the ACEs questionnaire, which was quite superficial, and actually changed the questions to ask more things like who was there to take care of you when bad things happened, who asked you how you were feeling, this kind of thing. That's when people couldn't finish the questionnaires, they couldn't finish the interviews because they were in such emotional trauma, you know they were sad about discovering that so they would actually leave the room. And that's something that's also by the way very interesting about relational trauma, it trumps PTSD, that's a really key finding.

Bad things happen to all of us, it's part of life, but if you had strong social relations, if you had a good connection and you felt you belonged, you're part

of the tribe, I would say this is even evolutionary biology if you think how important a tribe was thousands of years ago. If you got rejected, shunned, that meant death so that's how important our social relations are. If you have good social relations when a discreet bad event happens you are much less likely to develop PTSD in response to that if there's good social support.

So this is something the trauma experts are coming out with and pointing out that this kind of relational trauma is very different from PTSD. It also leads on to different symptoms as well, which we can talk more about.

Alex: I think one of the strongest predictors of ones relationship to their own emotions and they own feelings and their own symptoms is how did their parents relate to them, right, We internalize and we model the relationship of how those relate to us to then how we relate to ourselves and as we're working with people to get better at listening to their body, to get better at pacing, to start to feel their feelings, we have to often unpack some of those relationships.

Niki: Absolutely, that's exactly it. They're our role model and how they relate to themselves is often what we pick up at a young age, we absorb that, so that whole process is key. A couple of other statistics, if you had just 4 ACEs you had 400% increased risk of Alzheimer's and dementia, you had just two ACEs you had 100% increased risk of autoimmune disease. In fact autoimmune disease is as strongly correlated in women, so ACEs and having autoimmune disease in adulthood is as strongly correlated as smoking and lung cancer for women. So it's absolutely huge. Four ACEs also means you're 12 times more likely to be suicidal and attempt suicide. I'm saying it's across the board and I just want people to know that. If you have 8 ACEs it's triple the risk of lung cancer and 3 1/2 times the risk of heart disease.

The reason I'm sharing all that data is that so people understand the mind and the body are really one thing so you can't take the human body out of the social context and what's happening in this life, everything from who they perceive they are to how they relate to themselves, how they relate to other people, is being translated into the biology and it's like you're cells are listening to you and there's the evidence that's the case. I think it's good for people just to know who are on the chronic fatigue spectrum this is not this old thing of saying oh you're making this up and we're all talking about this just being a psychological thing. I'm saying no look this has a gigantic impact on your biochemistry as well as on your neurology as well as your psychology.

So it's this idea that we're saying this is all psychological, no then you don't understand trauma really, if that makes sense.

Alex: Absolutely. In fact I was asked a question a while ago on one of the Facebook lives I do and someone was saying what's the difference between what you're saying and this being psychosomatic and I said well if you've had a limb amputated and you have pain in the limb, it's called phantom limb pain, that is psychosomatic, there is not limb there that can have pain but you're still firing responses in your brain which tells you there's pain. So there's not real mechanism there. That's very different to what we'll come to in a second is that it's not that the trauma means you're making it up, the trauma impacts the body and the body therefore creates a set of symptoms which then result in what we're going to talk about.

So let's talk a bit about how does childhood biography become adult biology. That's your phrase that I stole by the way (laughs), it's a great phrase.

Niki: Actually I think it came from Caroline Myss who came up with that phrase first.

Alex: I was going to give you credit.

Niki: So yeah how does this translate? When this ACEs study came out it obviously triggered a huge amount of research and people wanted to know what was actually happening, what was the mechanism, how can this dramatically increase the risk of all these complex chronic illnesses. So one of the early studies they found is that when we have this relational trauma, which is basically stressful on the small child brain it changes the expression of the glucocorticoid receptors. That was the first gene expression that shifted, which means there is an epigenetic shift in how we respond to stress for the rest of our lives. So there is a reduced threshold of what would cause us to feel stressed.

So now we're sensitized, that's the definition of sensitized, a reduced threshold of what causes us to have a stress response. So they actually did this experiment with rats and the rats that didn't get the nurturing pup, you know mother nurturing them, had an increased stress response for the rest of their life and then they replicated that and found it to be true in humans as well obviously. So that was the first one.

Then other researchers came out and said listen it changes the entire epigenetic expression towards all these complex chronic illnesses. So from the date that this trauma, this disconnection, this feeling isolated and not feeling loved and welcomed into the world, whatever the event was, conscious or unconscious, the genetic expression changes. But also if you separate, they've done it in rats, mice and monkey's unfortunately I don't agree with those experiments, but they've recreated separation trauma, the gut changes from

the days that the child is taken away from the Mum. So you've got gut dysbiosis and changes in the microbiota that happen from the date the trauma starts, an entire change of the genetic expression.

