What My Toughest Patients Have Taught Me About IV Therapy, NAD+, And Ketamine For Optimal Wellness Transcript

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Summit Introduction and Guest Background

Welcome to the Bio Optimized Summit, where we explore the next level of physical and mental health. You can reach the intentional and targeted optimization.

I'm Doctor Amy, and today I am bringing to you Doctor Ken Starr. I am very excited to be bringing his experience and knowledge to you, and I know that you're going to get a lot out of the conversation today about I. V.

therapy, NAD and ketamine. And specifically, he has actually been working as an emergency medicine physician for 20 years. We just decided was his 20 year anniversary this summer.

But he's also been started to work with substance abuse and has become very proficient and competent. And the addiction medicine and using these I. V. therapies for those who whose health is even the most compromised, and how to bring them and restore them to health and vitality.

So he started a clinic after the overdose death of his brother from heroin in 2011, and now he runs the largest private treatment clinic on the central California coast, which includes the I. V.

ketamine program is the only program on the central California coast. He has clinic as the longest running NAD clinic on the West Coast, and has now treated hundreds of patients with I. V.

NAD, both for substance use and then wellness indications and so the longevity and health benefits that you will learn about today for the NAD. He's board certified in addiction medicine and emergency medicine.

And so Doctor Star, thank you so much for taking time out of your busy schedule to talk to us about I. V. therapy, NAD and ketamine today. Thanks. Thanks, doctor.

Amy, it's wonderful to be here, and I appreciate you having me on the show. Yes. So tell us about kind of you do I. V. therapy, and then you have the different programs with the I. V.

nad the I. V. ketamine. Can you run us through just your basic. What is a basic IV therapy? Who would that be for?

Basic IV Therapy and Nutritional Support

Why would people benefit even just from an IV therapy if they are healthy? Yeah. So, you know, we started really with as an NAD program, really convinced and committed to NAD as an IV therapy.

Quite a while ago, very early kind of in the in the in the process back maybe in 2013 or 2014. And because we were already doing IV therapy, we already had nursing here, we had infusion here really just doing any D it was, it was after doing that for a few years, then that, then I got interested in all the benefits of just IV nutritional therapies.

You know, I met Virginia Osborne and trained with her group, and, one of my nurses at that time was a very experienced international teacher on on the benefits of IV therapy.

So, she was wonderful. So. And then I just got interested in just, you know, well, you know, just Myers cocktail, IV vitamins, IV minerals, and, you know, giving B12 shots, giving, you know, vitamin C, high dose vitamin C, the anti-viral benefits of vitamin C, all of which, of course now with Covid are important.

And so and so then we just started general IV you know nutritional program. It's not a big part of our practice now,

but it's it's an important practice.

I'd say that most of those patients now are referred to us by oncologists, like our high dose vitamin C program, active patients, you know, battling cancer.

It's a big role. The qui lation we do evaluation, which I forgot to mention. So the real specific targeted, maybe heavy metal testing and treatment, general.

Feel good? You know, vitamin, formulas that really just help you feel great and, I think, help build your immune system. Yeah. Yeah. So it's a fun thing to do.

It's, you know, it's not just a party bus hangover helper. Although, although we do, try to keep people out of that, er. Right. I mean, people feel dehydrated. People have migraine headaches.

They can come here and get some I. V. therapy. Magnesium or anti-nausea medicines and penis and without having to deal with the. So we enjoy having it. I like it.

To answer your question specifically, you know, when you give IV vitamins, minerals right into the bloodstream, the bioavailability is significantly higher, right?

Everybody's GI tract is different. GI absorption when you take oral, even high dose quality supplements is very limited. And and if you have any question about that, just try it.

Right. Take a B12, take some B vitamins orally and then take em I. V.. You're right. Your skin stinks, your breath stinks, and B vitamins, I mean, it's it's a tremendous difference.

