

Traumatology with Dr. Nicholas Barr

Ologies Podcast

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Oh hey, it's that little green wispy weed sprouting from a crack in the sidewalk, Alie Ward, back with a hopefully hopeful episode of *Ologies*. Traumatology, what is trauma? Who gets PTSD, and what steps, large and small, can you take to heal a hurt in a brain? So, whew, it's a good one. I got goosebumps both recording and writing it up.

But first, thanks are always in order every week to the many folks who are making this podcast a reality, from an idea a million years ago, to a weekly thing I get to put together. So, thanks to everyone on [Patreon.com/Ologies](https://www.patreon.com/Ologies) for tossing in as little as 25 cents an episode to submit your questions and to join that party.

Also thank you to anyone supporting *Ologies* merch by sporting *Ologies* merch. It's available at [OlogiesMerch.com](https://www.OlogiesMerch.com). There's also a link in the show notes.

And thank you to all the folks who have rated and subscribed, which keeps *Ologies* up among those science giants in the podcast charts. Thank you so much for that, and also to everyone who leaves a review for me to read. For example, this one by Jersey Dork:

I was most touched by the "Field Trip, the LA Natural History Museum" episode. Alie shares her passion and love for the museum and you can FEEL how happy she was to have changed her career like this. She takes a minute towards the end to encourage all listeners to chase what you are passionate about and I really took that to heart. I'm now taking steps to start a wedding dress brand.

Congratulations, Jersey Dork! That made me just giddy for you, if *I do* say so myself. Heh! Get it? Never mind.

Okay, traumatology, very much a noun, very much a word, it's a discipline. But in researching this intro I found out there are two kinds. What? There's medical traumatology, which is surgical wound-healing, like after accidents or major injuries. Then of course there's psychological traumatology, that researches and helps treat people who have witnessed or experienced distress.

Traumatology, either one, comes from the Greek *trauma*, that means 'wound' or 'injury', and the root for that word – just a fun side note – meant to rub, or twist, or pierce in the way that one would have an old creepy weapon. So, trauma.

You know what, after a series of episodes about toads and crickets, I just thought we should have a little gander at our squishy but strong human minds. And I was chatting with wonderful person and boyfriend, Jarrett Sleeper, who helps edit *Ologies* and he's the host of the mental health podcast, *My Good Bad Brain*, and he suggested a friend of his. And less than 24 hours later, I was headed to this doctor's cute, cozy home.

There was a diploma on the bookcase, the smell of some freshly lit incense, he has a beard and tattoos. He looks like someone who would open, like, a vintage motorcycle shop, but he's like, "Ha-ha! Surprise! I'm a traumatologist." He got a cup of coffee, we settled into some big comfy chairs to talk shop about clinical bummers, but how to help your brain cope with maybe what life has dealt you.

This traumatologist has studied the role of mindfulness and meditation and its efficacy and limits in trauma therapy and other mental health symptoms and disorders. He's taught a Mindfulness for Practitioners' workshop in a psychiatric clinic; has worked on research for improving acceptance,

integration, and health among LGBTQ+ service members, reducing suicidality among LGBTQ+ youth; and done extensive research on examining mindfulness and therapies for military veterans. He's a cool dude! He's also a member of the Association for Behavioral and Cognitive Therapies; he's a member of the Cognitive Behavioral Therapy Society of Southern California; he's also part of the National Association of Social Workers.

I loved this chat because it's very obvious that his mind cares about other minds, but also his mind is just a bucket of responsible information on the topic. This episode, maybe not the most hilarious of the ologies, but I think it's incredibly important for all of us.

We talked about how trauma affects the brain, what trauma is, what percentage of folks will have lasting effects after a traumatic event, how clinicians help their patients get over some distressing memories. We also touched on PTSD, EMDR, CBT, CBD, PE, CPT, and more.

So, take a deep breath – don't forget to exhale – and learn about de-stressing with your friendly neighborhood traumatologist, Dr. Nicholas Barr.

Dr. Nicholas Barr: So, I'm Nick Barr.

Alie Ward: Dr. Nicholas Barr?

Nick: Mm-hmm. Yeah.

Alie: How long have you been a doctor?

Nick: Well, let's see. My degree is right there. I think that was last summer, so... Oh god, actually I think I defended my dissertation a year ago last week! So, about a year.

Alie: Oh my god! Congratulations! [*DJ airhorn*]

Nick: Thanks, yeah.

Alie: What was your dissertation on?

Nick: Basically, I looked at the role of mindfulness across the trajectory of military veterans' combat-related experiences. My first study just was a head-to-head comparison of trait mindfulness and combat experience as predictors of PTSD and depression. And then I looked at how mindfulness, and PTSD, and depression predicted internalized mental-health stigma, because we know that's one of the core barriers to veterans' service-use behavior, like getting mental health services.

Aside: Nick says that combat is what's called a linear predictor of PTSD. So the more warzone firefights a person may have experienced and the more intense they were, the stronger the probability of developing Post-Traumatic Stress Disorder, which is our good buddy we casually call PTSD.

Nick's research also found that the stronger a veteran's stigma about mental illness, the stronger their PTSD symptoms tended to be. Hm.

Nick's research also looked at trait mindfulness and its association with PTSD. So, could mindfulness help veterans with the body and mind's response to stress? Also, if you don't know what trait mindfulness is, you're in really good company.

Alie: What is trait mindfulness exactly?

Nick: Basically, when we talk about mindfulness from the Western behavioral health psych perspective, it's the ability to pay attention on purpose to present-moment phenomenon

without judgement or elaboration. Without ruminating or avoiding that content, things like thoughts, feelings, behavioral urges. And that's an okay definition from the perspective of measuring it with self-report scales, but there are a lot of problems with measuring mindfulness in that way.

From the Buddhist perspective, which is what mindfulness grew out of... My undergraduate degree is in religion and my focus was Buddhism. You really miss a lot when you define mindfulness in that way. In the Buddhist perspective, it's much a more holistic orientation towards your life and life experience, and we probably aren't capturing that level of nuance with a 24-item questionnaire. But then there are other researchers who sort of triangulate on the concept by taking objective measures of attention, so like measuring attention control and impulsivity.

Alie: Is a lot of that, trait mindfulness, is some of that just executive function? Is that frontal-lobe stuff? Is that innate or is it situational?

Nick: Yeah, great question. [*“Why thank you!”*] The brain regions that would correspond to better mindfulness, in terms of what we see in fMRI results, would be prefrontal cortex and then the HPA axis, which is, I'm not a neuroscientist... but it's your hypothalamic-pituitary-adrenal axis, which kind of regulates fear and memory.

There's one famous study where a bunch of very accomplished meditators, 10,000+ hours meditation experience, so monks, were asked to look at disturbing images. Horrible pictures, babies with tumors on their faces and things like that, while practicing a loving kindness meditation. They showed a lot of prefrontal cortex activation, whereas people who were non-meditators showed a lot of amygdala activation, so revulsion, fear, distress.

Aside: For more on this, you can see the two-part Fearology episode, in which we get to know our brain's little screaming almond of terror, the amygdala. Also, I went to look for that specific study, but there had been several like it, so I added some of the details that Nick mentioned and came up with some research papers about pediatric facial tumors, which was not what I was intending, but moving on.

There have been multiple studies looking at the brains of meditators, and some have been thrown a little bit of shade, just because the principal investigator was a close personal pal of His Holiness the Dalai Lama. So people thought that perhaps they were biased, but that doctor was like, “You're going to tell a cardiologist not to exercise? Come on.”

Nick himself is very, very committed and focused on evidence-based research, and I found his PhD dissertation. In it, Nick thanks his friends, who he says, “Have put up with my predictable response to even the most trivial claims with, ‘Okay, but where's the evidence?’” So yeah, he's a data dude.

Nick: And yeah, that will make you better at your executive functions. Actually, a colleague of mine, years ago in the same PhD program, did a study looking into mindfulness-based intervention with individuals with schizophrenia. She found improvements in executive functioning following her interventions, so yeah, there are linkages there.

Aside: Let's trace his path, all the way from his pre-academic beginnings. He got a BA in Comparative Religion at Columbia University, he studied mindfulness in India, did some teaching in Laos, and got a Master's in Social Work at UCLA and a PhD at USC, where he's now also doing some postdoc work.

Alie: Can you tell me kind of what brought you to be interested in, kind of, a religious background, how that led to trauma?