We have this area of science called Psycho Neuro Immunology and it's about 13 years of research now and one of the most robust findings is that this kind of social stress it suppresses your immune system. So we've got changes in the gut, suppression of the immune system, by the way your endocrine is going to change, it's going to affect the hormones, you know we're going to have maybe increased cortisol and at the cost of maybe the sex hormones. So all of these it's a cascade of changes that stress and emotional trauma affects the entire body. We're also discovering now that it will also cause mitochondrial dysfunction, we have this new area of research in chronic fatigue called 'the cell danger response, the CDR response' where the mitochondria, well it turns out they don't just do energy work they're also looking around and checking for threats. Robert Naviaux that did that work has absolutely said early life stress, it's in his science paper, he's said that early life stress is one of the factors that will trigger the cell danger response.

So there we have it, it explains that everything we see in chronic fatigue can be triggered by stress and emotional trauma and these changes that start happening from a young age, you know the bodies shifting without maybe us even being aware of it and then we have a trigger in adulthood but actually your system was set up to respond to that trigger and perhaps into illness. It started many years before for most people.

So that's the effect on the biochemistry.

Alex: Just to go back to where we were a few minutes ago where people are how does this affect the body, I mean that's an unbelievably compelling list of impacts of childhood experiences on adult health and development but I know you're not done so let's come to the effects on our neurology.

Niki: Yeah so we'll talk about the effect on neurology and the effect on the psyche, the psychology. So the effect on the neurology are really important because this early life stress will literally retrain the brain, the neural pathways, to be in more of this fight/flight stress response. It actually would lead to a term that, it was actually Professor Leonard Jason's came up with the phrase, well he didn't come up with it but he talked about it in the context of chronic fatigue, limbic kindling, which is the idea of the brain being over sensitized and then it's going to lead to inflammation, absolutely early life stress leads to brain inflammation. So now we have kindling in the brain and this wired for stress basically, which means less has to happen to cause us to

have a brain response and now we're building neural pathways that kind of become that unconscious pattern of being in a chronic fear state, for example.

So we're primed for that, so early life trauma will prime us for this kind of neurological limbic kindling and an over sensitized amygdala. So that's the kind of key on the neurological side, which becomes then very important as well. Also I could mention you would down regulate the vagus nerve and the rest digest detoxify parasympathetic side of the nervous system is all permanently down regulated and we'll talk more about the vagus nerve, but the vague nerve is for healing state. When you have strong vagal tone that is the definition of a healing state and if you have that turned off, turned down, down regulated epigenetically because you have neuropathways turning that down you have dramatic increase propensity for coming down with chronic illness in adulthood. So neurological very important.

Alex: And I think just to comment on it as well you see this quite often, I guess in the whole spectrum of fatigue related cases, if you look at the years prior to someone actually fully crashing and perhaps getting a chronic fatigue or fibromyalgia or whatever diagnosis, that you see these sensitivities often in someone's, either in their digestion or their nervous system or their tolerance for stress, that you start to see these signs often as early warning signs before you then see the more kind of whole body system crash that comes in.

Niki: Yes, exactly. So yeah it's a whole body experience and this is why we started the clinic, which is the idea of integral, holistic, like you can't break things down to being separate sums. We're more than the sum of our parts and you can't sort of break things down. Everything gets affected, the cells, the biochemistry, the neurology and the psyche and this is another area where I've spent role reversal here. I've spent a lot of time on the psychological impact and I started to research into this idea at a young age if we don't feel welcomed into the world, if we're aged 4 we're just an emotional sponge and we're just absorbing what's going on around us and by the way it's in utero, this is all the sciences behind the fact that Mum's state and how she's feeling in herself is transmitted to the baby in utero and then up to the age 4 the child is just absorbing all this stuff.

Now if the parents are, maybe they're depressed, maybe they're angry, maybe they've got trauma themselves they're dealing with, maybe they're dealing with financial stress, these kind of emotions that don't feel good, the baby is completely narcissistic at that age so anything before age six children are narcissistic, so they're absorbing this information and assuming it's them so it's a very easy step that takes place of well if I feel bad because I'm absorbing, actually it's not my stuff but you don't know that you don't realise it's an

environmental failure happening, you absorb that inside and translates to well I feel bad therefore I am bad.

That is the source, the core of a phrase that a brilliant psychotherapist coined Ross Rosenberg, Self-Love Deficit Disorder. So now we've started off in the world, we already don't feel enough, there's something wrong, I don't feel good, there must be something wrong with me, I'm at fault, I must need to make up for this because inherently there's something wrong and I've interpreted it unconsciously that it's me.

