



Healing the Freeze Response

Guest: Dr. Veronique Mead

Alex Howard: Welcome everyone to this session where I'm really excited to be talking with Dr. Veronique Mead. Firstly, Veronique, welcome and thank you for joining me.

Dr. Veronique Mead: Thanks so much, Alex.

Alex Howard: I was just saying to Veronique, that when Niki suggested this interview, I said, Niki, "we're already full, we've got too many interviews", and took a quick look later on and I realized that I've been looking at Veronique's blog a number of times over recent years. So I ended up having to go back and say, "actually, I've changed my mind, we should probably do the interview and I would like to do the interview", so I'm really excited to get into some of what we can talk about today.

Just to give people some context, we're going to be talking about chronic illness and specifically the freeze response burnings. Veronique has got an excellent blog, which I think does a very good job of making some of these ideas accessible and tying them together.

Just to give people her professional background, Veronique Mead MD is formerly an assistant professor of family medicine and a practicing physician, who retrained as a somatic trauma therapist. She presents a new paradigm of disease on her blog describing how the science of trauma explains the mind-body link, and shares a philosophy on how to identify tools that support healing in ways that are unique for each one of us. She is an author, speaker and writer who integrates the research with what she's learned from her own gradual recovery from a disabling chronic illness.

So, I'd like to start there if it's okay, a little bit with your own personal journey to understanding the importance of trauma in health.

Dr. Veronique Mead: When I was a family physician 20 years ago, I attended a number of mind body conferences back then and I was really starting to get curious about ways that were outside of a traditional medical view, but I had no understanding of trauma at all, there is such a split between mind psychology, psychiatry in one realm and medical care and physical diseases in the other.

I ended up leaving medicine, retraining as a somatic therapist, and my goal at that point was, I was really wanting to learn how to listen to the body and I had a sense that symptoms had something intelligent in them.

I had an “aha” moment at one point when I was retraining in a master's program, one of my faculty, Christine Caldwell, who'd written a book on getting our bodies back, I was writing a paper on it. And what I was learning was this concept in somatic psychology, which is a body oriented way of doing psychotherapy, was that if a cycle of activation gets interrupted, a fight or flight response gets interrupted, it can get stuck in that cycle and then just repeating that part of the cycle instead of going all the way through and continuing.

So I was looking for an example in this paper and since I was a psychology program, those were all the examples, I was getting anxiety, depression, PTSD. And I thought, you know what? What if a physiological cycle in the fight flight pattern activation cycle were to get interrupted? It was like, well, what if high blood pressure or blood pressure increases normally in a fight or flight response or just in a normal sympathetic, normal nervous system, responsive running or even standing? And what if somehow that got interrupted? Could that lead to high blood pressure? Or do we release blood sugar and make ourselves resistant to absorbing sugar, so that it's available for running and for our muscles? What if that got interrupted? Could that lead to diabetes? And that was, I think, the moment where I started to wonder.

Alex Howard: So really interesting question. Yeah.

Dr. Veronique Mead: Yeah. And what I ended up doing in the past 20 years since then has been, when I first started looking at the research, is there any research that supports the possibility that trauma is a risk factor for chronic illnesses of any kind? And that's where I started to discover the first one was in Type one diabetes, the autoimmune form of diabetes. And they were finding from antibody studies that people had the original risk for diabetes, from what they could tell from antibodies, could begin 10 years or longer before the onset.

And from there, it was like, oh, that led them to think about pre and perinatal risk factors and then I discovered a researcher in multiple sclerosis, Charles Poser, a physician who was saying, you know, it looks like traumatic or environmental factors can initiate risk. And then other factors perpetuate and facilitate and strengthen them. And then something triggers the onset. But it's really a long process.

Alex Howard: And how did these realizations then also impact upon your own personal situation, because you were sort of having your own journey whilst having these kinds of questions that were kind of inspiring you and driving you?

