Metabolic Dysfunction In Addiction Transcript

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Introduction: Addiction, Metabolism, and Sugar

Hey there, I'm Dr. Arwen Podesta, psychiatrist, addiction specialist, integrative and functional medicine doc. If you're new here, welcome. if you are a returning subscriber or a fellow clinician, Welcome back.

Today we're diving into really one of my favorite intersections. I do a lot of things, but I am very passionate about metabolic nutrition and addiction.

And specifically, today I want to talk about what if alcohol addiction in some patients and some people is actually rooted in an innate metabolic dysfunction?

And what The sweet cravings, the relapse patterns, and the why is this so hard loop aren't just psychological, but actually biochemical. So I want to bring to light a patient, anonymous of course, whose recovery journey really illustrates this truly beautifully.

She's in her late sixties and this year, out of all of her entire adult life, she has experienced her first sustained year of alcohol sobriety. But to really appreciate that, I wanna back it up.

Patient Background and Long Recovery History

I'm gonna rewind because as a child, She wasn't drinking yet as a child, but she didn't really just have a sweet tooth. She's what I would call clinically and professionally, calling it a sugar situation.

she had sugar addiction in the family. Mom had diabetes, siblings with metabolic issues and eating disorders, and dementia, which as you well know, it's often tied to metabolic dysfunction.

So before alcohol ever entered her life, Her reward circuitry was already primed and conditioned by sugar dysregulation and that's not actually uncommon.

So fast forward to her adult life. Remember she's in her 60s now so for the rest of her time as an adult she has been chasing recovery and chasing. She's had periods of sobriety, less than a year, followed by relapses, follow by life derailing, because that's what the reward system does when it's dysregulated.

But every time she tried some of the very best treatment facilities in the country, more than 15 times, which also is not uncommon, with using therapy and individual and group work and trauma work, and relationship work medications, she says she's tried everything, and she was doing the work.

And all of that matters. All of it does build the foundation. I always say each relapse is worse, but each recovery is better because you've built some foundational work, But just something kept always pulling her back, a little internal tickle.

She calls it that thing that whispers, I call it the alcohol chatter. that background noise in the brain that says, hey, shouldn't we be drinking right now?

MTHFR, Folate, and Neurotransmitter Support

And then this year, for the first time, she told me, I don't feel that tickle anymore. Nope, she's not cured because addiction is a chronic relapsing disorder of the reward cycle of brain, as you well know, but something fundamentally changed.

So let me talk about what we did differently. First, when I started seeing her, I tested MTHFR gene, which affects

folate metabolism and importantly neurotransmitter production, including dopamine serotonin.

She has two positive copies. This means her ability to convert standard folate into its active form has been impaired her whole life. So she was likely running lower than ideal levels of neurotransmitters.

that stabilize mood, cognition, and cravings. So with that knowledge, we added an activated folly. And what do you know her dopamine and serotonin production improved?

Not in a dramatic buzz producing, getting high kind of way, just in like, my brain finally feels a little bit resilient. It has the raw materials it needs to function consistently.

Next, nicotinamine adenine dinucleotide or NAD. This activates folly and it is giving the brain ingredients to help the cellular assembly line, as it were, run smoothly.

It supports mitochondrial repair, supports energy metabolism and cognitive clarity, all the things that get profoundly disrupted by decades of alcohol use.

NAD and Cellular Energy Repair

Within days of NAD, she reported more energy, more mental sharpness, and interestingly, less brain-based urgency around drinking. But here's the kicker.

She had massive sugar cravings all throughout this year of sobriety, even when I addressed these things. Not I like dessert, not I'm stressed I want chocolate, but sugar several times a day every day, feeling like she needed it.

And here's the thing, we often think of sugar as only a diabetic risk. But when sugar is the only fuel for the brain, it becomes a biochemical trap. A high sugar metabolism forces rapid glucose spikes and crashes.

crashes trigger cravings. Cravings trigger reward circuitry activation and so on and guess what also activates that circuity?

Sugar Cravings and the Metabolic Loop

Alcohol. So the metabolic loop and the addiction loop actually reinforce each other. Recently, in addition to the other stuff, we introduced the KetoFlex dietary pattern.

Not extreme keto, not I'm eating bacon and butter as a lifestyle, a flexible, mildly ketogenic plan built around whole foods, healthy fats, vegetables, proteins, and a 12-hour eating window.

And the goal wasn't necessarily weight loss, it was actually teaching the body to have metabolic flexibility. teaching her brain how to use ketones in addition to glucose, so it wasn't constantly screaming and craving for sugar.

Many studies show ketogenic and hyperketogenic diets can improve all aspects of brain health, cognition and mitochondrial effects, and importantly stabilize the reward pathway.

And for her, it clit. Well, I want to also mention another thing that we did. We consulted with her primary care because her hemoglobin A1C was creeping upward.

And we agreed that adding a GLP-1 agonist, microdosed, could give her metabolic support without overwhelming the system.

KetoFlex Diet and Metabolic Flexibility

So we know that GLPs have a lot of efficacy and a lots of different inflammatory aspects of the brain and body. One

thing that it does here is it reduces appetite and cravings, improves glucose control, and calms the reward pathway actually in the brains.

Honestly, that was one more additive that synced the system better. So I'm stacking all these different tools on top of traditional treatment for alcohol use disorder.

After one week of starting the GLP-1, she reported that the chatter was quieter and even her sugar cravings were quieter. So why does this matter? It's not a magical one-size-fits-all protocol for sure.

And that's what I do. Precision, individualized, integrative, functional medicine is what we're talking about.

GLP-1 Support and Reduced Chatter

We found the things that work for her. Perfect combination, for now, of correcting neurotransmitter precursors, restoring cellular energy, stabilizing blood sugar, breaking that sugar-dopamine loop, and supporting metabolic healing in a brain that had been inflamed, depleted, or dysregulated for decades.

This is addiction care that treats the whole human, including the metabolic system that fuels the brain. And that's the takeaway. Addiction is not just psychological.

It's biochemical. Its metabolic. its nutritional. And when we address those root layers, people can finally feel relief from that tickle, that chatter that they even thought were doomed to battle forever.

Whole-Person Addiction Care and Takeaway

I'll keep following her closely, of course. i'll adjust her plan and look for risks or cravings or dips in motivation. Because this is lifelong care. But for the first time, the fist time at 60, she's not white-neckling it.

She's living. she is thriving. If you want more discussions like this where psychiatry meets functional medicine, where addiction recovery meets metabolics, subscribe please and I'll see you in the next video.