Nick: I had a weird early interest in Buddhism. I think my dad did a bunch of work in Japan growing up; there were all these books on Zen. I didn't study Zen, but there were all these books on Zen, and I would look at them, you know? I just remember having this weird fascination with them as a kid. And then when I went to college, I went to Columbia, and the head of the religion department at the time was this guy Robert Thurman, who's the first western monk ordained by the Dalai Lama. He's this very charismatic, interesting storyteller, and I totally was hook, line, and sinker into it.

Aside: I was curious what this guy was all about, and I looked him up, and his face seemed hauntingly familiar. Then I read his bio, and he's also Uma Thurman's dad? Also, Uma Thurman's mom was LSD-advocate Timothy Leary's ex-wife, did you know that?! Okay, I'm getting off track here. Anyway, Nick attended a lecture by Thurman, who's a Buddhist author and academic, and he was enthralled.

Nick: So, then I just started taking a bunch of those courses, and I ended up studying abroad at this place called the Institute of Buddhist Dialectics, which is kind of the monastic training college that's attached to the Dalai Lama's temple compound in northern India, in Dharamshala. Then I was learning from a Geshe, a monk, Tibetan Buddhist philosophy. My father had just died, so I was totally just not doing well, wasn't coping that well.

Alie: I'm sorry.

Nick: Yeah, thanks. It was a long time ago, at this point, but yeah, I appreciate it.

I think all of that sort of led to my interest in Buddhism and how that intersects with trauma and coping with trauma. I don't think I was traumatized in the DSM sense of the word. I mean, I had not undergone a trauma. I was just fucked up, and disturbed, and upset, and not coping well. I'd had a pretty sheltered life, I think, and so I just hadn't dealt with something like that.

But it helped me. I mean, I was doing a formal meditation practice every day for a long time in this sort of monastic training context, and I just noticed that I was better able to handle my thoughts and feelings. I mean, I was totally naïve, I was like, [*dopey voice*] "Huh, I wonder if anyone's ever thought about this before? Could we use this to help us with trauma?" Of course, people had been doing this in a really rigorous way since the 1980s, or maybe before even. But naïvely I was like, [*dopey voice*] "Oh, this could be my contribution." [*cringe*] Oh, god.

So, I ended up doing some teaching and development work in Laos, which is a Buddhist country, and I was just interested. They were kind of developing from the ground up at that point, they didn't have a public health system really, or a mental-health infrastructure at all. Again, naïvely and with a lot of hubris, I was like, "Oh, I bet I'd be a good therapist because I'm pretty even-keeled, and this stuff doesn't freak me out. So maybe I should just go be a therapist." So, I applied to a Master's in Social Work program. While I was there I took the GRE in Bangkok, and then came back and got my master's at UCLA.

Alie: I think that's a good self-selection, though. If you're like, "I think I can listen to people's problems and not get freaked out," I think that's good. Because there are plenty of problems that I'd be like, [*dramatically*] "I'm crying more than you are! I'm bad at this!"

Nick: I don't know, a tear or two is probably okay, but...

Alie: Just in the fetal position. They're like, "Doctor?"

Nick: Yeah, that's not good, right. You don't wanna do that.

Alie: But what was it like as a Westerner, as a white dude, to go to other countries and learn. Did you find that that was pretty rare? Or was it pretty common? How were you received?

Nick: Uh, I mean, white privilege follows you everywhere in my experience, so I definitely had it in southeast Asia too.

Aside: Nick says he lived in Laos for three years, and formed relationships, and friendships, and became part of the community, and one thing that struck him was the multigenerational living; a household with grandparents and kids and uncles and aunts and brothers and sisters. He said in the three years he lived there, he could count on one hand the number of times he saw a baby crying. There was just always someone holding the baby, tending to the kiddos, and it felt so different from life in the US where, I guess, we got a lot of crying babies.

Alie: How is it as someone who has a background in the US but studied abroad in so many different cultures? Why do you think Westerners are so bad at mindfulness and meditation? Why are we resistant to it? Why are we, maybe, ignorant of it?

Nick: Yeah, it's a good question. We talk about trait mindfulness, right? So, there's the idea that there's some level of the trait in everybody, but I think physical exercise is a good analogy. Everybody has some level of physical fitness, and it's going to be in a bell curve, probably. It's a normalized trait. Some people are just going to be more fit than others as a result of their genetics and their behaviors, right?

And I think it's the same with mindfulness. Some people are more naturally attuned to that style of cognitive management than others, but it's a malleable trait. You can get better with practice in the same way that you will be able to do more pushups if you do them every day or run farther if you do that every day.

So again... This is beyond the science, but just my personal view, we're in a culture that doesn't reward that, you know? Because we're in the attention economy, and really smart people are trying to figure out how to consume more of your attention with shorter and shorter bits of stimulus, so we're literally practicing the opposite of mindfulness every day.

When you get an email and feel like you have to respond to it in a minute, that's the opposite of mindfulness. I think we're culturally conditioned not to practice those skills. But I guess the short answer is, I think our culture doesn't value mindfulness, even if we say we do.

Alie: And when it came to trauma, how did you become a traumatologist? At what point did you really zero in on that?

Nick: You know, it's a good question. My clinical training – my first internship, when I was doing my Master's – was at the VA here in West LA, in the inpatient psychiatric unit. And when you're in an inpatient unit, you don't get to do a lot of therapy, because people are acutely ill, and the goal of those units – for better or for worse – is just to get people to calm down. Then you figure out where to discharge them and get them engaged in other services.

I think some people are freaked out by that, because it's outside the bounds of your normal experience to see somebody who's floridly psychotic and loud. That just freaks a lot of people out, but to me it didn't. I was like, "This is interesting." And then my second training placement was at Harbor-UCLA, which is a county-directly operated adult mental health clinic, and almost everybody there had some kind of traumatic experience. It may not have been their presenting problem, but it informed what was going on often. And I learned how to

do what's still now one of the gold-standard PTSD treatments, which is called Prolonged Exposure, and I just loved that treatment.

Alie: What is it?

Nick: It's an exposure protocol. The gold-standard PTSD treatments are Prolonged Exposure, this thing called CPT, which is Cognitive Processing Therapy. Some people also consider EMDR to be one of those treatments, which I'm not trained in.

Aside: So yes, exposure is a leading treatment to trauma therapy. We'll talk about EMDR later, but right now, suit up for some PE, which is Prolonged Exposure. From the sound of it, it might get just as sweaty. Okay.

Nick: What it is, essentially – after doing a lot of informed consent, and explaining what the treatment is, and what the roles are, and really laying out in detail what the roadmap is going to be like – basically what you do is have the person develop a list of their most and least distressing experiences.

You would start with something low, like let's say the person had been attacked in the parking lot of their grocery store at night, for example. Low on your list of SUDs – which is Subjective Units of Distress, this list – would be thinking about, in detail, going to the grocery store. And that might put you at 20 out of 100, 100 being the trauma event itself, the worst thing that's ever happened. And then 90 might be going to that same parking lot at that same time alone, that might be high on the list of SUDs.

So, you develop that list, and then that person recounts to you, in detail, their worst traumatic experience, and you record that. And they do it over and over, for 30 or so minutes. And you're checking in, but you're not... Also, before doing that, you teach relaxation skills, like progressive muscle relaxation, deep breathing, things that physiologically relax the body.

And you have them narrate that experience, again and again and again. Usually, in the beginning, it's five minutes because there are disturbances of memory, gaps in the memory, the person wants to get through it, it's upsetting. Then you're like, "Great. Now again."

You don't do a lot of traditional talk therapy while the person is relating their experience, and it's *very* distressing for people. I mean, imagine, someone has been trying to not think about this experience for however long, and now they're giving you the most detail they can about it.

Alie: I just literally got goosebumps thinking about it!

Nick: Yeah, it's terrifying! People really become upset in the session. People are crying, they don't want to do it. And then they would listen to the tape afterwards, and do some of what we call in vivo practice, where they would approach some of the stressors on that SUDs list and then do relaxation afterwards. It's a process.

And what happens is people habituate to their distress. An analogy would be like watching a horror movie. If you watch the scariest movie you've ever seen, but every time the worst scene comes on you cover your eyes and look away, the 100th time you watch it, it's still going to be terrifying. But if you force yourself to watch it again and again and again and again and again, the 100th time you watch it, it's not going to be pleasant, but it's not going to be horrifying to you because you've habituated to that experience.

Aside: I went to add an audio clip from *The Exorcist*, and I started to google it, and then I was like, "Nope, nope, nope!" And I chickened out, so... Point taken, Dr. Nick.

Nick: But that's kind of the underpinning of most trauma treatments, this idea of habituation to distress.