Dr. Veronique Mead: Yeah, it was this, so many of us with chronic illness at the early phases, we don't even realize we're sick. We think it might be stress or whatever it is that's going on. And so for me, I was getting progressively more tired, more fatigued. I would have fatigue attacks as I called them, and then be fine in-between.

So on this part of my journey, I didn't quite realize I was getting sick and I ended up developing chronic fatigue syndrome. That was the diagnosis that I ended up getting since there were no others that fit it. But when I first started looking, I didn't think trauma applied to me. And I think this is really common also

Alex Howard: Yeah, I think so. And I think also you've written, I think, very eloquently in your blog about the sort of misunderstanding that people have when they realise how trauma affects physiology and we have what is then very real physical symptoms is not the same as something being psychological.

And the sort of labels and the reactivity that those labels create can create quite a difficult set of territory, which can really sometimes, I think, get in the way of people accessing the ideas that may be the key to help unlocking what's happening for them.

Dr. Veronique Mead: I think that's really well said. I mean, it makes it even hard for us to look at our own lives and consider whether adverse experiences could have contributed to our own health, because we do have a medical culture and a social culture that's so rooted in thinking that there must be only physical causes for physical diseases.

And so it was quite a while before I started to think, well, is there any trauma in my history? And one of the things I said I first looked at with this question was, we know that traumatic experiences can act as reminders later in life for veterans, for example, who have post-traumatic stress disorder. And so I started wondering, could triggers actually happen in my own experience that could make me have a fatigue attack or a worsening of my fatigue? And it actually took me a year before I caught the first trigger. That's how sneaky they are.

And if you don't have that full picture of trauma, it can be harder to know what to look for. But it was, I had a sort of a flare for a couple hours of worsening fatigue one day and then I realized that I'd had a phone conversation right before then where there had been a relatively small amount of conflict - it was a group discussion I was in - that had been enough to get my system to get worse.

And I caught other triggers, I started to catch them after that, but that was the first real clue for me that, oh, wow, there really may be a history for me. And then one of the things that took me a while was the trigger sort of for onset, sort of the last straw, and that ended up for me being my medical training, I think.

There is just so much trauma that physicians witness and that we don't even understand in our medical training and so on top of the lifestyle of no time for yourself, the hours. But there's also the component that's starting to emerge now that's been mentioned, which is the concept of moral injury, which has come from the military and it's a term that's now being applied by some folks for medical care, which is that physicians can get caught by the business side of medicine and then having to do things that doesn't fit with their underlying sense of moral ethical practice.

And just the example of having no time and having to do a lot of tests just because of the insurance component but that doesn't actually necessarily serve the patient or the person in that position of the patient. And so that was part of what I realized was one of my big triggers towards the end.

Alex Howard: I think it's enormously beyond those pieces, I think are really important, just the physical demand as well, of the hours of medical school and particularly those early years, I think working as a doctor is incredibly demanding.

I think it opens up another important question, which you've written about the difference between stress and trauma. And I think that's quite an important distinction that you make. Could you just perhaps speak to that a little bit?

Dr. Veronique Mead: Yeah, I think the difference is not fully recognized yet. And when I was writing my thesis for my master's program, I had to be looking up what the definition really was of stress. And when you break it down to the bare bones, anything that asks our system to adapt, whether it's our physiology or behavior, if it's cold outside, your physiology might start to shiver a little bit, that's actually an adaptation response to warm us up. But putting on something warm can do it, too. And the thing about stress is that when the stress goes away, your stress response comes back down to baseline. So once you're warm again, you don't have to shiver. You can take off that extra layer. And that, I think, is one of the critical pieces about trauma, is that trauma is a stress response that has gotten stuck and unable to come back down.