Alex: There was about 3 or 4 months ago, my wife and I have three daughters 2, 5 and 7 and our eldest daughter was kind of picking on our middle daughter and it was kind of bedtime and I was a bit like you need to stop it, you need to sorry, and kind of setting a boundary in a way that I think was fairly loving and considered but that's not how it was experienced because about an hour later having put her to bed she comes down and is like I can't sleep and this whole thing of why is Elle allowed to do this and I can't.

This whole thing went on for about half an hour, forty-five minutes of her kind of pushing up against a wall and suddenly the penny dropped for me where I realised that she thought that because I was giving her a boundary and not her sister that she thought that we loved her sister more than we loved her. And I said did you think that because I asked you to say sorry that you think that we love Elle more than we love you and it was like those moments in therapy when the tear roles down the eye and the whole nervous system kind of settles and it was like that's exactly what it was.

And it was a very sweet loving moment and suddenly her system relaxed but it was something as simple as she was basically being out of order and she needed to have a boundary but she interpreted the boundary as my father loves my sister more than he loves me and it's just amazing when you think about these subtle moment to moment experiences that we have when we're six, she's seven, but as you say can be younger, where we literally define our self worth and how loveable we are by these experiences.

Niki: Yeah this is it, you know in a way your daughter's are kind of lucky they have a therapist for a father (laughs)

Alex: (laughs) I think there are pros and cons to that.

Niki: Yeah I'm sure but it is really key and right now we don't live in an emotionally advanced society when it comes to how most people are dealing with their kids. I often talk about the standard emotional diet, we have the standard American diet and the statistics are terrible right, and I would say

the standard emotional diet people grow up with and go into adulthood with is way worse than their physical diet and it's having worse impacts on their health as well.

We don't have this sensitivity that we need right now. We need to understand more that our kids don't respond to trauma and stress in the same way that the adult brain does, it's much more transient. In childhood states, a state for an adult would just be a passing thing, states become traits in children and that becomes your biological fate. Now that is my phrase by the way (laughs).

Alex: That's very good.

Niki: So it not only changes our biological expression, we mentioned the neurological expression but we also start to develop survival traits, this idea that where we sort of come equip to make up for these deficiencies of not getting essentially love and a sense of safety and a sense of self compassion. Because we don't have that we have certain strategies. So we've talked about this system of personality typing, which is just a useful tool, called the Enneagram where it lays out the different ways people can deal with their childhood trauma. We see certain types where you can clearly see the lack of self love in a Type 1, known as the Perfectionist. You would just think of the work so you're talking about someone who is well if I just get everything right then I'll be OK, then I'll be loveable. What the child's done in their mind is that's what makes them safe. Or Type 2's they're the caregivers, they are the ones that have learnt they weren't automatically given love so they've learnt if they give it that's how they get it back.

So this was first laid out in the brilliant book Alice Miller's 'Drama of the Gifted Child' where she said a lot of you therapists are all essentially Type 2's on the Enneagram, you didn't get the love unconditionally, this is all about not getting unconditional love as a child. So Type 2's become chronic helpers and they put everybody else's needs before their own. Then you've got the Type 3's that become super achievers so there's a sense of lack of self worth unless they have this external status and everybody sees them as successful, then they feel loveable. Sixes are kind of like the anxious type where anything could go wrong at any moment, as long as I can find safety then I'll be OK.

So these are all the kind of traits that people have developed into unhealthy traits that are actually responding at its core is Self-Love Deficit Disorder in all of that, the maladaptive traits, but this is another way that our behaviour translates. We've got a biochemistry towards all this, we've got neurology going towards all this and now we're actually behaving in ways that basically time for self care goes out the window. The perfectionists, the achievers, the twos, the anxiety types, they're all busy doing other things like the self care piece

and they're perpetuating the stress with this internal worry. So it's another way that this time behaviour translates into the healthy as well and at its, call it the emotional core, unfortunately it's a sense of gut wrench, it's a sense of depression, underneath all of it is this unacknowledged emotional states that haven't been reconnected with and realise that you've got to bring it to light, feel it and go back. It wasn't your, it came from this early life experience and it wasn't your stuff.

But you have to feel it, connect with it again, learn to do the re-parenting process and resending love towards self and then when you have self love the whole world changes. The way you perceive people, you don't care so much about whether other people like you or not, whether you are perceived as a success or not, all that pressure and stress goes away when you have true unconditional love and self acceptance. For me that's been a big part of the jigsaw of some of the things I'm seeing that are chronically happening in chronic fatigue and many other chronic complex illnesses. Very much the stress related ones as well. All the mental disorders, autoimmunity, chronic fatigue, fibromyalgia, that spectrum. This is a huge part that you also want to consider.

Alex: I'm still having an intellectual organism over your states become traits thing (laughs). Just on that it's also I think for people which are wondering about well this thing just happened when I was a kid. I didn't feel particularly loved by whatever but how the hell can that be causing me to have chronic fatigue now. I think that's such an important statement because actually it was just a state at the time but that then formed a personality trait, which then means you've spent your whole life ignoring your feelings, ignoring what your bodies trying to tell you.