Alie: When you're talking trauma, what exactly is trauma? I know that that's so subjective, and when you're talking about people who are in active firefights where people – many people at once – are trying to kill them, and their closest friends are dying around them, it doesn't get a whole lot worse than that. And I know that having studied in Laos too, I'm sure that you saw people who had been through a lot of that too, having done some work there. But how do you quantify what trauma is?

Nick: It's a really good question. I mean, there's the DSM definition. Essentially, there are four symptom clusters, which are: re-experiencing, avoidance, arousal –physiological arousal – and cognitive and emotional symptoms, like numbing.

Aside: Nick says that between two versions of the Diagnostic and Statistical Manual of Mental Disorders, aka the DSM, the parameters of PTSD changed. I looked this up, and they added 'involuntary' to 'intrusive, distressing recollections of the event'. And instead of the vague symptom of 'having a sense of a foreshortened future', they now say 'persistent and exaggerated negative beliefs or expectations about oneself, others, or the world' and a 'persistent inability to experience positive emotions'. So what else has changed?

Nick: It used to be, like, you have to experience something that made you feel like you were going to die. And now you could experience something that makes you feel you're going to die, you could hear about it in a lot of detail firsthand, not on TV is a stipulation. But you could hear about that happening to a friend or family member, or if in the course of your work you are exposed to the details of horrible things a lot, like police officers who are having to search for child predators and are exposed to child pornography and things like that, they are also covered under that criteria A.

So, the definitions are still evolving. That's the current DSM criteria, but PTSD wasn't added to the DSM until the 1970s by a group of Vietnam veterans who advocated for its inclusion, even though we know people have been experiencing PTSD symptoms since the first human being did something terrible to the second human being.

Alie: It was called 'shell shock' for a while, wasn't it?

Nick: Yeah, soldier's heart, shell shock; it's been called different things, and some of the symptoms have been different, but there's this underlying disturbance in fear and memory and some brain regions associated with those things. Although, now we have this more emergent field of inquiry, which is looking at something called moral injury. It can look like PTSD but is more related to people's experience of betraying values. Either they've betrayed their own values or someone important has betrayed shared values, and the symptoms follow from that more than this fear processing problem.

Aside: Quick aside: moral injury is a term that arose to describe what soldiers experience when they, in the course of service, do things that otherwise contradict their values. But in reading further about it, I found one article by Simon Talbot and Wendy Dean, about how physicians and healthcare providers suffer not just from burnout, but from moral injury because the US healthcare system doesn't allow them to provide services that they want to. Anyway, be nice to your nurses, and doctors, and veterans, and your psychologists, and neuroscientists who write the manuals about this stuff.

Nick: So, that's kind of a rough overview of the DSM, but really you don't need to have been in a firefight to have experienced a trauma. It's really when you have an overwhelming sense of

fear, shame, terror, or helplessness that is beyond your capacity to regulate. And that experience causes problems in your ability to remember and process fear.

Alie: How do you know if something you went through, either emotionally or physically, has caused PTSD? How do you know if it's interfering to that extent?

Nick: That's a good question too. All the DSM diagnoses carry this requirement that the symptoms you're experiencing have to cause problems in your life. They have to be interfering with your ability to function in the two core domains; work and relationships. They have to be interfering with those core domains.

Aside: Okay, hold on to your butts, because this next fact truly surprised me.

Nick: It's possible that someone could, and in fact, most people who experience trauma, don't develop PTSD.

Alie: What? Really?

Nick: By far most people. The prevalence in the national population's around 7%, and in veterans it's between 11-30%, depending on what kind of population we're looking at. But even if you take 30%, that means 70% of people don't develop PTSD, and presumably some of them are experiencing traumas.

But it's also possible to have negative experiences cause you problems, even though you don't have full-blown DSM-V-criteria PTSD. We know from the literature that that's the case. I would encourage people to consult with a professional if they can. Go to therapy. Everybody should go to therapy, so go to therapy if you can. If you feel like there's this memory of something that happened to you that's causing you a lot of problems, and you're experiencing a lot of distress, having nightmares, you can't relax, it's intruding on your day-to-day life...

Aside: Okay, so more on access to therapy later in this episode. Trust old PodDad, we're going to go over some resources for y'all.

Nick: ... it's probably worth talking to somebody about it, you know?

Alie: Are there any myths about PTSD or how it's handled pop culturally that you cringe at, that you wish you could dispel?

Nick: Well, I just think we use the word too loosely. There's a balance, right? It's not helpful for anyone to think, "Oh, what I went through isn't as bad as being shot at for a nine-month combat deployment, so I should just shut the fuck up." No, that doesn't help anybody. That doesn't help you, that doesn't help the people in your life.

At the same time, I think we do overuse the word a lot. We'll be like, "Oh, that exam traumatized me!" And that's just how we use the word now, but I think we just have to be careful about that. Not fragilizing ourselves, but at the same time being really honest about when we are having problems.

Aside: So, does Nick have any festering flimflam he wants to debunk? Let's bust a couple of myths.

Nick: One myth that I hear a lot, and I hear this from a lot of veterans, so I think I should mention it, is that most veterans are doing great. Most veterans do not have PTSD; most veterans cope really well. In fact, there's this thing called the healthy soldier effect, which suggests that in general, military veterans are better able to cope with difficulties than the civilian population because they're very highly trained. And they're self-selecting, since we don't have a draft.

So, most veterans are doing well, and there's this myth of this sick, fucked-up veteran, and that does not reflect the larger population of veterans, so I think it's important to say that. At the same time, we do have this subset of veterans who really need help, and we can do a much better job at getting them help, and we're not doing a great job right now. So, you know, both those things are true at the same time.

Aside: So, another nugget of flimflamery, Nick says – not in those words – is that there is a misperception that PTSD and trauma treatment is just a done deal, we know what we need to know. And he says, “Boy howdy, that is not the case. And we need much more research into some new ways to treat PTSD.” Even of the veterans who seek and get good therapies, like Prolonged Exposure, a lot of them still meet criteria for PTSD after they complete the treatment.

Nick thinks mindfulness is promising, but there's a lot of debate in the field about how effective mindfulness-based interventions are for PTSD. And remember: he's an evidence-loving data nerd. In all, he says, we need more research, we need more treatments.

Nick: I think there's also some evidence that there could be a prophylactic effect to doing mindfulness practice. So, if you do a lot of mindfulness and you have an adverse experience, there's probably a bit of a protective effect against developing PTSD, so I think it's worth doing. But to get to your question, I would say, it's like exercise. What you like to do, and whatever is easier for you to keep on doing consistently, is probably the best thing.

That might be an app; some people love that. If it makes it easier for you to do the practice, you should do that. Other people want to be in a group, they might go to a meditation group. I know there are a lot of those in LA. If that makes it easier for you to do the mindfulness practice, you should do that. Other people don't like to do that; they just want to practice on their own, they just want to just do a breath stabilization.

There're so many resources. You could have someone guide you thought a meditation on YouTube in any accent that you want, you know, male, female... So yeah, it really is about what works best for you.

Aside: So, just in terms of apps, just side note to say: I've been using Calm, and I really love it. They are sponsors of the show – not this episode in particular – but I just want to say I generally prefer it, just sayin'. They're not having an ad this episode, but if you do want to try them for seven days for free, you can: Calm.com. If you decide to get a yearly subscription, you can get 25% off by using Calm.com/Ologies if you want to. So, at the very least there's a free trial. Now what if apps are just not for you?

Nick: People are more interested in adhering a little more closely to a traditional Buddhist perspective. There's a great book called, *What the Buddha Taught*, by Walpola Rahula, which is a free PDF now. That's a great place to start.

It's really, I think, what's easiest for you. Not everybody needs to go do CrossFit, you know, so not everyone needs to go do a ten-day meditation retreat. If you like that, and that helps you: do it! If you prefer to do the equivalent of taking a walk around the block, which is maybe just sitting down and doing some deep breathing for five minutes, setting your phone alarm in the morning, do that. That's great!

Alie: So, whatever you do is the best.

Nick: Yeah, whatever you can keep doing is the best, exactly.

Alie: That's so good to know, yeah. I'm not going to run an Ironman anytime soon.

Nick: No, me either. What's wrong with those people?

Aside: Obviously, nothing is wrong with people who go hard. But just FYI, if you're wondering, "What is an *Ironman*?" It's 2.4 miles swimming, 112 miles biking, and then you just top it off with a marathon for dessert. All in one day. It takes like ten hours; a lot of people don't even stop to potty. And I respect that so much, but it sounds more terrifying than watching *The Exorcist* on a jumbotron.