And the distinguishing feature with this is that it's a moment of freeze that interrupts the cycle. And I think that's what a lot of us in the somatic psychology field and in the science of trauma field are starting to think about. There's a really great quote by Robert Scare, who's a neurologist, who's a colleague of mine. He wrote this in *Psychology Today* in 2006, and the way he describes trauma, he says; 'any negative event that occurs in a state of relative helplessness, a car accident, the sudden death of a loved one, a frightening medical procedure, a significant experience of rejection. All things that we don't typically think of as traumatic can produce the same neurophysiological changes in the brain as do combat, rape or abuse'.

And so that's a major shift for most of us to start thinking about, all by itself. But then he adds this other piece. He goes, 'what makes a negative life event traumatizing isn't the life threatening nature of the event, but the degree of helplessness it engenders in one's past history of trauma.' So this helplessness piece, he's actually speaking to the freeze response. When the stress is overwhelming enough to me as an individual that I cannot adapt to it through fight flight behaviors, anything else, my system will unconsciously and very naturally go into a default response to freeze and shut down, to sort of wait out the threat. And we see this in animals.

Alex Howard: Yeah. Maybe you can say a bit - because people that aren't familiar with the semantic model - maybe just say a bit about what that freeze response actually is and how that then impacts upon the system.

Dr. Veronique Mead: Exactly, because we're getting much more familiar with fight flight, but we don't think about freeze as much, so freeze is what the opossum uses as its threat response to danger.

An opossum can't run away. It doesn't have the mechanics and the physiology as its primary response. And so when it's faced with threat, its whole physiology shuts down and the thing is, it's not a conscious response, it's actually a physiological thing that happens. And so the opossum, the heart rate and the blood pressure and the sense of awareness all go down. There's a video online where there's actually a fly walking across the eye and the opossum looks dead.

Alex Howard: Yeah, I was just going to say it is really - we had a bird which managed to get into the house a couple of days ago and it was sort of flying around and it sort of flew into the window just in front of my computer screen, stunned itself, and then went into a freeze response. And it was sort of like, there was one point, we were like, is it dead? But it was sort of sitting up and it was like we were sort of trying to get it to move. And then it gradually came out of this freeze response and then it sort of came back. But it was fascinating to actually see in real time an animal go into freeze like that.

Dr. Veronique Mead: Exactly, and that's also an example of just how common it is and this response is actually while the system is trying to - look in the case of the opossum, it's wait until a threat goes away to fake out the predator because it looks dead and the predator actually tends to need movement to stimulate that final attack. But for the bird, it may be that it's having to reorganize from that shock. And it's actually helpful if we let it have its own time and give it its own space.

And in chronic illness, what I've been discovering and pulling together in my own model, but based on the research I have been looking at for 20 years, is that we have likely had some series of events that have had that freeze component that have strengthened a

pathway to the point where it stopped a pathway in some direction that has led us to them a particular disease, depending on what cycle's been interrupted. And so this perspective that freeze gets us stuck really suggests that there may be ways of getting unstuck, like the bird that you just described.

Alex Howard: Before we come to some of the ways that we can reverse it, we'll take a slight tangent in the conversation here and just open up this idea of cell danger response, and then talk about how the freeze response sort of impacts into that. And then we can sort of come into some of the ways that we work with it. I know it's slight tangent to the conversation, but I think it's almost like putting in the sort of different building blocks to then bring it together.

Dr. Veronique Mead: I think it's important because having science really helps, because the concept seems to be so, so foreign to how we approach medical disease that really to understand that there's science that supports it from all these different parts is really helpful.

So, the sole danger response comes from Dr. Robert Naviaux, who has a mitochondrial research lab and who does other kinds of work at UC San Diego. He's pulled together 60 years of research and the way he proposes this model that our cells do the same thing our nervous systems do, it's just at that very small level.

And so when our mitochondria in our cells - when a cell is faced with threat, such as an infection, it has its own set of responses. And the mitochondria can release that, send the message to other cells, tell them what to do, tell them whether they need to strengthen their boundaries, send out something to attack the infection.

And in a similar way to how we're understanding it from a nervous system point of view, if that cell gets overwhelmed and can't adapt, it also can go into a shutdown or freeze response or get caught in one of those places where it can no longer shift out.