And people feel better. So anyway, that that's that's that's the fun we have with IV vitamin therapies. I think they're safe. I think they're very, very effective.

Obviously, if somebody is in great health and has good nutrition and good gut health, there may not be a benefit or, you know, to the cost of doing I. V.

vitamins. I think that it may not be necessary, but, you know, a lot of our patients who are dealing with stress and inflammation and addiction and detox and, you really benefit from that.

I think their systems are already taxed, and they seem to have a real big benefit with IV. So it's not for everybody, but it's a nice tool. I think it's safe and I think it's effective for us for a lot of people it is.

And I really like how you mentioned the bioavailability, because that's been the biggest, most important way that I can use the IV therapy very intentionally for people like you say, who have any kind of get or digestive issues.

We can bypass all of that with the IV therapy. And so when I started using it for myself, I realized that I could use this as a, recovery from my long exercises and my long bike rides.

And so I would start doing I. V., vitamin C, high dose vitamin C, the NAD glutathione. And I noticed how much more quickly I would recover and be able to go out on another bike ride by doing the IVs.

Whereas before that, I had been trying to take everything in order for my body to restore through, you know, like orally. And my gut just could not handle that.

Well, I've had digestive issues most of my life, but still, like, it's it's at a good place now, but still, like with the amount that that it needed to recover, being able to just give that IV has really just allowed me to be very targeted, intentional and maintaining a good physical performance.

Yeah, it makes sense. I mean, certainly I. V. hydration after endurance events is very effective, right? Probably

had, you know, a little bit of rabideau going on and some other things. So like, yeah, just the inflammation, the lactic acid and being able to.

Yeah. Yeah, yeah. And of course makes everything better. Everyone loves the iron. So I have found that to be true as well. It makes everything better.

Yes. Good. Well let's talk about specifically the IV nad because not many people know about this. And yet I have experienced personally amazing results with it.

I've had a lot of patients who've also experienced some significant shifts for themselves, whether it be an addiction medicine or chronic diseases. Even like viral stuff, chronic Lyme stuff.

I mean, it's just been this kind of therapeutic approach to optimize one's biology, almost kind of no matter what the compromise is, it just helps the cells every cell in your body do it.

It does better because of its effects on the mitochondria. So I'm really curious to pick your brain. Yeah, yeah. Tell us about you nad tell us about your experience with AB.

So yeah. So you know, for the for the listener who's not really initiated Nadia's nicotinamide adenine dinucleotide, it's a sort of a vitamin, A vitamin derivative coenzyme that's involved in hundreds of, functions in your body.

And for many years, like when we learned the Krebs cycle, we thought, well, you just use nad to make ATP to make energy, and cells use ATP to make energy.

And that's all you do. It's all it's for. Well, turns out that that is just, you know, the very beginning of the role of nad. And nad is involved in sleep.

It's involved in immune. Response is involved in and significantly for energy production and most significantly for DNA repair and for cellular health.

But also I'd say nervous system health. So I got introduced to this, Amy, because I was doing just basic drug and alcohol doctoring, you know, a number of years ago, and had a patient who said that this is like a heroin patient.

She said, I'm going to go and do brain restoration therapy. I was like, oh, okay. Like, what is that? Like, oh, fairy dust on your on your over your head and you're magic.

You're cured. I was like, okay, whatever. Good luck. You know, and I'm open minded. I'm like, okay. Well he came back a few months later. Phenomenal. Like great.

It wasn't it was not any substitute medications. He had no withdrawal. He had no craving. And I said, what did you do back where did you do this? What is it called.

That was very curious. Right. He says, well, I went to Louisiana and I trained in nad and so he put me in, you know, gave me some names, some number.

NAD Therapy for Detox and Recovery

So I made some calls and I talked to Dick media, Richard, Nadia, who's the original kind of nad grandfather of nad in this country. And he's at a place called Springfield Wellness Center, which subsequently has moved locations.