Alie: Do you have friends in your life that come to you, saying, "Yo Nick! What up. It's me. I had this really bad thing happen. What do I do?"

Nick: I wouldn't do therapy with my friends. I don't think that's a good idea, even though everyone in a clinical graduate program absolutely does do that in the beginning. Everyone does it, and everyone realizes, "This is a terrible idea."

Alie: Just diagnosing everyone in your life.

Nick: Yeah, and yourself, yeah. I have a lot of conversations with friends who are like, "Hey, I'm having this problem, can you give me a suggestion about what I might want to try?" Yeah, for sure.

Alie: Can I ask you some Patreon questions?

Nick: Of course, yeah, please.

Alie: I have a stack of several, several pages.

Nick: Yeah, bring 'em on!

Aside: Okay, he is down. But before your Patreon questions, a few words from sponsors I like so much. Also, they make it possible for us to donate to a charity every week of the Ologist's choosing. This week Nick picked, National Military Family Association, founded in the Vietnam war era by military spouses. They are the go-to source for members of Congress and politicians when they want to understand the issues facing military families. They provide support for veterans, their kids, and their families. More info is at MilitaryFamily.org.

This episode comes out on the heels of Memorial Day in the US, and May is Military Appreciation Month, so a sincere thank you to everyone who has served and to their families for their sacrifices. Thanks to the sponsors who make that donation possible.

[Ad Break]

Okay, back to your questions.

Alie: So, this is from Shannon: My trauma question: if someone grows up with a parent with major PTSD and feels like there's definitely transfer trauma, what would your advice be to both treat that and help break the cycle going forward for their own children?

Nick: That's a great question. I'm a huge advocate for competent professional treatment. So, I would go and see a therapist who is trained in PTSD treatment, and they should tell you what modalities they're trained in. We know there's intergenerational transmission of trauma, not all the time, but that's certainly a real phenomenon.

Aside: Okay, quick aside: I did a little digging on this, and it's fascinating. There are so many studies on this topic, dating back 30 or 40 years, studying the offspring of survivors of the Holocaust. And in one *World Psychiatry* paper titled "Intergenerational Transmission of Trauma Effects: Putative Role of Epigenetic Mechanisms". First off, I did have to look up 'putative', and it means 'reputed'.

This study reports that psychologists were noticing that children of survivors were having issues with overidentification with a parent. There were self-esteem impairments because they would just minimize their own life troubles in comparison to the parent trauma, which totally makes sense. There's the tendency to catastrophizing and worry, anxiety, nightmares. There's hypervigilance of dangers, and some difficulties in interpersonal relationships. So, was this epigenetic? Were genes altered because of the trauma?

And of course, this can extend to so many populations, from victims of colonization, and slavery, and genocide, all over the globe. Researchers also looked at how maternal stress can affect the HPA stress handling in the womb, and also how parental care changes the way our genes are expressed. Now this is a big one: how does parental care change the way our genes work?

There was one study in the 1980s that just blew scientists the fuck away, they just lost it over this. They separated mother rats with their newborns, and then reintroduced them. Some of the pups in adulthood showed these altered responses to stress, and it turns out it wasn't the separation, but the way that the mom rats welcomed them back. More licking and grooming as a little tiny baby rodent was shown to buffer some of the negative effects of the trauma for the lifetime of the baby rat.

Now is this true for humans? Scientists know these things are really hard to test and study in humans because of so many factors. And also, as adults, our exposure and our responses to stress change us all the time anyway, which is a fact that widened my eyes and made me rethink some of my life's stressors.

Okay, so what if you feel impacted from a parent, or a relative, or a partner's trauma, or trauma experience?

Nick: I think one of the good things about our contemporary information-saturated society is that you can look up a lot of quality information. I would look up the National Center for PTSD. It has a lot of really valuable information. They will link you to lists of providers, they will link you to which treatments are effective, they talk about symptoms, so I would do that.

I also think in terms of breaking that cycle, the second part of the question, again, I am an advocate for mindfulness, so I do think it's worth trying some of that. Not necessarily that it's going to treat the person's trauma, but that it gives you some space in between your urges and your actions. Especially if there's another person, if you're going to respond in this way that is kind of driven by your own emotional urgency but that isn't really consistent with your values, doing mindfulness practice will give you a minute, or some space, to notice that urge and then make a determination about whether the behavior – maybe it's a parenting behavior – that you're going to do is consistent with your larger overall set of values.

So that might be another thing to do. But treatment, I really think it's critical that people who are having some of these problems try to go and get treated. There's no reason to keep suffering.

Alie: Other than money, I guess, sometimes.

Nick: Fuck. Other than money, yeah. There is pretty good treatment if you don't have any money. Actually, LA County Mental Health, there's some excellent clinicians, and then there's really good treatment for people who have a lot of money, who can just pay out of pocket. But it's really hard if you're in the middle to get access. That's absolutely the case.

Alie: How do you feel about those apps where you can text a therapist?

Nick: I am not up on the research in terms of their effectiveness. I imagine there probably aren't great studies yet because it's so new. Look, if it's working, if it's helpful and it's working, that's good. I think one issue, though, especially around trauma: if you have PTSD, talk therapy – traditional, sit-on-the-couch-what's-wrong talk therapy – isn't effective. We know it's not.

Alie: Really?

Nick: Yeah, and in fact I think it can be unethical to do treatment with people where you're not actually treating the underlying problem, you're just the stress relieve valve. They come in once a week, they blow off enough stress so that they can kind of hang on with their fingernails for the rest of the week until they come see you again. That's, to my mind, not responsible or ethical.

Therapy should be about learning the tools so you can overcome the problems that you're having. And you can do that in many cases with PTSD, so if you've been seeing the same therapist – or texting with the same therapist – for a couple of months, three, four, five months, your problem is PTSD and you haven't gotten any better? You need to see another therapist, because it's not working.

If you feel as if something is working, your symptoms are getting better, you're not having those functional problems in work and relationships, then that's probably good, I would maybe keep doing that. If you've been trying something for a while, and your symptoms are not getting better, and it's not an evidence-based treatment, then I would look for something else, you know?

Alie: Yeah, GTFO, man. Find something new.

Nick: Yeah! Exactly.

Alie: Laura Evans wants to know: What are some of the main differences between EMDR therapy and other forms of therapy like CBD? [*background reggae music*] CBT, not CBD.

Nick: Yeah, although that's promising as well.

Aside: Okay, quick aside, because an EMDR question was also asked by Miumiu and Bowie, Michelle Minert, Jenni Huntly, Erica Smith, and Ashley Hamer. But before we get to the EMDR and CBT, let's real quick go over to the other therapies, like CBD.

Now, this is found in cannabis and not the THC elements that make the tobacco wacky. But a ton of papers have been published on cannabinoids, starting with rodent models in 2008, and then going to human trials four years later. And this one *Frontiers in Neuroscience* journal article from 2018 said, "As observed in rodents, recent studies have confirmed the ability of CBD to alter important aspects of aversive memories in humans and promote significant improvements in the symptomatology of PTSD."

Also, note: overuse or abuse of cannabis – like the THC part – has been correlated to folks suffering from PTSD, possibly from self-medication. So, if you're going to consider it as a therapy, do some research, and talk to a doc, please and thank you. Love, Dad.

Now, as long as we're speaking in acronyms about experimental drugs, what about MDMA – or the buttoned-up lab name for ecstasy or Molly, that your roommate's cousin tries to score before going to a rave carnival in the desert? Well, it's being researched as a possible PTSD therapy.

If it's administered by therapists and doctors – some folks say in two sessions, two weeks apart is best – some brain imaging studies have shown it may be able to help reduce activity

in the amygdala to help overcome the reliving of the traumatic memories. But if you're going to consider it as a therapy, do some research, talk to a doc, please and thank you. Love, Dad.

Okay, EMDR:

Alie: [Laura Evans's question continued:] Is EMDR effective only for certain types of issues? And how do you know a type of therapy will work for you? So, EMDR, CBT, and is CPT also another one?

Nick: [*laughing*] Yes!

Alie: So many!

Nick: Yeah, a lot of acronyms. This is a big question. CBT, Cognitive Behavioral Therapy, is like a giant umbrella, and underneath CBT, Cognitive Behavioral Therapy, a lot of different treatments fall.