And that's kind of the basis of the cell danger response theory is that something gets stuck, a threat response gets caught and unable to come back into adaptation baseline. This happens over time, that it can be initiated generally very early in life, and that it's really a process of multiple exposures over time.

And Naviaux recommends this as a whole new paradigm of disease and he has a chart showing over 100 diseases that this is the new paradigm, whether it's Parkinson's or other autoimmune diseases or chronic fatigue. All of these fit into that same category; one causes many different disease expressions.

Alex Howard: And I think one of the things that's particularly important about his work is that it's not just a theory. It's also that there's a lot of, really I mean, reading some of his papers are way over my head, you've got a better head start because you've got medical training, but it gets pretty technical.

Dr. Veronique Mead: And I can't understand them all either!

Alex Howard: It gets pretty technical. But, you know, there's some amazing research I know they're doing at the moment on autism, where some of the findings on that are really, really staggering because normally people talk about trying to limit the progression of things like autism. What he seems to be finding is actually reversing autism in some cases, which is pretty incredible.

But I think there's something about his work and also I think it's very helpful the way that you put together these different pieces, which sort of explains some things in health, in particular chronic illnesses that sort of have been coming out for some slightly poorly defined and unhelpful sometimes ways, where there is something going on between what's happening in the nervous system and what's happening in the body.

But now we have much more helpful models and vocabulary to really understand the nuance of how those impacts actually happen. Which also then opens up the potential of ways to start to address that and work with that, which I'd like to come to in a moment.

Before we do, I think it's worth probably helpful just to explain, you've given a few examples, but to explain maybe a few more of the ways that this freeze response, which then is impacting upon the cells in cell danger response, some of the ways that that can be triggered, because I think there might be people who are watching this and going, well, I don't have chronic fatigue. I haven't had major trauma in my life. I can sort of see how that might be true to others. But I think in more subtle ways for many of us, that there are impacts here that are happening.

Dr. Veronique Mead: I think so and that concept that there may be something that initiates a cell danger response pathway and then events that strengthen it or that actually weaken it and buffer us and give us more resilience and then there's a final trigger before the onset of a chronic illness. Are you curious about onset triggers?

Alex Howard: Yeah, exactly. So I think, just I think it would be helpful for people to hear a few more examples of how that can happen. Yeah.

Dr. Veronique Mead: Yeah. And in one of his studies, Naviaux actually looked specifically at folks with chronic fatigue. And he included a survey for all of them of what had happened

for them among certain categories or what was, if anything, that triggered the onset of their chronic illness. And he had five categories. One of them was unknown.

But the others, the first one, the one that was the most common, were all different kinds of infections. And you find that in all kinds of chronic illnesses, not just chronic fatigue, but in autoimmune diseases and other diseases as well and what they're finding in all these different areas is that there is not one particular infection that seems to trigger a particular chronic illness.

So even in chronic fatigue, whether it's Lyme or Epstein Bar or having had a cold. And so what Naviaux is saying with this first example is that the infection is the trigger that sort of solidifies a cell danger response pathway that's been growing for a very long time. But it's not actually the cause of the chronic illness. And so for a lot of us, you can treat the infection and the symptoms don't go away. And you still have the chronic illness. This is one way of making sense of that, even if there may still be a pathogen in the system.

Alex Howard: It's almost like it's the final straw that breaks the camel's back. It's not the straw that's the cause of the whole situation.

Dr. Veronique Mead: Exactly. And when you keep looking at the research in Type 1 diabetes, for example, they'll find that the kids who will develop diabetes after an infection were the ones who also had more stress in their lives. More, sort of, an accumulated load. So infections were one of them.

Another one was chemicals, whether it's toxins, things like toxins from mold or pesticides or pollution.