But they do and they do. And so I called him up and like, hey, how do I do this? Thinking I'm in California, I'm busy. Doctor, give me the recipe. Oh, no, you need you need to come here.

You need to see how an ad works up there. So I was like, are you kidding me? So I went to Louisiana in July, right? Oh my God. And, but what I saw was absolutely amazing.

I mean, I went to the clinic and he had patients detoxing off opiates, like 120mg of methadone, two grams of heroin a day, detoxing, getting IV infusions of NAD that were fine.

They were fine hanging around, eating lunch, talking outside, sitting on the porch, reading. And I've been detoxing patients for years, like. And they're not feeling so good.

And so I spent, you know, some time there and, and I was absolutely blown away. And I remember flying back on the plane thinking, I am going to heaven.

I'm going to revolutionize the treatment of substance abuse in this country. Using NAD because I saw I saw what it did for me. And so we started our NAD clinic in Los Osos, California, which is just outside of San Luis Obispo.

Now we are in Rio Grande, but and we just started treating people with NAD IV infusions of NAD. So what does it do? NAD seems to significantly, very significantly reduce withdrawal and it accelerates.

Recovery is what it does. Does it eliminate withdrawal? No, but it significantly reduces and minimizes withdrawal. And then it accelerates that that brain restoration.

How fast you're feeling better. I think the mechanisms of how it does that are a little unknown. Certainly there some, you know, tolerance in your system is involved in protein modification.

And we know that NAD has this sort of histone deacetylase function. So it kind of unravels these, it's kind of unravels proteins that are involved in tolerance.

Anyway, I can certainly give some resources off to, to to listeners who are more interested in the actual molecular biology of NAD. I'm not a molecular biologist, but, so we so we started using NAD in our program back then, and I think NAD is absolutely pivotal for people detoxing from alcohol and opiates.

I mean really they they unanimously get better. Benzos is a little tricky I think, than those are you know, I think most practitioners have used NAD for benzo withdrawal.

It's a little bit riskier. I think the doses I think people's history, I think underlying issues make it more challenging. Not that it's not effective, but it's sort of a different conversation.

But alcohol and opiates, damn, those patients get nad they feel great. Their post acute withdrawal is minimal and and and it's and it's changed. I mean it's changed our practice.

So that's, that's how we got started. And like I say that was probably 2013, 2014. And we've been going ever since. You know, we have rotations all the time.

And we love it's a great part of our program. Now, in all fairness, that's not all you need. If you have a substance use disorder. Right. So we have an intensive outpatient program.

We have counseling, we have therapists. We have, you know, we're a standalone, accredited car, you know, state licensed and accredited substitute treatment program even without NAD.

But when you start detox, if you're in the detox business, then I think it's a wonderful tool. So when I get a lot of calls and you probably tube, I get a lot of calls, a lot of inquiries from physicians and treatment centers and docs and nutritionists and people who do I. V.

therapy. Anyways. They say, oh, I want to do energy for detox. It's the first thing I say is, okay, are you already treating substance abuse patients and providing counseling and therapy in groups?

Well, no, I said, well, why don't you start with that? Yeah. And then we can add in. It's a tool because it's not enough of a tool that people just get that miraculously are cured of addiction.

But it's just a wonderful, tool in the tool that for somebody who's overwhelmed with the detox and has to get feeling better. So that's kind of our experience with anything.

And these are, yeah, these are kind of long rotations. Again, for people who are not familiar, these are typically like ten day programs, maybe as little as five days for some people, but as long as 15 days for some people.

These are all day infusions to again for people who aren't familiar. So this isn't a one day, one time thing, but this is this could be this is typically ten day programs to 12 to 14 day programs, depending on where people are coming off of.

There's so many factors that go into why a person develops a substance abuse or an addiction. And so yes, there's never going to be just one thing that is the only thing that they ever need, right?

But as you say, it's effects on the nervous system have been astounding. And so I'm using it for not only addiction, but for people with PTSD and trauma because of their nervous system and their imbalances.