EMDR, which is Eye Movement Desensitization and Reprocessing... Again, I'm not trained in EMDR, like, I'm not certified to do EMDR, I am to do Prolonged Exposure and Cognitive Behavior Therapy. But my understanding of EMDR is that there is a pairing of your talking about the experience with this bilateral stimulation, which is either visually – someone moving a finger back and forth – or a sound in the ear. I think the hypothesis is that by engaging the brain and processing that other stimulation you take some of the emotional valence away from narrating the trauma experience.

Aside: EMDR, by the by, was discovered in 1987 by now-psychotherapist Dr. Francine Shapiro, when, by chance, she was walking through a park, she was hella bummed, she was like, "Ugh! This hurts!" And then she noticed that when she glanced rapidly back and forth – maybe there was a squirrel, a bird, I'm not sure – her troubling thoughts seemed to subside. She was like, "Hot Dog! I'm going to get a Ph.D. about this."

To see more research on it, there is plenty: go to NIH.gov, the page for the National Institutes of Health, and you can just tippity-tappity [*rapid typing*] EMDR and a whole boatload of studies come up. Now Nick, who's a stickler for evidence, has an open mind.

Nick: Now it's not clear that EMDR without the bilateral stimulation is better than EMDR with it, so that's kind of an interesting finding. But if you have someone who's trained in EMDR, and you are doing EMDR, and you are getting better? Awesome, I would keep doing that.

The difference with the Cognitive Processing Therapy, CPT, and Prolonged Exposure is that those two are explicitly exposure-based protocols, and EMDR doesn't call itself an exposure-based protocol, even though I think it is. I mean, if you're talking about your trauma experience, that's exposure. But Prolonged Exposure and CPT are explicitly exposure-based protocols, and the mechanism of action at work there is exposure.

Again, it's really about what you're more amenable to trying; the one that you are going to complete is the one that you should do. There's a lot of dropout in PE.

Aside: So, dropouts in PE can be common. Not unlike when everybody happened to be sick on the day we had to run the mile. But Nick says PE, Prolonged Exposure, dropout may be high because the recall is just so distressing at first.

Others might not like the Cognitive Behavioral Therapy because there's some homework involved. So, in order for it to work for you, the type of therapy should be a good fit. You can't [*vocal fry*] haaaaate it.

Nick: I think it's important to ask the therapist what they're trained in, what they think the issue is, and what the treatment plan is. And if they can't answer those questions, I don't think that's a great person to see. But there are a lot of paths through the garden, you know. A lot of different modalities can work.

If it's trauma-specific I would focus more on those trauma-specific interventions, but again it's really about what works. I mean, Equine Therapy is emerging as an effective trauma treatment, I know this guy who runs motorcycle trips through the Horn of Africa for veterans with PTSD.

A lot of this stuff is probably not scalable for a community mental health clinic or a national system of clinics. I would work your way down from the things that are most well-studied until you find something that's effective.

Alie: How do you know if you've got a good therapist? How do you find a good therapist? And how do you know if you don't like your therapist? Or that it's not *your* problem?

Nick: Well, it might be. I mean, it might be your problem if you've tried like 15 therapists...

Alie: I had a therapist who read my astrological chart and made me take a Polaroid with both of her poodles.

Aside: It's true, she told me that I wasn't married yet because something about a house in Pluto, and I was like, "[*doubtful noises*] but I like your weird poodles."

Alie: I was like, "All right, lady."

Nick: Did that work for you?

Alie: No, and I kind of broke up with her over text, and she just texted me back, "K." And I was like, "Ouch!"

Nick: I mean, that sounds like you handled that well. But who knows, maybe that is helpful for someone.

Alie: I don't know.

Nick: Well, yeah, probably not. Look, I think a therapist is a provider, like a physician or a primary health care doctor. I think you should probably interview a couple. I mean, there are those baseline questions: What modalities are you trained in? What is the treatment plan for this disorder? Have you treated people with these problems before?

If it's like, "Oh, treatment plan? I don't really do that, I kind of feel it out." Well, I don't know about that. It's probably good to go maybe once or twice, but if someone's really off-putting, or you just don't like their personal style? That's okay. Find someone who you do like.

In all of the big effectiveness meta-analyses for different types of therapy, the factor that explains the most variance in outcome is the relationship with the therapist. This is an often-cited fact, we're finding. So, regardless of what the modality is, if you don't feel like your relationship with the therapist is strong, it's unlikely you're going to have good outcomes.

Alie: What if you're a dick and that's why you're going to therapy though?

Nick: Yeah, that's the case. Some people are dicks. So, if you're a dick and no therapies are working and you think, "Man, I feel trapped in my set of behavioral responses." It might be worth going and getting a really good assessment to try to figure out, and if you want to change that, if you're interested in changing that.

Alie: Right, some people don't want to change.

Nick: Some people don't. They just don't want to change, and hey, do your thing. The world needs people like that too, I guess, right?

Alie: They're like, "I'm making a lot of money this way."

Nick: Yeah, right. "I'm CEO, so *you* deal with it."

Alie: A bunch of different people...

Aside: I'm looking at you, Rachel Polivka, Lacie J Scheuer, Graham Tattersall, and Todd McLaren.

Alie: ... asked: they've heard that certain games, particularly *Tetris*, (which I covered on one episode), distract the mind after a trauma and can make a big difference in recovery. Have you ever seen that in any veterans?

Nick: No, but I'm going to look this up after we stop. Yeah, *Tetris*. Wow! I mean, I don't know, I have not seen that.

Alie: How does trauma imprint itself? If you distract yourself right after a trauma will it imprint differently?

Nick: Well, this is a good question. We know that early intervention is really important, but the type of early intervention matters. There was this program that was 'critical incident debriefing', something like that, which was immediately following the trauma experience they had the person debrief about it, and the evidence showed that that made people worse.

Alie: [*slow-motion "oof"*] Oh...

Nick: Yeah, so it matters what type of treatment people do. Let's say you have a pretty stable life, your family life or your home life is healthy and good, you don't have a lot of negative experiences beyond the realm of the norm, and then you have a single trauma, your odds of recovery are very good. Someone who has multiple sequential traumas, including early childhood trauma especially, especially like early childhood sexual abuse, that's some of the most predictive of later problems: PTSD, depression, anxiety.

Aside: So, quick aside: this of course can be greatly affected by socioeconomic and also some cultural factors, clearly. Studies have shown that women are twice as likely to have PTSD at some point in their lives as men, and as a woman who has been mugged by guys with knives, I get this. But privilege also plays in yet again, of course.

In America, Blacks have the highest prevalence of PTSD, but all minority groups were less likely to seek treatment for PTSD than whites because barriers to therapy could be everything from social stigma, to cost, to time off work. More on that later in the episode.

Now, getting back to video game studies: just type in '*Tetris*' to the NIH.gov website, I swear: a whole bunch of reading.

Nick: Yeah, I'm not aware of *Tetris*, although that's cool. I'm interested in that, yeah. I'm going to hop on Google Scholar.

But again, because I am an empiricist, I do think that it's best to start with the things that are most well-studied. I think in general that's a good default. But just because something hasn't been studied, doesn't mean it doesn't work. There are now these emergent virtual reality exposure-based protocols, those seem to be very promising.

Alie: Oh wow! So, if you had a bad experience with a spider, you'd just go into VR SpiderTown and you're over it?

Nick: SpiderTown, yeah. That would be flooding, where you expose yourself to the stimulus. That's not great for everybody, and that's again an exposure-based method.

I mean, look: it's not going to hurt to play *Tetris*. I cannot imagine what the downside of that would be. Especially things that are very low-risk, yeah, try it. Why not?

We also know, there's some studies that show that pharmacological intervention right after trauma can blunt some of the memory-encoding, so those things can be useful.

Aside: Nick reminds us that he's not a psychiatrist, but explains...

Nick: The two neurotransmitters that are most closely tied to trauma are cortisol and norepinephrine, your fight-or-flight neurotransmitters. But again, the brain of someone who's experienced a lot of childhood trauma, the way that they respond to and process those neurotransmitters is going to look different from the brain of somebody who had a trauma as a relatively healthy adult.

Aside: In looking this up, I found a study saying that cortisol and norepinephrine levels were affected, and that these and a host of other changes in biology are likely the causes of more depression, substance-use disorders, and medical issues like GI problems and immune system issues. Also, obesity and heart disease. So, if you experienced any childhood trauma, there are so many reasons you deserve to heal and get some help to work through it. So, a big hug goes out to the next patron, Julie, who asked:

Alie: Julie W said: I found out a couple years ago that a "friend" of my dad's, who is now dead, sexually assaulted me when I was 2-4 years old. I have no recollection of this happening. She essentially says: Is it possible that these traumatic experiences, remembered or not, and along with other circumstances, could have contributed to 25 years of depression and anxiety?"