So 10 years ago when your body said you're stressed you need to slow down you said sod off I'm too busy I need to go do this thing other wise people won't love me, it's then that's how actually someone's causing an experience. We talk about loads on a boat and it's not any one load that causes the boat to sink but it's the combination, that's how that state as a child is ultimately causing you to go and gather, I'm kind of mixing metaphors here, but to go and gather all of those loads on the boat which then ultimately causes someone to end up in a crash. I think it's a really, really helpful way of conceptualizing and thinking about it.

Niki: Yeah and it also makes you less resilient to other stresses as well. So if you didn't have the stress, the trauma from childhood, maybe you would have been less susceptible to say mold in the environment, to exposure to toxins, because all of the detox pathways slow down when our bodies gone into a chronic state of either fight, flight or freeze so then we get more and more

prone to these other environmental factors and they all add up, additional loads on the boat. Then you need to start to take all the loads off the boat, one by one.

Alex: Maybe say a bit about the data of how this specifically relates to fatigue and obviously as we've been talking about this wider conference there's a whole spectrum of different kinds of depths and complexities of fatigue. But kind of fatigue generally or perhaps even specifically chronic fatigue, what's the data on ACEs in relation to that?

Niki: Yeah so it's very interesting that I mentioned that with chronic fatigue it's like the poster child, ACEs in childhood means you have a six-fold risk of increased chronic fatigue in adulthood or fatigue related illnesses. One of the things of this very issue is there's a fascinating area of research but there hasn't been that much genetic research done looking at purely at fatigue and chronic fatigue but the ones that have been done they've very clearly found, out of millions of gene mutations, the single nucleotide polymorphisms, these SNIPs, there are about four that are very high and prevalent in the fatigue group versus the control groups. Interestingly the researchers are like this is unbelievable, out of millions of SNIPs there's four that look like you could say that somebody whose got chronic fatigue.

And they are all SNIPs related to how somebody deals with stress, isn't that interesting. Not their mitochondria, not other areas, it's things like there's a SNIP called NR3C1, which is how the glucocorticoid receptors respond to stress, there's one called TPH, which is to do with serotonin and tendency towards to OCD, there was another one related to dopamine and having a worry trait. There's also another one which was to do with 5HTP or serotonin again and not bouncing back so quickly from stress.

And this is fascinating because what we're now discovering is that probably in the fatigue community there's a higher percentage of people, you could call them the highly sensitive types. So this is a genetic propensity to be more influenced by all biological context, which means whether that's a toxin, a psychological stress, an emotional, physical, electrical, that you are just basically a more sensitive type. Now this does relate to, I think it was Elaine Aron is her name she is a psychologist who wrote the book on the 'Highly Sensitive Person' and that's been round for many years. Well that work has been totally backed by mainstream science and looking at proper research at mainstream European Universities where they've actually discovered, the researches very poetically looked at a whole range of children and they came up with this phrase orchid children versus dandelion children. What they've identified, it's not just the four SNIPs that we mentioned, there's about seven

of eight of them, but will essentially cause a child to be one of these highly sensitive types and they are more influenced by all biological context.

Now essentially that means on the one hand, if you think about dandelions you can spread the seed anywhere and they tend to bloom even against a wall, concrete, there's a bit of desert environment, not so much care and attention, and they'll still thrive OK. Orchids aren't the same, Orchids needs greenhouse care and if you put them in an environment where a dandelion would be OK but Orchids are particularly going to have a bad time. Orchids when there's ACEs in childhood they're the ones who are going to be more negatively impacted by those ACEs.

But here's the brilliance of the studies, it was awesome and I love sharing this because I know a lot of fatigue people who I'm talking about highly sensitive and they say I know I can read energy in the room, I can feel other peoples feelings, they can actually know that they're highly sensitive. They're probably thinking it's a weakness and now also it's related to my health as well. Actually this is not true, this is not what the research found. They actually found that when you give the Orchids the greenhouse care they blow past their dandelion colleagues and they outperform the dandelions.

There's another analogy, I talk about you've either got a Landrover or you've got a Ferrari and the Landrover's you've got a make and model you can drive off road and you're going to pretty much be OK. You can't do that with a Ferrari but with a Landrover you can't travel down a straight concrete road at 200mph. There's a gift in your sensitivity and that can be eventually when you're healthy again you can also use that to do amazing things in the world and also help other people and you're actually at an advantage with it. The imperial research with the kids, hundreds of families that these researchers worked with, they absolutely found that when you give the Orchid care.

