

Neuroscience of Addiction: A New Way to Think about Recovery

Presenter: Daniel Hochman, MD

Can you explain what is urge surfing in more detail?

A: In the addiction phase of the model, one has already chosen to partake in their cravings and so distraction from the act is key. In the cravings phase, however, we want to *allow* the thoughts. This is one of the reasons I like to teach the “current” model from the webinar so that as a client struggles, we are able to have a very specific and deliberate response using the phases of addiction that matches their particular need (and, in turn, offers a greater chance of helping).

Urge surfing is a mindfulness technique created by Dr. Alan Marlatt to recognize that when we fight urges, they only intensify. It also recognizes that cravings are like waves that come, intensify, and then pass. As mindfulness expert Jon Kabat-Zinn says: “you can’t stop the wave, but you can learn to surf.” I’ll refer you to the link below that describes some of the steps in more detail.

I would suggest allowing clients to be creative with their imagery. Some people like to imagine riding the wave to the shore, others like to ride a swell up and then down (way before it would crash). Your job as a provider is to help encourage them and look for any tolerance and allowance for cravings, and then point that out so they feel empowered. The idea is that they find confidence they can ride out cravings instead of fight them (which is more exhausting and less effective), and that they don’t need to carry it out in order to get rid of it.

It’s hard to do this in a way that would be harmful, so don’t be afraid to experiment with it. The easiest way is to try it for yourself with anything you want to try not to indulge in. Play around and get familiar.

<https://portlandpsychotherapyclinic.com/2011/11/riding-wave-using-mindfulness-help-cope-urges/>

Do we know how many people without addiction have "addiction genes"?

A: Good question, and I have never seen this quantified so I am not sure but I can provide some thought. Because “addiction genes” are only associations, there are likely hundreds of genes that could be associated with factors in addiction. Because of this, I would suppose that nearly everyone has several “addiction genes,” yet about 10% of the population suffers from addiction. I would suggest thinking about addiction genes as a spectrum of influences, with some genes having more of an influence, and others being associated but to a lesser degree.

How do you explain the numerous "twin studies" claiming to demonstrate genetic influence for addiction?

A: There are different types of twin studies. Let’s take the one that’s hardest to defend: identical twins who are adopted. In that case, genes are identical and environments are different, so you could suppose any similarities are due to genes. But let’s point out a few things:

- 1) They were still formed in the same uterus. Prenatal conditions *do* matter, and have been shown to affect gene expression (epigenetics). If a mother is of a certain mental state while pregnant, effects can be seen on addiction at a later stage (among many other outcomes). That is not deterministic, but influential.
- 2) Most twin studies of this nature are looking at subjects who were adopted out well after birth. To be specific, in the largest twin study on addiction, the average age of adoption was 8 months, and went up to 3 years. Similar to above, there are now even more influences on those twin children postnatally. The biggest factor here is nurturing. We know babies who are deprived of love and warmth are heavily affected. In fact, without being held infants can literally die. If both of the twins go through a similar early life experience then genes are not being “controlled” for

by experimental design. There are early effects on attachment, self-regulation, and stress response that are lasting without proper attention. Behavioral geneticists know this well.

- 3) Adoption itself is a major risk factor for addiction. This means there is even less reason to trust that the variable of genes is controlled for experimentally. Adoption leads to expected resentments towards parents and peers with biological parents, existential questions of whether they were wanted, feelings of inferiority, delegitimization of adoptive parents and thus a sense of lack of guidance, etc. This is on top of the trauma of each twin being taken away from the other (unconscious but still significant for attachment related issues). These again are variables which are going to heavily influence the development of traits in addiction.

So now imagine running a study and finding a relative increase in rates of addiction in twins. When some people say addiction is 50% genetic, they are usually referring to data that if one twin has an addiction, then other one has a 50% chance of being addicted too. Can you begin to question the validity of this claim?

I am curious about the accountability aspect of the online SelfRecovery.org program. Are there reminders or other ways to help with that accountability aspect that a provider would usually provide?

A: Great question, and I was initially concerned about this as well. Since launching I have been very pleasantly surprised to see high degrees of engagements and follow-through. First, there is no way an internet-based, on-demand program can hold someone as accountable as a traditional rehab or therapist. Yes, there are several accountability measures like email reminders as you mentioned. Participants are also prompted to identify accountability partners for very specific purposes (such as mentorship, discipline, exploring of themselves, relapse prevention plan), and given clear guidance on how to engage them. Some exercises even ask that person to join them to watch a lesson, and go through exercises and questions together. So if there is an exercise on boundaries, for example, they are immediately accountable to that person. A unique advantage to the program is that a participant can even go through all lessons with a loved one, so accountability in those cases (not at all uncommon) is quite high and fosters a shared effort rather than one that is just disciplinarian.