Nick: It's certainly possible, yeah. To back up a little bit for that first part, some people will come in and say, "I know this thing happened to me, but I just don't remember it." And especially at that age, it's part of the body's and brain's natural repertoire of protective mechanisms to try to not remember horrible things, and that's okay. If you don't remember something horrible that happened to you, that's okay. That might be good, you know? I don't think it's a good idea to try to recover those memories, you know?

Now if you're coming in and it's like, "This thing happened to me, and just the knowledge of that... it's not provoking symptoms of PTSD, but the knowledge of that really fucking bothers me." That's a problem in and of itself to work on, so that could be absolutely to work on.

We also know though that trauma is really embodied. I think one of the deficits in the more cognitively-oriented treatment protocols for trauma, but everything else too, is that they neglect physiology a lot. Doing relaxation practices, doing deep breathing, progressive muscle relaxation, getting into the body, noticing where in the body you experience emotion, it's really critical. And I think especially for some people that's what they need, more than like, "Okay, I'm having this thought that's maladaptive, how do I collect evidence to adjust it?" You know, some people don't want to do that, and it's not as useful for them.

I think it's certainly possible that events that you don't explicitly remember can have an impact and be experienced in different ways, like physiologically and in terms of mood and emotion.

Aside: Quick aside: the next day I got a text from Nick, who wanted to add an afterthought. He said:

I was reflecting on some of your patron's questions about what someone can do if they are reluctant to seek treatment but want to do some work on their own...

He said he mentioned physiological relaxation techniques and medication, which he says:

I definitely think are a good idea, but wanted to add that getting good sleep, eating in a balanced and healthy way, avoiding alcohol and mood-altering non-prescribed drugs, and scheduling some exercise and social interaction are also really helpful in facilitating wellbeing and recovery. It's of course tough to do those things consistently, but they can make a big difference.

Thank you, Dr. Nick, for that.

I should say, when I myself am at my most balanced and happy I do this thing called REM-REM, and I should do it every single day of my life. I make this little weekly chart with the days on one side, and then four columns on the other axis, and the REM-REM stands for Reading, Exercise, Meditation and REM – good sleep – and I try to hit each of those every day, even if it's just five minutes of very tired burpees in the living room, and five minutes of meditation, and reading one page in a book, and just trying to go to bed with the lights off. And right now, I'm just going to have a one-on-one, really quick, with myself:

"Alie Ward, hi, it's me. Can you please do that again?"

"Yeah. I'll get on it."

"Okay, thank you. Thanks. You're the best." [*slow-motion: "Thank you."*]

Alie: Helen Bobiwash asks: I'm an Indigenous person. People talk about intergenerational trauma experienced by Indigenous people. What causes trauma to be intergenerational? And Jennie He says: Yes. This.

Nick: Yeah, that's a great question too. We think about groups that have been discriminated against, marginalized, and not only discriminated against and marginalized, but were the victims of violence at higher rates.

Even if you personally didn't experience violence, but let's say you're growing up with mom and dad in the house, right? If mom and dad experienced violence, and they have symptoms of trauma, which might include beliefs like, "The world isn't safe and I'm not safe," and they're acting on those beliefs that, "The world isn't safe and I'm not safe and my kids aren't safe," you are going to learn from that example. Even if they're not ever saying that to you but their behaviors are demonstrating that point of view – for good reason, because it's accurate – you might incorporate those views into your own behaviors and feel unsafe.

Which again, if we're talking about trauma as a disruption in the way that we process fear and memory, you can see that that might create those conditions in the brain of the person who has not directly experienced the trauma, but whose experience has been conditioned by these views that the world isn't safe and that they can't trust what's going on, they can't trust the world.

So, I think in that way we can start to see how the experiences of a trauma can be passed down generationally, also in terms of the way people process emotion. If you have untreated trauma symptoms and it's like, "Well, when disturbing emotions come up my strategy is, avoid that." Which makes a lot of sense. Who wants to experience distress, right? Then you

learn that emotional coping style too, “Oh, something come bad comes up? Avoid!” [*“Just say fuck the lemons and bail.”*]

And we know that avoidance is one of the things that sustains PTSD symptoms. If you avoid traumatic memories and emotions associated with the trauma, it perpetuates that cycle of experience. So, if you’re learning all those strategies and incorporating those beliefs as you grow up, that can account for what we talk about when we say intergenerational transmission of trauma. [*“That’s the bad news.”*]

The good news though, is that those are learned behaviors, and so you can learn other behaviors. You can stop practicing those behaviors. When you practice and rehearse different skills and behaviors, you acquire those faster than the ones you passively absorb.

Aside: So, in pre-plotting skills and coping, you may be able to respond to emotional situations with less sweating, and less frazzle, and more calm, a little more chill. Your brain’s like, “Been there, survived that.” You brain essentially turns into Kurt Russell wearing sunglasses in a 1980s film. He’s cool.

Alie: That’s interesting. Does it form a neural pathway?

Nick: Yes, absolutely, yeah.

Alie: Really?!

Nick: All behaviors – thoughts, feelings, urges, emotions – are reflections of brain processes, that’s what true empiricists would say. Any time you learn a new pattern of behavior you are changing and creating new neural pathways.

Actually, evidence shows that the effects of depression medications are immediate by what’s called neurogenesis, which is the creation of new neurons in the brain. Changed behaviors are mediated by changing brain processes and brain structures. So yeah, absolutely, by doing new things, by rehearsing new ways of responding to distress, you are creating new pathways in the brain.

Alie: Huh, that’s interesting. That’s very optimistic, though. You know what I mean?

Nick: Yeah, totally. People are incredible, resilient, and the brain is too.

Alie: Jennie He also asks: Can you speak about the different ways that trauma manifests in different people? Like dissociation, ADHD, OCD, eating disorders.

Nick: Yeah, the DSM criteria points to this set of symptoms that are related to trauma: re-experiencing, avoidance, physiological arousal, cognitive numbing. Those are the symptoms that really describe PTSD. But certainly, there are other issues that people can have that can be informed by their experiences, including trauma experiences.

There’s no evidence to suggest that ADHD is a result of trauma. I don’t think there’s a causal link there. Disordered eating behavior can definitely manifest in the context of trauma. Many of the trauma patients I worked with also had disordered eating behaviors, that was very common. OCD, true OCD, tends to be very organic in the brain. So it is possible that compulsive behaviors could arise in relationship to traumatic experiences? Yeah, absolutely.

If your problem is, “I’m bingeing and purging,” for example, I would try to treat that problem first, and in the context of treating that problem, if trauma emerges, if it’s like, “Every time I think about this thing that happened to me, I want to binge and purge.” Okay, now we have this explicit linkage that’s emerged, and we can work on that pathway. Because that’s a pathway, a behavioral pathway, it’s a pathway in the brain.

Alie: It's so weird to think that you have these little trails you carved out in your brain, like, [*sing-songs*] "Doo-do-doo, I'm just going to go on this trail I've been on before!" And you're like, "Damn, I've gotta make a new trail."

Nick: That's such a great example, and I actually use that analogy. To develop that analogy further: it's like a freeway with no traffic, right? Let's say, there's this linkage: every time you remember this person or this thing that happened, it makes you want to engage in X behavior.

Aside: Okay, so right now, think about a thing that freaks you out, and the maybe not so great behavior you use to cope. [*clip from Clueless: "Yo, you're getting on the freeway!"*]

Nick: Well, that's like a freeway in your brain. It's so well-rehearsed, because you've practiced it many, many times, but when you start to practice an alternative behavior... I know this is very reductionist and simplistic, it's absolutely not this easy. But let's say, for example, you have that memory, you observe the urge to engage in a target behavior, a problem behavior, and then you're like, "Okay, you know what I'm going to do instead, is I'm going to do ten cycles of deep breathing, five seconds in, five seconds out, and then I'm going to see what my urge is afterwards."

If you do that – to use our roads analogy – you're kind of bushwhacking a tiny trail through the jungle. [*"That's a knife."*] You have this superhighway of your old behavior, and now this tiny trail that you've kind of bushwhacked through the jungle with this alternative behavior. But the more you practice that alternative behavior, the wider and smoother that new trail gets, and the more overgrown that old highway gets. And eventually that old highway will return to the jungle, and you'll have this new behavioral pathway that you've practiced and rehearsed over time. [*clip from Clueless: "Boy, getting off the freeway makes you realize how important love is."*]

So, I think it's a really good analogy. But to pull back a little bit and answer this question from a clinical perspective: it's possible that trauma can play a role in the constellation of causes and conditions that lead to contemporary problem behaviors, absolutely.