And it's been an amazing tool, not by itself, you know enough, but amazing tool to add to everything else that we're doing to support their nervous system and bring in that health and flexibility back to their nervous system.

Yeah. And and it's certainly the first few years all of our energy patients were substance abuse patients. Now probably half are half of our patients.

Now we're just wellness indications right. Longevity, memory, cognitive impairment, dementia, Parkinson's, Ms. per stroke. We have a lot of people doing nad now again more than half now who are not substance abuse are just coming in for for for wellness and are the name of our company actually used to be addiction medicine group cancer, our addiction medicine group and now we're wellness group for, you know, with nad an addiction medicine therapy.

So yeah. Yeah, yeah I definitely and of course people need to sound that well where's that coming from. You know, there was some very important scientific information that came out a number of years ago that showed that if you gave NAD to mice, it reversed aging in muscle cells and it reversed and in reverse a lot of age related changes.

And that was associated yeast as associated with mice. And then there, you know, prove that if you give NAD precursors like nicotinamide riverside, it raises energy levels in humans.

So so that has really gotten sort of the longevity, community very, very interested in energy. So, that's kind of where that came from, you know, and then it's been proven that if you even if it's been shown that if you give other small mammals nad it has an anti-aging longevity benefit.

So yeah. So now I guess people who are really into that, are doing energy and Nadia. Yeah, the studies have been clear and been able to show that the NAD does act on the telomeres.

It does help the DNA repair. Well, the enzymes that repair the DNA, they can do that better. They're making fewer mistakes. And so that will slow down the process of aging.

So yeah, NAD is definitely considered one of the top, tools for anti-aging and longevity. But then because of everything else that it does as well. Yeah, it it is a great tool and resource for the body to just for cellular health on all levels.

Absolutely. It's it's an essential supplement. We talked about like a few course supplements for people like Omegas. 3rd May be some vitamin D, it may be a multivitamin.

NAD is on that list. Now if you can't just take oral NAD. So people need to know that. So NAD because it's degraded in the stomach and it doesn't work.

So people either take a precursor that gets converted to NAD like it's called nicotinamide, riverside or and then there's another one. Or you can take nad either sublingual right into your, you know, under your tongue.

So we have an NAD lozenges or sublingual tablet or a nasal spray. Right. There's no nasal spray or people use it transdermal. So those are other or IV. Right.

But it actually takes some time and money. So if it's a daily thing, I'd say that nicotinamide right beside might be the way to go or sublingual product.

And it's not particularly expensive that way either. Yeah I've been able to maintain patients on a good routine of once they go through that initial program with the IV and then I get them on patches, the nasal spray, the lozenges and they're able to kind of maintain their levels up until when they want another IV boost, which is like once every three months or so.

Exactly. Yeah. Yeah, I find that too. Right. I try to maintain them on an NAD supplement or precursor. And then, you know, a lot of people come in every 3 or 4 months for a booster.

Yeah, they love it and it makes a big difference. Yeah. So what have you seen. What has been your experience when treating people with some of the chronic conditions where mold Lyme viruses, anything that's, that's kind of one of these chronic compromises to a person's health.

Have you seen any negative side effects from the NAD that a person would should be careful when starting this? Because too high of a dose at first might actually not be helpful for them, you know.

So we're at my clinic. We're not primarily doing this function on this. And alternative treatments like Lyman mold. There are some doctors in our community who take on this patient, so they'll refer them to me for NAD after they've completed, say, a line treatment, because they know Lyme affects the mitochondrial membrane and they feel like energy helps.

We I have I have heard of rare patients that I've gotten some calls over the years of people who had an adverse reaction to nad we've given hundreds and hundreds of treatments of NAD.

We've never, ever had an adverse reaction. Any problems with NAD? The worst thing I've ever seen with NAD is it didn't help. Yeah, literally. That's the worst thing I've ever seen.