We think of accountability as to other people. I would assert that in the end, we must be accountable to ourselves. That is much more rewarding and healthy than being under constant discipline. It's a sort of "game" to clients who are drug tested or asked about their behaviors, almost serving as a tempting invitation to deceive or be shamed out of treatment (and play out a dynamic of feeling unwanted or counted out). I think the reason people do well in SelfRecovery.org is because that is developed. Lack of self-efficacy is a major core deficiency in addiction, and people do very well when we provide just enough guidance that they succeed, but not so much that it interrupts the development of self-efficacy.

I see a lot of patients who were "kicked out" of an opioid clinic for using. Where are they supposed to go? I am of the mindset that as long as someone wants help, I will help them. There's a difference between enabling and compassion (another interesting topic).

There are a number of people who develop a gambling problem as a result of trying to recover from a SUD - why would you ever suggest a recovering addict look into online gambling?

A: I fully agree that suggesting someone look into online gambling is not a good idea. I apologize if this sounded insensitive to the destructiveness of that habit. I said that in the context of suggesting it to someone with IV heroin use who has the obvious risk of death on any hit, among other life risks. It was to make the point that any progression is success. Most people with addiction suffer from *at least* two, and we can view their addiction on a spectrum of urgency and risk to life. In the first few months of recovery before the brain has had a chance to rewire, it can be too much to ask someone to remain sober from all addictive habits.

Are there any options for low income individuals who could benefit from self-recovery.org?

A: Thanks for asking. Absolutely. I am very passionate about bringing quality care to anyone in need - not based on privilege or insurance. That's my dream with SelfRecovery.org. If anyone is interested but financially unable, please have them contact hello@selfrecovery.org or call 512-766-4051. The same would be true for any organizations that want to offer this to expand access to care.

How is his genetic information presented consistent with Schuketts twin studies?

A: Please see the above Q/A on twin studies. If you want to send me a complete peer-reviewed study and a particular question, I am more than happy to comment specifically on it.

I have some clients who are so uncomfortable with their emotions that they compartmentalize them to figure out later (but they never do). What interventions/discussion/education would be helpful in this regard?

A: That's very normal. My biggest recommendation in this area is: be deliberate. If you're going to compartmentalize, then do it with the intent to distract from the issue. This would be most appropriate for the 'addiction' phase of the current I talked about. That's when you want to teach the client how to self-soothe, distract, and get by. If you're looking for the next step for someone who's stuck compartmentalizing, I'd suggest going through the current in the order I mentioned. Most people don't deal with the underlying issues because they don't feel safe or equipped to do so. That's why I go next to the 'cravings' phase, and then the 'false pleasure' one. That way at some point, they're ready to move to the source of it all. It always helps to reduce anxiety by sharing this plan with the client so they don't feel like they could walk into any session and be dragged into what feels too scary for them. But have a plan for a setting and time that it *is* OK to deal with. Once you're done with the 3 other phases, your client will be well prepared and equipped with the tools to deal with the underlying emotional pain.

What do you think is the root cause of many of millennial generation becoming addicted to Opiates?

A: Some of the trend is sociopolitical, some cultural, some generational differences, and probably several other factors. I don't study public health policy on this so I'm not sure. From my experience, at least, I am aware of a couple of trends. One is that opiates have become much more potent, and proximity to Canada has at least been somewhat behind more available high potency forms of heroin where a higher rate of overdoses are occurring. There is also a growing trend of clients/consumers looking for quick fixes. The more that happens culturally, the more that lends itself to doctors being pressured into prescribing painkillers in cases they should not be.

Don't you think emotional and physical pain have the same correlates? You have an event that results in pain and we may never get over it but we may get used to it, are saying you become habituated to pain?

A: Yes, emotional and physical pain share many features. They even are often experienced in the same regions of the brain, and both can grow into other regions of the brain. And both would of course be states that one would want to escape from. While behaviorally both cases could lead to a habitualization, I do view them differently as far as addiction is concerned.

If someone takes painkillers to escape only a physical pain, they would almost certainly become *physically* dependent at some point. By definition they would increase tolerance, it may have detrimental effects, and they would suffer withdrawal symptoms if stopped. The key difference, though, is that if there was an alternative medication, physical therapy, or other treatment that allowed them to stop the painkiller, they would only suffer from the physical dependence. What does that mean? The only thing they would need help with is detox. From there, they would be fine. In fact, this is well documented in large studies and by far this is the usual case for people who stop painkillers. It is the people who come to rely on a painkillers' *emotional* relief that are at risk of becoming addicted in a way that would persist after removal of the medication.