I think people should avail themselves of the best evidence that we have right now, and that is, we have particular treatments that the evidence suggests work best for particular disorders, or particular problems. So I think it really makes sense to find someone who's experienced and trained in treating whatever the problem is that you're having and try that first. And if it doesn't work, then we can work our way down.

Aside: So, if you're feeling like you're struggling, get some help if you can. It doesn't mean there's anything wrong with you. It just means you're human. You deserve to heal.

Now, we all know that a huge block to therapy is cost. I get that so hard. I put out a tweet over the weekend asking folks how much cost plays into their access to therapy, and out of 1,500 responders 93% of you said cost was a huge block. So, I asked if anyone wanted to share any tips, and here are some resources.

Okay, I mentioned this site in the Addictionology episode, but OpenPathCollective.org is a wonderful site. It helps match you with therapists who provide low-cost talk therapy to people who are uninsured or underinsured for between \$30-60 per session, and it costs a one-time \$49 fee to join, and then you're in for life.

If you have insurance, or can afford therapy, but just aren't sure where to look for someone, try their sister site BeingSeen.org, or there's a directory at *Psychology Today* that's really helpful.

You can ask a therapist about sliding scale fees, and they can adjust their prices depending on what you can afford.

And if you're in a bad place and that just seems overwhelming, see if you can enlist a friend or relative to just help sit down and make some phone calls with you and line up some appointments or some interviews over the phone. Sometimes just getting a buddy to encourage you and get you started can make all the difference.

Now, some other options: there are apps that provide lower-cost text or video therapy, there's LARKR, there's BetterHelp, there's Talkspace, there's even 7 Cups which is free and just staffed with volunteers who are just active listeners, though it can connect you with a database of therapists if you need one.

Now if you have health insurance through work, you can ask about flexible spending accounts to allocate some toward therapy, or you can ask HR if there's any free crisis counseling for employees. Some larger companies will offer this, and when I was a newspaper reporter and so stressed out, I took advantage of this and got a few free therapy sessions which was super helpful and in part convinced me to quit my job there. Thank you.

One listener said that for military families, Military OneSource has been super helpful for her and her family.

Also, look into counseling centers or universities that have graduate student counselors, who are therapists who are heavily supervised. So, it's kind of like getting that therapist and then several of their teachers in one, who go over your case and give some advice.

Now, feel free to interview the doctors or therapists over the phone first. Ask what their methods are, what kind of issues they treat, and Twitter user NerdyZebra chimed in to say that neurodiverse folks, like anyone on the autism spectrum or with ADHD, should ask if the therapist has experience treating similar patients, because talk therapy can have really different approaches. They also say, "I should mention that depression and PTSD can be considered disabling, and there are vocational rehab departments and even Medicaid that might be able to help."

As for prescriptions, a few folks on Twitter mentioned GoodRx as having good deals on prescription medication.

Okay, this is a long aside, and at this point I also apologized to Nick for hanging out in his living room for so long and peppering him with so many questions.

Nick: Seriously, this is really fun and nice for me.

Alie: Oh yay! Kristi Stuart wants to know: How often do trauma victims display symptoms of echoism? I just learned about this term and think it's really fascinating that we just very recently came up with this term. I don't know what this term means!

Nick: I don't either!

Alie: Okay, I'll look it up.

Aside: Okay, I looked this up, and hoooo boy! Okay, wow. Real quick: echoism is when a person has a fear of seeming narcissistic, and they tend to be warm-hearted, but afraid of

becoming a burden, and they have a hard time just voicing their preferences. I did not know there was a word for this.

And Shannon Feltus and Boni Dutch, the wonderful sisters who help with all the *Ologies* merch, have a saying about shying away from praise. Whenever someone compliments them, they respond, "You are that!" To the point that they have finally put out their own podcast. They're so hilarious, and so charming, and warm, and weird, and so fucking funny. And their title? *You Are That*.

They just posted episode zero literally yesterday, it just went up. You should be able to find it on Spotify today and it should be on iTunes literally any second. So just go and subscribe right now, you will love them. Again, their podcast is called *You Are That*. I'll put a link in the show notes. *You Are That*. Okay.

Nick: Echoism?

Alie: Echoism, yeah, I don't know. Amy Greenan asks: If someone has been through multiple traumatic instances of abuse in the distant past, but won't get professional help to deal with the lasting emotional/mental effects, is there something they can do on their own to help themselves through it? Asking for a cherished someone who would never ask for themselves.

Nick: Yeah, man, that's really tricky. Okay, so here's what I would say. First of all, I totally understand why people would not want to go deal with this with a professional, because who wants to re-experience, talk about, investigate, and relive the most painful things that have ever happened to them? [*"It's just... I prefer not to."*] I mean, it's a big ask, you know? So, I totally understand people not wanting to excavate all that stuff. And if telling people to do things got them to do it, then there'd be no problems in the world, right?

If you have done your best to try to invite this person to get help and they just really don't want to do it, I think you're going to jeopardize the relationship if you keep pushing them. So, what I would say is, just very broadly, one way that can help improve symptoms is for people to get more comfortable with distress. [*"I don't get it."*]

I know that's kind of an oxymoron, but basically to do a couple of things: one is to develop the skills to engage with and experience emotions that are painful, because that leads to the knowledge that this is not going to overwhelm me. That I'm not going to open the door to this stuff and be totally overwhelmed and never recover. It leads to the understanding that actually this stuff is really painful, these memories are painful, these emotions are painful, but I'm able to tolerate them even though I might be crying, I might be in a lot of pain, I'm able to tolerate them, collect myself, and go forward.

That is the real holy grail of trauma treatment, to develop those skills to tolerate distressing emotions and develop the knowledge that even though you have these distressing emotions you're capable of dealing with them. Which people are, it's just very hard to do that.

I think what I would start with is physiological relaxation exercises, like progressive muscle relaxation and deep breathing. And like we were saying with meditation, you can have any accent and any gender lead you thought progressive muscle relaxation on YouTube. So, if you want to have an Australian guy take you through progressive muscle relaxation, [*ethereal music over an Australian male voice: "Feeling your muscles as they become soft and relaxed."*] you can do that. There are five-minute scripts, there are 25-minute scripts. I would do that. I would do yoga, I would do massage. I would start in the body, so that people have confidence, "I can relax my body if I get overwhelmed." I would start there.

And then I might think about doing some meditation, some mindfulness practice, because that will bring up, inevitably... You will see, surfacing in the mind, distressing thoughts and emotions. But I don't think you should start there if you can't relax your body. Again; first physiological relaxation, then maybe moving into mindfulness, where now you have confidence you can relax yourself, and you're making a little space for these things to come up in the mind.

And then I would be doing things that build confidence, like doing things physically that allow you to build some confidence. Depending on what the traumas are, there seems to be some evidence to suggest that martial arts training can be helpful, especially for women who have experienced sexual assault.

But again, you have to do that with people where you feel safe and confident. You can't go to some Idiot McDojo who's untrained and unsafe. And who knows? Maybe after doing that the person's like, "You know what? This is good, I feel a little bit more control and mastery, and now that I've done this a little bit on my own, maybe now I am willing to talk to a professional." Or maybe not, maybe this is enough, you know?

Alie: Yeah, that's great advice.

Aside: Neither Rome nor confidence is built in a day. So just keep stacking those bricks! Keep digging out those latrines. Little by little, it's going to make a difference.

Alie: Meghan McLean asked: Can you talk a little on how animals like pets, therapy animals, looking at a fish tank, etc., can help people who have experienced trauma? How does it help in long and short term?

Nick: Yeah, so again, this is a little outside of my area of expertise, but there seems to be some evidence that petting dogs results in the release of a bunch of beneficial neurotransmitters, like dopamine and oxytocin. But I know there's a big program to provide emotional support animals to veterans, and these animals are incredible. They're so perceptive that they can nudge you when you're having a panic attack, encourage you to take a medication or try a practice. I haven't heard of any negative effects, but beyond that, it's a little outside my area.

Alie: Whenever I pet a dog, I'm so much happier.

Nick: Yeah, I know for me that's the case.

Alie: Like, "What's happening? I'm so happy right now! Is this what happens when you have a dog?"

Nick: Totally.