We do give it with methyl donors. If we're gonna do multiple days of nad, we'll give it with a methyl donor like TMG or Sami, because you could potentially get into methylation crisis.

And then also for alcoholic patients will also pre ND give them optimal vitamin some IV vitamins because I've seen it kind of precipitate like a thiamin deficiency.

And what I mean by that is if, you know, we have alcoholics who come in who are nutritionally deplete, then what happens now? You give given this tool that's going to, provide this foundation of building block to increase, their sort of their central nervous system tonic.

It's a tonic for the central nervous system, and they don't have the substrate. So I've actually seen it kind of get worse that we've warded off with like IV, I mean, IV b-complex.

So, so there are some situations where I think you just need to kind of make sure your underlying nutrition is, is okay. And regarding effectiveness, you know, overall I've seen some amazing effectiveness of nad.

Right. I've seen but I don't I and I don't know when it's going to work and when it's not going to work. Certainly in the substance abuse patients we talked about like icon opiate detox.

It works great when we have I've seen it work well for some Parkinson's disease patients who have had and some

dementia patients who have actually had reversible.

If you go to, we have a video on YouTube, I don't know, you could probably find it, but we have, one of our old nurses, one of she's one of our former nurses, many years ago, we use nad and her mother with dementia.

And we we characterized it. We we we we videoed this, like how she could write a clock, how she could write her daughter's name, how what what was her memory?

And we tested her and this is all in video. Then we gave her IV nad for a couple days and then we did it again. And you can see the changes, right? And so she gave her mom nad like IV once a once every three months and you know from her mom died of other causes.

So, so it can be helpful, but have we use nad for dementia and Parkinson's and M. S. and it didn't do anything. Absolutely. You know, so I don't know, I think I it's always worth trying I think it's safe.

And so I was we're trying we've had some patients who who come in with very severe Parkinson's or very severe post-stroke deficits who want to try NAD and IV, and it didn't seem to help much.

But it's never hurt and they certainly feel better.

NAD for Longevity, Brain Health, and Dosing

But, I, you know, I think I it's challenging also, you know, how many, how much you give them, you know, before you decide it's not going to work. I've decided on about five grams.

So if we're going to do a trial of NAD for, you know, for some, you know, neurocognitive impairment, I would say let's try to get him five grams at least.

So that might be a gram a day for five days. It might be ten days if 500mg a day, depending on what they can tolerate before I decide it's working or not working.

So that might be useful. So there's no test or, I've had people come in from Europe with like NAD levels documented, which I think is cool, but it didn't seem to determine whether they responded or not.

And so I don't know how functional that is to test for it. So, but I think it has the role we've, we've actually seen a cure and I don't mean help. I've seen a cure.

Trigeminal neuralgia, interstitial cystitis, interstitial cystitis. Can you believe that? Which was a which was which we did was accident. We had a lady come in for migraine headaches who wanted to try d we gave her a course of needing a cure to interstitial cystitis.

She came and told this ad a month later. We didn't even know she had. It never came up. So, you know, I mean, when you prove that the functional integrity and strength of your central nervous system, very powerful things happen, especially if you're doing other things to optimize your health, like good nutrition and good sleep and other therapies.

So it's a great tool. We, we love nad we love energy. And clearly it's getting more and more popular because like I say, we get lots of emails and phone calls of how ha how to do it, how much do I give, what's the recipe?

Where do I go to learn? So yeah, sounds like you're already on the energy bandwagon yourself. Yeah, I've been using it for a few years. And yes, I even just had a chiropractor from Kansas reach out to me the other day, and she was starting an ad on a patient.

Didn't know anything about a protocol. What do I do? So yeah, the other physicians and providers are becoming more aware of this. Patients are asking for it because they're getting information and they want it.

Right. And so yeah, when it's as safe as you say that it is. Right. And that's been my experience. Like it's it's very safe to at least try. Right. And why wouldn't you try it right now.