And the third one is psychological stress. And this is one of the ones that a lot of us have trouble getting but it's things like having been a caregiver to a loved one during a long period of severe illness that the other person may have had. But it could be major stress at work, or it could be the kind of stress of the pandemic. This may be a trigger for a lot of people who have had a pathway that's been growing for a while and with this extra stress, maybe throwing some over the edge into a chronic illness.

Alex Howard: I think yes, and I think one of the challenges can be particular, some of those psychological triggers is people normalize themselves and how they live their life. So, for example, you mentioned caregivers where what I would call a helper pattern, where someone is somewhat defining their self-worth by what they do for others, that we get so used to being that way that it's almost hard to identify in ourselves, because it's just what we've always done.

It's like we can't see the wood for the trees of the fact that that's just how we are. And often people, I think have these sorts of triggers and these sorts of depleting ways of living, but not identify them as such because they're just normalized.

Dr. Veronique Mead: Absolutely. And, you know, even if it's because you're working extra hard and being super productive at work, but that there's a stress in that background, we live in a society that is so normalizing and also encouraging of those of us who are workaholics, really. And a lot of us who develop chronic illnesses and maybe chronic fatigue and certain illnesses in particular have that type A; go, go, go. Which is actually kind of like a fight flight pattern that's also caught because it can be very hard for some of us to even slow down and relax.

So, yeah, there's a lot of ways in which we can be blind to what actually constitutes stress. Like, I didn't quite think that my medical training, you know, everybody else goes through it and not everybody gets a chronic illness from it.

Alex Howard: I think it sometimes takes a level of sort of compassion and and gentleness towards oneself to be able to create the space, to be able to see these things.

Dr. Veronique Mead: It really does. And creating space is actually a huge piece. And this the self compassion, not judgment. And a lot of times we have to start with ourselves because our culture doesn't get it enough yet.

So the fifth piece is physical stressors, physical trauma, things like an accident or a fall, an injury. But even something like surgery can be a trigger for some folks. And there's a lot of elements that happen in a procedure like surgery. It can be really scary. It's invasive. There's a process of healing. It itself can be traumatic, especially if someone already has a history of trauma.

So these are the kinds of things that can trigger the onset. And like you say, our own ability to have some self compassion and find a place to be curious about what might have been triggers is kind of a place where we can begin to think about our own chronic symptoms from a slightly different angle and a different way.

Alex Howard: Let's come to a little bit of some of the ways that people can work to address what's happening here, and I think perhaps one of the places to start with that is, is actually the freeze response piece we were talking about a little bit earlier.

That particularly within the semantic models that we're at, where you've been sort of practicing in a more recent time, perhaps say a bit about how we can start to unfreeze the freeze response, in a sense, how we can start to work with this kind of response in the system to these these different traumas.

Dr. Veronique Mead: Some of us will present with more fight flight symptoms, more hyper vigilance, anxiety, go, go, go, having a hard time to settle down, but also really ready to kind of engage and try all these different kinds of things.

And some of us are more cut and freeze, which I think is, for example, with my own chronic fatigue, that the freeze is the layer that is the most dominant that's causing everything else to be inhibited underneath.

We may have some fight flight underneath. And that freeze place that involves the other end of the spectrum, such as depression and a sense of apathy, a sense of meaninglessness in life, brain fog, exhaustion. And you know the exhaustion, just a tie in the CDR (cell danger response), if the mitochondria are stuck in a defense threat response they don't have the capacity to keep producing as much energy either. They can't do both 100 percent all the time. And so fatigue is something common in all kinds of chronic illnesses, not just chronic fatigue.

So if your system is caught in freeze, it's a whole other deeper layer of the trauma response. And it can actually be harder to work with and we actually have to work in smaller doses. And what we're trying to do really is to change the signaling, the threat signaling in our systems to actually start to provide more of a safety signaling so that the nervous system or the cells get the message that these things happen in the past and right now, if we are indeed truly safe, that our nervous system can start to get that peace.