So if you are in the more highly sensitive type it means that you probably are going to be more impacted by ACEs but know that all of the impact of trauma by the way can be reversed, phew that's good news. We'll talk about that, that's the good news, everyone's like oh my god it's all bad news so far, no the good news is it's reversible and there might be parents listening thinking I think I've got an orchid child, they just need the extra care. They need some extra time, you need to pay more attention to their environment and when they get that greenhouse care they'll absolutely thrive and they'll end up being more productive in society and more successful than even the dandelion children.

Alex: I love that piece. When you told me that when we were talking about it the other week I was like I love it. And in a sense it's also I suppose part of the

reason why I connected with it so much is it's kind of a little bit the story of my life in some ways. I was the super sensitive kid that got horribly bullied and was feeling everyone else's feelings and all that kind of stuff but then when I chose the career that I chose it was like I had a superpower because suddenly the thing that was the cause of the most suffering became actually one of my gifts in my work. I could feel stuff other people couldn't feel because I was so bloody sensitive to it.

But I love the fact that what you're saying is that really it's the way that someone understands those sensitivities and the care they put around them and I guess that's where self awareness and understanding what our needs are is crucial to then being able to put in place the things that we that are most going to support us.

Niki: Yeah and it's knowing that your genes, they're not a limitation they're actually laying out the potential for your genetic potential. It's your genetic potential to know you can change your environment, to know you'd be better off than you were if you didn't know that you had those SNIPs of that propensity. So I think it's good for people to know, to acknowledge, oh I am a highly sensitive type and there's some implications for that and to know how to go forward with your life. It's not going to be the same approach as perhaps somebody else who isn't but it's not necessarily a disadvantage, that's good to know. I was going to say you're a good example of that, I was going to say you're the exact example.

Alex: Thank you that's kind of you to say. My narcissism jumped in and I had to steal the thunder first (laughs). Another result of being a highly sensitive child.

Let's come to some of the things that we can do to heal this. Now obviously this is an enormously big area and there's lots of different facets and pieces but let's come to some of the things, if people are watching or listening to this and I imagine a lot of people at this point will be that's basically my life story you've just been describing in terms of those kind of combined impacts and the way that manifested in terms of physiology.

What are some of the things people can start to do about it?

Niki: Okay so always split up there's the three levels we need to consider. So the biochemistry, the neurology and the psychology and we talked about those mechanisms. You may not realise that what you're doing on the biochemistry, everything that's been on this summit, whether you're healing the gut or your balancing hormones, or you're you know on a blood sugar control diet, all of that you're reversing the imprint of trauma. So the trauma has left this

biological imprint and what we're doing when we're functional medicine practitioners and nutritionists and this side of things, what we're doing is resetting this impact of trauma and that's important. Part of treatment from trauma is reverse the impact on the gut, reverse the impact on the hormones, reverse the impact on the blood sugar, all of these things. So this is where all the summit topics on those areas you're actually addressing trauma. I have practitioners asking me all the time how do I treat ACEs, how do I bring that in, and it's like you're already doing it you just haven't realised maybe that the source of a lot of it was this early life stress.

So my main thing from that is don't throw that stuff out, don't just do psychology work, do the biochemistry. It can actually help, it's a vicious cycle when something starts psychologically and then our biochemistry changes that makes us feel even worse because now the biochemistry is changing our neurotransmitters in our brain and our emotional state so now we've got a feedback mechanism so when you do the biochemistry work it makes the pure psychology work easier to do, better to do, you'll be more motivated and then it's a virtuous spiral. Then when you do the psychology work the biochemistry sort of improves even more so you need this to be a multi factorial approach and it's this virtual spiral upwards where you do some psychology work it makes you more motivated to do the biochemistry work, you do the biochemistry work it makes the psychology work better. So take this multifactorial approach.

A couple of things I'll just give two practical tips as well unless you wanted to add to that.

Alex: No I was just going to say I remember back in the day when we first started The Optimum Health Clinic having endless conversations about whether people start with psychology or nutrition and sometimes it was just diaries that decided where someone started. It's like you can have someone that has all the psycho-emotional symptoms start on the functional medicine nutrition side and they change and vice versa. And there were so many stories as you know over the years, I remember someone who was based in Singapore did a mitochondrial test and then the results got lost and then they started psychology and then did a re-test, we had a 3 month time stamp of these two tests and the only thing done in the middle was psychology and there was a massive shift in the mitochondrial results. So there were just so many of these as I know you know, stories like these over the years.

Niki: It's good for people to know. We are actually what we mean by holistic medicine here, being holistic it doesn't just mean switching from drugs to supplements.