There are some common mistakes that I see people do. For example, you know, it causes and it's not an allergic reaction and it's a side effect. If it goes too fast, you don't feel well, right?

You get like an ice cream headache in your whole body and you're about to pass out. And it's very, very unpleasant. That's not an that's not an allergic reaction.

Slow it down. So, you know, here's what I've taught my nurses. It's like we give nad as slow as possible. I if they come in at 8:00 and we've got till 5:00, I want that last drop to go in at 5:00.

The way I describe it is like if I'm pouring, if I'm refilling your water glass faster than you can drink it, it's not very helpful. So a lot of people come in, it's like, oh yeah, they gave me a gram of energy like in two hours. And I felt like I felt horrible.

It's like, yeah, of course, don't, don't do that. You know? And and of course everyone has a different tolerance too. And there's, we've had patients who can only get through 500mg in a day.

Right. And I've had people who can get through 1500 milligrams in four hours, you know. So you've got to be, you know, go slow, make sure that you're getting good quality nad.

Yeah, I think that's a question a lot of us have is like so many labs now and compounding pharmacies are making an ad and you know who makes a good product and who doesn't.

How are they made? Are you reconstituting it or whatever? So we found our supplier many years ago, who always gives us the best quality stuff. And I haven't switched it since then.

So yeah. But yeah. So yeah, I have not seen any problems. I think it's a fairly risk free procedure. I've never personally had any problem other than if it goes too fast, you slow it down and then people are fine.

Right. Right. And like you say it's, it's, it can be a stress to the system only when you have these deficiencies especially nutritional deficiencies.

And it's like you're asking your body to respond when it doesn't have the other nutrients that it needs. And so being able to supplement that with the other vitamins the other IB therapies can be very helpful, for those people, especially alcoholics.

But anybody else who has. Yeah, any kind of a nutritional deficiency, that can be very helpful. Right. So we have we have an IV therapy called the nourish, which is actually sort of just an enhanced Myers.

It's like a myers, but a little bit more of everything. And we'll give that to patients before they start in any program or the morning before they do.

And it seems to kind of ward off the evil spirits. And they seem to get they seem to get a little bit better feeling out of it. But but when you have it, when you have a patient who has had gastric bypass and then an alcohol use disorder, I you know, nutritionally they are so off curve compromised.

Yeah. That, you know, you can't just start blasting them with nad without doing some, you know, foundation work too. So yeah, you got to kind of look at the whole person. But the Lyme and mold, those are very complicated patients.

I think nad could have a role. And like I say, for those patients, I'm mostly just providing the nad. I think, most of their primary care is, is, is, is, is run by some other docs who have a real interest and expertise in that.

But we certainly get them. We definitely get Lyme patients and we get, more patients. I think they do better when they're not pi substance users, too, like a lot of patients.

Certainly Lyme patients. But other mental health patients will come in on benzos and antidepressants and other things. And then the EDS response at night is less predictable.

But if they but if they don't have a lot of other co-occurring medications, they seems like their response is a little bit more effective and predictable.

I and I really can't talk to him more than that. I just kind of an observation. Yep. So yeah, like I say, complicated patients have complicated or complicated, but certainly, you know, if they're just, you know, pretty straightforward patients with underlying, you know, self-esteem issues, problems or basic mental health problems.

And they're not big part polypharmacy patients. They do really, really, really well with NAD. Yeah I still remember my first treatment of IV nad. And it was, oh, you really it made quite the impression on me because what happened?

Well, I have to admit that because of my schedule at the time, I did a very fast infusion, too fast and too fast. And I was right on that edge of I cannot tolerate this anymore the whole time.

But as soon as it ended, then I really was able to experience all the benefits and I realized my mind was so much clearer. I was seeing things in more vivid colors.

I was able to process things faster. I went to work and I never was able to type that fast and not make one mistake. Like, it felt like being superhuman with it because it felt effortless.