So working from a trauma perspective with the freeze response is the biggest piece I found about going very slowly and very gently with whatever it is that you do. So you, in this conference, for example, there's so many different ways, so many tools, whether it's mind, body practices, meditation, yoga, tai chi. And just starting with that concept as someone with chronic fatigue, anything that asks my system to mobilize, to move, to act, has a risk of triggering more freeze. And I think that's something that a lot of health care professionals don't quite understand and a lot of us with these illnesses don't get until we keep overdoing too much and then having these terrible flare ups.

Alex Howard: Yeah, I was just going to say that people often try and solve the problem in the way the problem got created. It's almost like they pushed themselves to a point that they became ill. So they tried to push themselves out, but actually it activates the same damage that was there in the first place.

Dr. Veronique Mead: It's a real challenge because some folks with chronic fatigue have more of a full on, more like the opossum, it's all frozen and there's not a lot of energy even under that. But then there's some of us who have that wired but tired drive and that urgency and a lot of folks with any kind of chronic illness that urgency to get better. It's so strong. And I think part of that is a fight or flight response that's also stuck.

And so I'd say that mindfulness is one of the biggest tools in this process of observing from a witness in ourselves. What's happening in our system without judgment, but with curiosity. This is a lot of mindfulness meditation work, because when we can observe something, it means that a part of us, even if it's really small, is not completely caught in what's happening or in a reaction. So we're able to observe that, 'I just got back from the grocery store. We're maybe in the middle of a pandemic. My system is actually kind of activated. I feel really stressed and anxious', but if you're observing that and you can recognize, oh, this is a threat, trauma response type of a thing, what might be helpful to be with this? And so from mindfulness, you have options. And it might simply be to slow down and notice it and allow this at least some part of you to not react, not freak out.

Alex Howard: It's sort of building a new relationship with oneself in one's body. In a sense, it's creating the gentleness and the sort of holding that perhaps we didn't get as children or perhaps didn't get at different points in our life and really changing that relationship in such a way that it allows the system to feel safe enough to come out of that freeze response or indeed come out of that fight or flight response.

Dr. Veronique Mead: Exactly. And the way you mention it brings up a whole number of threads onto how this is actually working. One is that just as adverse experiences strengthen a cell danger response pathway over years or decades, everything we do to add the safety signaling, even if it means for kind of the sense of reparenting ourselves or being compassionate and gentle with ourselves. For some people, it'll be something they may have never experienced. But that's how we're actually strengthening the pathway of safety, signaling and weakening at the same time this threat response pathway.

The research is finding that there are epigenetic changes that are happening just with mindfulness. But with all these other practices, there's changes in our brain, our prefrontal cortex, that disengage from the amygdala in the HP response.

And I just want to add the piece that you mentioned that this may have happened in the past or come from never having had this experience. This is actually, I'd say, one of the most under recognized sources of the threat response, is having not had enough of that concept of nurturing, it's one of the easiest things for people to blow off. It's all they've known, they know maybe their parents love them, but they worked so much they couldn't be home or they couldn't tolerate difficult emotions. And so they couldn't be quite nurturing or available.

That is something that we know as complex. PTSD is one term or developmental trauma, but that's actually one of the reasons it can take so much time to begin to heal, because of how much we have to learn and grow to end and implement this practice of nurturing our own systems.

Alex Howard: Yeah, it's almost like we have to develop and learn how to do something that our parents probably didn't know how to do and didn't give to us. And for things to change in the nervous system, we actually have to go on a journey of growth and development.

I think people sometimes think, oh, I just need to learn to meditate or I just need to learn a few tools to calm the system and although that may play a role or maybe very helpful, it's sometimes more complicated than that. It's that more than the fundamental relationship of how one is with oneself.

Dr. Veronique Mead: Yeah, I think a lot of us will hear of people who recovered from a chronic illness doing one thing, maybe they did diet and that was enough for them or they meditated and that was enough for them and then there's the rest of us where we have to add things and really have a lot of tools in our toolkit.