So a couple of tips I would just say on biochemistry side, I know it seems so basic but still it's so profound to get your blood sugar regulation under control, it may seem like oh goodness throw that out or miss it, or kind of I've got that covered. I can't tell you how in all the years, I've probably been doing this for 15 years now, still the blood sugar control it can change somebodies life, when they actually do it, quite quickly and it makes everything else you do work better. So all the psychologists should know about blood sugar because you can just eradicate anxiety. Someone's anxiety may be entirely down to the fact they're not managing their blood sugar and all the neurotransmitters, you can't actually balance them if the blood sugar's out of control because it blocks the transporters of those transmitters into the brain.

So blood sugar being out of whack you can't sort out, adrenals you can't sort out, thyroid you can't sort out, neurotransmitters it's going to affect the gut, just get the blood sugar right, that's like step one. And it's still really profound, it can be life changing and I think, I won't go into it because I think you've got one of your summit interviews on that topic where you go into detail about managing your blood sugar.

Alex: Yeah Dr Bryan Mowll goes into that.

Niki: Yes that's great. The other one and I'd say this has been the biggest breakthrough that I've known about since about the last 5 years, circadian rhythm management. That has been life changing for my clients; it's been one of the biggest things. It doesn't cost anything much either to get that right you can solve adrenal issues, they're even thinking that thyroid issues is a circadian rhythm mismanagement. It's timing of sunlight, time you eat, even temperature in activity levels and I think it's Jason Prall?

Alex: Jason Prall and also Evan Brand touches on it a little bit as well but Jason is the main one.

Niki: Here's a tip for you, just start going to be at 9.30 at night OK, wear blue blocking glasses from about 2 or 3 hours before or turn all your bulbs orange or red, think campfire light. Go to bed at 9.30, if you can don't eat anything during that time, when you get up, get bright sunshine in the first 30 minutes of the day. If you can't do that because you live in the UK or somewhere like that you can get these SAD lamps, these Seasonal Effective Disorder Lamps, they're not very expensive on Amazon, and get a bright shower of light in the first 30 minutes of waking. Then do a high protein, perhaps fat, breakfast.

Just doing that you can change somebodies life. That was what three simple things I said to do and you can change somebodies life if you just work on that. That's practical tips that can be life changing and they are the basis of

everything else you do. They change your psychology and there's more you can do with that too but they are some of the top tips that don't cost anything, you can do them at home.

Alex: I think this is a great point where as we start to cover some of the other pieces people can do on the psychological and the neurological side, I think it's a really neat way that this interview comes a bit kind of full circle in terms of your primary background, although I know that you'd already done work and had interest in psychology before you were doing the functional medicine side, that you're primary background on that and then over recent years getting interested in ACEs and psychology in a sense that kind of linking back to, as you were saying a little bit earlier, ultimately one of the key pieces of this is still you have to deal with the impact of what's happened on the body.

It's a little bit like you get punched in the face and say I'm going to heal being punched in the face by trying to resolve it with the person who punched me. You still have a black eye and a broken nose, you still need to deal with the impact of what's there, right.

Niki: Yeah those changes that have taken place, exactly, and coming on to the next one that's also the neurological side is really important, the nervous system side and the brain. There's this thing called neuroplasticity, which means the brain can change, the brain actually changes itself, and the brain when we grow up as children it doesn't just grow in a vacuum, it actually responds to, the shape of it, the size of it actually gets impacted by our social relations. Your brain doesn't just grow from the DNA it's shaped by your social interactions so there might be some brain retraining work to do, especially if you're in that state of limbic kindling and you've got some unconscious neural pathways that triggered the amygdala to be oversensitised.

Now that's the area where there are some great Neuro Linguistic Programming based therapies, STOP processes that have been part of The Optimum Health Clinic from the beginning, there's various other practitioners, you know I think Ashok Gupta.

Alex: Without going in to a whole kind of long story there were a few of us in 2001/2001 – about 2004, funnily enough based in the UK, that were kind of developing these ideas but yeah it's that retraining of the patterns in the nervous system is crucial and we'll cover that in some other interviews, that haven't yet been recorded so I'm not going to reference them, but we're going to cover them in some other pieces as part of this conference.

Niki: Great. So you've got these brain retraining's that are needed to literally retrain the neural pathways to address the sensitivity and they are very

effective. So they're something to look into. I call those top down approaches, there are also some really important bottom up approaches and this is where, it's one of my favourite areas to talk about. We're coming to the end of the interview here but vagus nerve stimulation.

So we love the vagus nerve, the vagus nerve is what connects the brain and the body more than anything. The vagus nerve is the gigantic nerve that starts in the brain and it connects to multiple organs and systems in the body and it elevates those organs and systems. And one of the things it does, for example, is it triggers the peristalsis in the stomach, it triggers the digestive enzymes to work. When you electronically stimulate the vagus nerve it heals the gut, so it causes the un-tight junctions to tighten up in the epithelial layer in the intestinal tract.