Aside: Okay, quick look-up, and there are nearly 70 studies published on HAI, Human-Animal Interactions, or as I like to pronounce it, [*excitedly*] "Hi, hi, hi, hi! Hi! Hi! Hiiiiiiii!"

Now, some benefits of having interactions with animals? I'm going to list them off as fast as I can: social attention, social behavior benefits, interpersonal interactions, and mood. Stress-related parameters, such as cortisol, heart-rate and blood pressure. Self-reported fear and anxiety goes down. Mental and physical health improves, especially cardiovascular diseases. Improvement of immune system functioning and pain management, increased trustworthiness of and trust towards other persons, reduced aggression, enhanced empathy, and improved learning.

What's happening here? How are pets making us so hayappy? Well, your brain likes to release a feel-good chemical around them called oxytocin, and it promotes bonding and happiness.

So, if you're bummed? Maybe adopt a critter. I myself am leaving almonds outside and checking them constantly to see if a crow wants to be my friend. And I think that counts as interaction.

Okay. Let's get negative real quick.

Alie: Last questions I always ask is, what's one thing about your job that suuuucks? What is the worst thing about your job?

Nick: Um... Man, what's the worst thing? I really like my job, honestly.

Alie: There's gotta be something that sucks.

Nick: Yeah, well, I mean, getting manuscripts and grants rejected sucks. Cleaning data sucks. Yeah, I hate cleaning data.

Alie: What is cleaning data?

Nick: Well, when you collect data from people... Imagine just a giant spreadsheet of all these things, you have to convert that into a usable format. So, you have to go through and recode variables so that they're scored correctly, you have to – if you're like me – go through with a fine-toothed comb manually, and make sure that there are no glaring errors. [*"Hell naw!"*] Yeah, it's just turning a raw dataset into a usable dataset, it just takes a ton of work.

Alie: Are there any jams you listen to when you're like, "I gotta data crunch."?

Nick: I do like to listen to music when I'm doing that. Things with no words though, or words in a language that I don't speak, that would be okay too.

Alie: Nothing numerical, "99 Problems" is not going to work for you.

Nick: Right, yeah. Dub reggae is good, because it's pretty chill and there's not a lot of lyrics. [*dub reggae music*] That's good data-cleaning music.

Alie: That's a good jam. And then the thing that you love the most about your job; I know that's going to be difficult.

Nick: Honestly, it's not that hard. Right now, I have an intervention that a colleague and I developed, which is a mindfulness and yoga-based intervention for youth experiencing homelessness, for whom trauma is ubiquitous. It's one of the prime drivers of youth homelessness, or youths leaving home, and youths are at very high risk for experiencing trauma when they're on the street as well, for a variety of reasons. So, we just piloted this intervention, we have some good results. Our first main effects paper was just accepted for publication, so that's all great.

The best thing is just hearing from people who have benefited from the work. That's why we do it, you know? Nobody gets into this so that they can trade their papers around with 15 other academics; you want your work to have an impact on people's lives, so that's far and away the most – you know, we're not in it for the money, unfortunately – that's far and away the most important thing. That's the best part. Seeing people get better, their lives get better. If that didn't happen I wouldn't want to keep doing this, you know?

Alie: Yeah. I guess it's cool to watch new pathways get formed and freeways overgrown.

Nick: Yeah, totally, it is cool. And it does remind you of how strong and resilient people are. People are really extraordinary.

Alie: Yeah, I guess we don't really give ourselves enough credit for that.

Nick: No, no we don't. Especially in our contemporary culture, I don't think we give ourselves enough credit.

Alie: That we're just stronger than we realize. It's just a matter of practice, in a lot of ways.

Nick: Yeah, even if you have the negative view – I just finished watching *Fleabag*, the second season, and there's...

Alie: Oh, I haven't watched it yet!

Nick: Oh my god, it's so good. She's incredible. But there's one scene where she's like, [*clip from Fleabag*: "Yeah, because most people are..." "What?" "... shit."] "People are shit." I think we all have that thought a lot too, if we get cut off in traffic enough. But then the person says to her, [*clip from Fleabag*: "People are all we've got."] "Yeah, but they're all we've got." Which is just great too.

Yeah, so I like that also. I mean, people are all we've got, so it's nice when you see them feeling better.

Alie: Thank you so much for doing this!

Nick: No, thank you! Oh my god, no, it's my pleasure!

So, ask smart data nerds stupid questions, and it just might help your brain.

To learn more about Dr. Nicholas Barr, you can find him on Twitter now [@DrNicholasBarr1](#). I'm going to link that in the show notes. He is brand new to Twitter, I was his second follower ever – I just followed him – so show him some love, say hi, ask questions, [@DrNicholasBarr1](#).

Ologies is on [Twitter](#) and [Instagram](#), @Ologies. You can say hi, you can tag your merch photos #OlogiesMerch or any artwork #OlogiesArt. I love to see it and repost it. I'm on [Twitter](#) and [Instagram](#), @AlieWard.

Merch is available at [OlogiesMerch.com](#). Thank you to sisters, Shannon Feltus and Boni Dutch for managing that. And do check out their brand-new podcast *You Are That*. I think you will fall in love with them, they are wonderful.

Links to sponsors and charities are in the show notes, and if you'd like to check those out, and some more links to research, those are all up at [AlieWard.com/Ologies/Traumatology](#).

Thank you to Erin Talbert and Hannah Lipow, you wonderful beings, for adminning the [Ologies Podcast](#) Facebook Group.

And thank you to listener jsgsnaig. [*whispers*] I'm not quite sure how to pronounce it, it's a lot of consonants. They left a review saying that they like this show but found the recent Bufology "me toad" remark in poor taste, and... I totally agree with you, and I'm so sorry. In the moment it seemed like a dig against perpetrators, kind of likening them to these gross, warty toads, but toads deserve better, and very much victims deserve better. And my positions as a woman who has experienced sexual harassment doesn't give me a pass to make light of it, so I'm snipping that comment out of the episode and re-uploading it because I don't want to risk bumming anyone else out. So, thank you for letting me know, thanks for the head's up, and honesty, and perspective, and thanks for listening.

Also, happy, happy belated birthday to my dear friend Sarah Bosco [phonetic], who I'm lucky to have known since we were 12. You are a wonderful person and will forever be the beach master of my heart.

Thank you to the very handsome Jarett Sleeper of the podcast *My Good Bad Brain* and the martial arts podcast *Fight Stuff*, for the Nick connection and for the assistant editing, and for some research help. And of course huge thanks for editor Steven Ray Morris, who hosts *The Purrrrcast* about kitties and *See Jurassic Right* about dinosaurs, for stitching this all together every week and saving my brain. The theme song was written and performed by Nick Thorburn, of the band *Islands*.

And if you listen to the end of the show, you know I tell you a secret, and this week I'll give you a pro-tip when you're not sure if you can handle doing any exercise, because you don't want to go outside and put on shoes.

There's this app called Tabata Stopwatch Pro, and it's very handy for when you want to do like four minutes of burpees or jump rope, and it's like 40 seconds on, and 10 seconds off, and 40 seconds on, or whatever. And then this robot voice kind of lovingly barks at you, "Exercise. Rest. Exercise." And it's helpful, and it's a great way to just get blood to your brain.

So, take care of your wonderful brains, because you and they both deserve it.

Berbye.

Transcribed by Janou, new cat mom and everything enthusiast. Dordrecht, The Netherlands

Final touches by Kaydee Coast who reminds you; don't lick toads, check your crevices, milk your thumbs, and never apologize for asking questions. Kthxbi

Some links which may be of use:

A donation was made to: militaryfamily.org

[Nick's PhD work](#)

[Stats on PTSD in U.S. veterans](#)

[Intergenerational PTSD research](#)

[Different populations with higher rates of PTSD](#)

[Brain changes in folks with childhood trauma](#)

["What the Buddha Taught"](#) book

[What is EMDR](#)

[EMDR research](#)

[CBD research](#)

[More CBD research](#)

[Research paper with the most cringeworthy pun ever](#)

[Robert Thurman wiki](#)

[Biological effects of childhood trauma](#)

[Physicians having moral injury](#)

[DSM V PTSD changes](#)

[Echoism](#)

[Mental health apps roundup](#)

Free chatting app, [7cups.com](#)

Low cost therapy resources, [Openpathcollective.org](#)

Find a therapist if you do have insurance: [beingseen.org](#)

[Calm.com/ologies](#) meditation app

[BetterHelp.com](#) therapy app

[Talkspace.com](#) therapy app

[Animals and stress reduction: any evidence? YEP.](#)

[Ending music](#)

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