So I include trauma therapy as one of the big missing pieces for working with healing chronic illness. The more we understand how much of a risk factor all kinds of trauma are for chronic illness, I think the more we're going to start to marry that mind body piece and incorporate these therapies that seem to be psychological therapies, but that are actually helping our physiologies and ourselves resolve and move through these effects of past trauma as they are designed to do.

And that's part of what creating space also does, whether it's slowing down or meditating or having compassion. It's actually creating more space so that our systems can do their own work, that they know how to do in this process of healing and recovery. And that's part of what Dr. Robert Naviaux talks about, too, that this is all part of the cycle, it's how do we complete that cycle to get it unstuck?

Alex Howard: Yes. And I think that opening to looking at chronic illness from this perspective, I think it can be challenging and I think actually it's a, I think one of the real gifts of your blog and the way that you write is I think, by bringing the science to it and bringing the sort of, the kind of depth of the explanation of some of what's going on here, I think it makes it more - for want of a better word - it makes it more palatable sometimes to people who I think particularly can feel quite defended, where they spent too many years of people telling them that they're making up or there's nothing wrong with them, that it can be quite a difficult thing to open to that that perspective is wrong. And yet there is something that's going on that requires understanding what's happening on a psycho emotional level. So, yeah.

Dr. Veronique Mead: I think it's one of the most common reactions I hear from people, they have been traumatized literally from the people in positions of power, often their physicians, telling them that a symptom, a symptom that they could not objectively measure or see must therefore be psychological or all in their heads.

And there's a really supportive article by a neurologist psychiatrist named Burke, Matthew Burke. I believe that came out, I believe it's in the *Journal of the American Medical Association* JAMA last year. And it talks about this 'all in your head' being a silent epidemic and that it's actually harming the doctor-patient relationship. And that kind of just leads to a piece I would say that part of the healing that needs to happen is we all need to become trauma informed, and that includes organizations and institutions.

And I think medical professionals and organizations from the bottom up to the CEO need to become trauma informed and catch up with the science. It's not just that they can and we can stop causing trauma inadvertently, but it actually enables us to become more of team members with people we're working with, because as product people with chronic illness, we have so much expertise, we know so much. And what the other study in JAMA that came out early 2020 is there is an early study training people to be trauma informed in eight emergency medical centers and one of the things that they're finding is that it may also help reduce burnout in staff, and that's a huge problem. It's a really significant problem.

Alex Howard: You know, there's so many more things I'd like to talk about. I have, as I said to you before we started recording, I think we'll have to have another conversation when we have more time.

But for many people that want to find out more about you and your work, maybe just say a bit more about what they can find on your blog and also other things that you have that people can access.

Dr. Veronique Mead: My blog is called Chronic Illness Trauma Studies. You can find it at chronicillnesstraumastudies.com. And I have the home page, it's kind of a summary of all the different posts.

When you get into the regular blog section, there are menus on diseases. I have started writing about those and I write about chronic fatigue. But what the sciences applies to all these other chronic illnesses. And I also have tools because I really think that as we start to get it as patients, we can begin to educate our doctors. And so there's also information under the sort of science of the trauma.

So there are factsheets that you can give your doctor; one page fact sheets on ACEs, adverse childhood experiences and other types of trauma is just one example. And then I also have a page with over twenty five free ebooks that each cover various topics, but they're all free to download.

Alex Howard: You've been quite prolific in content. But I highly recommend it. I think you have a real gift for making complex stuff accessible without throwing out the pieces.

Sometimes people can make complex stuff really accessible, but in a way that sort of loses the substance. And I think you have a very real kind of talent for making accessible, but also keeping the substance in there.

So, yeah, I recommend checking it out. And thank you so much for your time today. I think it's been really informative. I really appreciated it.

Dr. Veronique Mead: Thanks so much for having me, Alex. It's been great to talk with you.

Alex Howard: Thank you.