So just think if you're stressed your vagal tone goes down so you're digestive enzyme output goes down, your stomach acid goes down, your peristalsis and that's the movement, then you get constipated, and then you also get a leaky gut. The vagus nerve remember starts in the brain, it gets messages from the brain but it's bi-directional, we know that, so the gut can change the brain but it's also the other way round as well. The vagus nerve elevates everything, the only thing it doesn't connect with, it elevates the liver, low vagal tone you're going to be detoxing more slowly, it's connected to everything.

When we stimulate the vagus nerve by the way, it's proven in the science that a higher vagal tone, the way to measure the vagal tone, which is a test of stress, is heart rate variability. And this is where the amazing research 30/40 years ago of HeartMath research comes in. If you have a high heart rate variability it means you have a high vagal tone and it means you have an increased longevity, lower mortality rate, when you've got high vagal tone. When it's low you have increased risk of all chronic complex illnesses across the board. What's fascinating is there's tons of ways to stimulate the vagus nerve but they totally correlated being in a high emotional state the heart math correlated to 75%, they can look at somebody's heart rate variability and tell the person what emotional state they're in.

So the negative emotions are lower down in the heart rate variability range, which means you're lowering your vagal tone, it's that simple. So when you're in chronic anger, if you're holding resentment, if you're in chronic states of fear, if you're in chronic states of guilt or shame, those are all stressing the body. They lower heart rate variability, they lower vagal tone, that's not healing state and if we want to recover we want to be in a healing state. Are you in a stress state or are you in a healing state?

A healing state by definition, you can what that is now, it means a high vagal tone. That means also feeling good. So it's not only the bad chemistry that changes but when we get into these higher emotional states, if that makes sense.

Alex: Absolutely and I'm being a bit presumptuous here because I haven't recorded the interview but tomorrow night I'm talking with Dr Datis Kharrazian, and funnily enough before we started recording I was reading his book 'why Isn't My Brain Working', which is another place that goes into the vagal nerve stuff, which is absolutely fascinating.

Niki: Yeah Dr Datis Kharrazin, we could actually touch on that if we have time at the end because I think it would be very interesting.

So just a few other pointers, I want to give some practical...

Alex: Yeah come to some of the psychological pieces people can do as well, yeah.

Niki: Yes. So just so that people know they've been doing experiments with electrical vagus nerve stimulators, where they started actually implanting them in the neck of people and they cured arthritis within 8 weeks, a severe arthritis case within 8 weeks. They did the same thing with fibromyalgia and got a cure in 50% of people with fibromyalgia, that has never been achieved by any other intervention in the medical literature, where the person no longer qualified for fibromyalgia, which means a cure even though the researchers aren't say that, but it was a cure.

So the vagus nerve, as it turns out, also regulates inflammation in the body, the vagus nerve switches off inflammation. So now it's like oh my goodness so we have a mass of inflammation, we know there's inflammation with chronic fatigue related illnesses as well, so what's that related to, at least in part, it's low vagal tone. So there's the connection to stress, lower emotional state from often our emotional diet, which translates into the vagus nerve, which translates into every organ of the body and the gut especially.

So stimulating the vagus nerve is not something you do once and then forget about it, it needs to become a daily way of life and I get my clients to create what I call a miracle morning. There's like 40 different ways you can stimulate the vagus nerve and I'll give some examples, just look up increased heart rate variability, that's stimulating the vagus nerve.

So meditation, yoga, tai chi, Qigong, there's so many things. Actually even things like fasting will increase heart rate variability, even veg juicing increases heart rate variability, breathing, positive social relations, laughter, many

psychotherapies also increase heart rate variability, that's absolutely been shown, gratitude journaling, a loving kindness meditation, exercise, essential oils are found to dramatically increase heart rate variability as well. So all of those things, these are the types of things, there are like 40 of them, the different types of things you can do. I just get people to pick 3 or 4 things in the morning to do and maybe all you do, you've only got 5 minutes, you do 5 minutes of meditation, do 5 minutes of gratitude journaling and setting your emotional intentions for the day, maybe do it while you've got essential oils going, and do a little bit of exercise, just a little bit of movement. You've touched four different things to reset the nervous system because it needs to be a daily practice.

So there's many things you can do, love the vagus nerve, love everything that stimulates it. Switching off social media by the way, social media lowers heart rate, violent video games, they are not good.

So it gives you an idea, these are practical things but they need to be sort of built into the day and need to be done on a daily basis.

Alex: So for people which are kind of watching or listening to this are still with us and kind of going this is absolutely me but it seems utterly overwhelming, these things happened 30/40/50/60 years ago, it's become who I am, like this is me. Because I think people can become defined, for better or for worse, by those kind of experiences, that it feels overwhelming, you just kind of touched on it a little bit there anyway.

What would you say to someone that just thinks it's too hard to change this?

Niki: It's never too late to become the person you were meant to be.