It's like, I'm not even trying. Like, this is just how my body is performing now on this elevated state. It was it was very yeah, it was very yeah, I that's so funny.

I get those reports a lot like people's hearing is improved, efficiency improved. You know my favorite NAD patients I have a group of women who come in who are in this, like, consciousness, group like expanding consciousness and meditation.

And they meet at different parts of maybe with Covid they don't anymore, but they used to meet in different parts of the country and do these retreats, and they get introduced to NAD, and they use NAD to enhance their sort of conscious ness, because after deep meditation, I guess the energy really opens things up to a whole different portal.

And they would just hang out the clinic and just do like high doses of energy. And they love it and they are so funny. I really enjoy having them when they show up.

It's really fun. That would be fun. Well, let's talk about the other I. V. therapy that you do. Sure. Speaking of meditation and consciousness. Okay. Right.

The other I. V. therapy that you do is ketamine. Right. And I've also been very happy with using ketamine as a tool. Again. Never. All by itself, but just as a tool, for especially helping the nervous system and mood and treatment resistant depression.

So let's talk about that. And how did you get started? Why did you get started with that? What was the importance? Yeah. Adding that tool that you saw.

Well, you know, I'm very familiar with ketamine, having practiced emergency medicine for 20 years. We use ketamine all the time for pediatric sedation anesthesia.

So I'm already very, very, very comfortable with ketamine. And then, and then of course, we were already doing I'd

be therapies here. Right. I've already vitamins IV environment infusion.

So I already had nursing, already had infusion pumps. And as this literature and wave that, hey, ketamine is very effective for depression and treatment resistant mood disorders.

Well let's try it right now. Let's do it. Let's try it. Right. So we just followed National Institute of Mental Health Protocol, which is very straightforward.

Your dosing and your weight. Let's let's try it. So that was a few years ago we we introduced academy program. Again I take no credit I'm not the smartest guy on the block.

This is other people have done this research. This is endorsed by the National Institute of Mental Health. We're not experimenting on people. And I thought, let's try it.

And it is amazing when you have a very depressed, very suicidal patient or you have someone, again, with treatment resistant mood disorder, anxiety, panic attacks, certainly depression, ketamine is amazing.

And of course, it's, it's an IV infusions typically over about 40 minutes. We usually do 2 or 3 sessions a week for about 2 or 3 weeks. And then we measure their response over time.

It's not only about 20 or 30% of patients get better. Those first few infusions we have people commit to six because so many people get benefit. The benefit this you know, those last 4 or 5, six treatments.

So anyway, ketamine is highly recommended for severe, you know, severely depressed people who have not responded to traditional therapy. Right. So treatment resistant depression is defined as we've been on two or more antidepressants over the years and they didn't help.

It's a very low bar, right? A lot of those patients have been on two or more antidepressants over the lifetime. Most of them have. Yeah. Right. So anyway, yeah.

So so we started the ketamine program a few years ago. And and we love it. It's great. It's made a huge difference in people's lives. And I mean I mean like a crazy difference.

Like we get thank you cards. Like I'm like I had depression my whole life and I feel so much better now. So, you know, so ketamine is approved. Well, actually it's not it's not FDA approved I. V. ketamine.

It's not FDA approved, but ketamine is recommended for, treatment resistant depression and chronic pain. So a lot of anesthesiologists and a lot of pain management services will use longer I. V.

infusions of ketamine in slightly higher doses for chronic neuropathic pain.

Ketamine Therapy for Mood and Pain

And what that means is, like, if you have bone on bone arthritis and you need a knee replacement in your knee hurts, ketamine doesn't help that. But when you have sort of a nice programed adapted central response to pain, like a regional pain syndrome, reflex sympathetic dystrophy, fibromyalgia, where your pain system is altered significantly, ketamine seems to help reset that.

It really helps reset that, and those patients seem to do better. I always try this patients with the shorter doses first just to make sure they tolerate it, but the recommendations for pain are much, much longer infusions and more consecutive days.