Alex: You've been spending too much time in L.A (laughs)

Niki: (laughs) I know that sounded tripe but actually I've said that in other interviews and it's caused the interviewer to tear up because she really got that, that it was really true. It's never too late, we have the neuroplasticity. Actually I've interviewed some of the world leading trauma experts, people who've worked with the really terrible, like you know ritualistic child abuse, child torture, some of the worst things that you can imagine, they are inconceivable, and I was just straight out like can someone really heal, is it possible. And he was like he was like yes it can, it is absolutely possible and it's good to consider, this expert came up with a few ideas. Think about Oprah Winfrey as an example, I believe she was raped more than once and was molested as a child, another one is Matthew Sanford, he's very inspiring, he's the paraplegic yoga instructor. So he was in a car accident and had no

movement from the next down after a car accident in his teenage years and goes on to become an absolutely inspirational yoga instructor. So it is never too late, the brain can be changed, the brain is plastic, we can always change the brain, and the biochemistry. Your body knows how to heal itself, its natural state of being is towards healing so the only thing we need to do is get out of our own way and I guess this also links to the last point here on the psychology side. Part of the psychology is recognising that overwhelm is another pattern that we're running, overwhelm is a pattern that can be reset.

On the psychology side, you know how do you eat an elephant, one bite at a time, so you could either feel overwhelmed by all this information or you could see it as like oh my god she's just given me 40 different ways that I can get better. You know so it's glass half full or half empty, right.

The way that I've seen my clients, over 15 years now thousands of consultations, you know it's just one step at a time, it's not giving up, it's being committed and it's being consistent and it's a lot of awareness work and this is the last part on the psychology side. The step of just cultivating awareness, start the exploration process so you could start, for example, by doing your ACE score and people can do that, there's a link that I believe we have below this video, I've got a free eBook that people can download, totally free, and it's got the questionnaire in there so you can tot up your own ACE score. I've actually extended it, it's the extended ACE score, to include all the things the researchers missed out.

So even just start the exploration process, was it inter generational inherited trauma, so was it not something that happened to you but was it something that happened to your grandparents, which you can totally inherit the physiological and psychological imprints of something that actually happened in your grandparents life, that's absolutely been proven as well, that's another nugget of information there. Start exploration by going to find out a little bit more about the Enneagram type and just start this process, just the process of wondering and starting to explore how you may have responded to life. Start to see the patterns and you'll start to see yourself going 'Oh'. This is an awakening so the things in the unconscious become conscious.

Then it's step-by-step building emotional intelligence, so maybe you do find out that you've got a particularly chronic negative emotion that is your default mode, we all have default modes you know we go into depression, or guilt, or we go into fears, there's something we all have. Start to recognise that's your pattern, step one is awareness, that could be half the issue, and then next is slowly starting to work on those emotions, building emotional intelligence. Whether starting to recognise OK do I need to use a particular neurological

technique or the awareness to go OK this is an emotion I can work differently. There are tools available to work on all of that and help available for practitioners working with some of that side of things to, and I would definitely recommend people get help with that work.

But there are things you can do at home, like start the exploration, start seeing what Enneagram type, do your ACE score, start doing some of the conceptual work and then it will lead you to, at the end of the day we want to change the feeling state that you're in on a regular basis. So we release the emotional old stuff we don't need anymore, we start to recognise when it's not our stuff and we took it from other parents, we took it from caregivers, it wasn't our stuff anyway, and we learn to appreciate ourselves and our whole nervous system will start to come down and then the healing begins.

Alex: I wish we had more time but I'm mindful of time. Niki people that want to find out more about you and your work, you mentioned that they can use the link to go and to their ACEs score but just mention your website, what people can find there for people that want to find out more.

Niki: Yeah so its just www.Nikigratrix.com you can find out about everything I do on there. But I do recommend, there's two little free eBooks that we've got on the link below, one is 'The Seven Steps to Healing Emotional Trauma and Building Resilience' with the ACE score in it and all the steps that you could start at home. And I've also got 'The Seven Principles of Abundant Energy' so it's all things that I've picked up, the traits of people who recover, the traits of people who are successful in getting abundant energy again, after 15 years of research and working with clients on that. So that's the other little freebie that we're giving away today as well so I hope people get a lot out of that too.

Alex: Niki thank you so much it's been a lot of fun and I always deeply and admire and appreciate, not just your ability to go deep on things but we haven't done this kind of thing together for a long time and I forgot just how good you are at making really complex stuff, putting it together and making it simple.

So thank you so much I'm sure people found that immensely helpful and its been a great pleasure as always.

Niki: Thank you so much Alex and thank you for putting on this important event for such an important cause so kudos to you as well on that and well done I know how hard you've worked on all this too. I am sure it's going to be very successful.

Alex: I hope so (laughs) thank you.