It's a little bit bigger undertaking. Yeah. So so we do ketamine, against that, the biggest part of our practice. But we offer it. And then of course Bravado Screen came out.

So we're doing some of that. That's just a nasal spray that is FDA approved. So we're doing that. We don't really do I am ketamine very much, which I know some psychiatrist will do.

I think it's a little bit more kind of shot in the dark. You can adjust the dose or the bioavailability is much. We've done it on rare occasion. If we can't get an IV, but very, very rarely.

Yeah. So so I like ketamine. I think it's a great tool. And we actually have some very innovative programs where we'll use ketamine for active withdrawal.

You take somebody in the throes of opiate withdrawal. And ketamine is amazing for that. And it also reduces, cravings for alcohol, easier for alcohol patients.

So there's definitely an emerging role in the treatment of substance abuse and addiction with ketamine, too. Now you could say, well, ketamine is addictive.

Well, you know, we're using very low sub dissociative doses. We're not using recreational cahill doses of ketamine. And, yeah, we haven't we have, a couple patients who come in regularly for ketamine infusions, and they've maintained their sobriety off alcohol now for quite some time.

Real, real bad alcohol use disorder patients. So yeah, I think it's a great tool. Who's it for? Yeah, certainly treatment resistant mood disorders is is a response.

Well, I think chronic pain patients, it's worth having that conversation although they have to routinely, you know, do ketamine to get a response. Some of them aren't real happy with how long it lasts, because sometimes I'll just get pain relief for a week, you know, or two weeks.

It's not a huge investment. But, you know, we have the, the the more mental health patients that will come in twice a year and do a day, ketamine. So yeah, I'd like and there's more coming out now on like escalating doses and the frequency of dosing to maintain the response.

There's a psychiatrist who published a paper, she said, like, I think in Maryland, who who treats high risk, you know, suicidal patients and measures their response.

She hasn't had any patients commit suicide once. They once they got ketamine, which is which is great isn't that. Yeah. So yeah that's our experience with ketamine again I think it's safe.

I think you just need to be in a clinic where they have some experience with it. Now. I just may be into the weeds a little bit but some ketamine clinics lots of use.

Other lots of use. Like they like to use a lot of other drugs with ketamine, like, you know, other used for a lot of said they'll use propofol and all these other things to get you pretty deep.

I haven't really found a need to do that. I just we just do the said dissociative doses. Yeah. Magnesium to the bag that's supposed to help. And then that's it.

We'll sometimes maybe give a dose of clonidine for blood pressure or something, but we don't really pollute the polluted it too much. Yeah. And ketamine is, it's directly acting on the nervous system.

Oh yeah. Yeah. And, and really resetting those neural pathways and the communication. And so when there's any, any thing off in that, in those perceptions, in those pathways, ketamine is very yeah a very effective tool.

And I can't think of any other subset of people in which their nervous system is more off balance than the addiction and substance abuse population. And so, yeah, adding that to a person's detox, if they're really struggling with withdrawals, I can see how that would be amazing.

We, you know, for a lot of these patients, Amy, will give nad in the morning and then ketamine in the afternoon and they really start feeling better. But you know, the way I'd like to explain ketamine is it just helps you change the channel.

You know, when you're in a real depressive state and you're ruminating about the same things over and over again, you have the sort of pathological inability to change the channel to change your story. And ketamine changes your story.

You can now you really know, look from the outside in and and that's I think one of the ways it you know now it has this neuro adaptation. It causes, new dendritic buds to come out and it branches new nervous system connections and all these sorts of cool things.

So but that's way I like to explain it was simply the patients is that just helps you change the channel. Yeah. Yeah. The science is there behind the ketamine in terms of it's even the neuro plastic effect.

Yeah. And. And it's so nice, I think for many people to know that you don't need that dissociative state in order to get the benefit from ketamine, because that, that is scary, right.

Like kind of going in the space where you've lost all control over yourself and you're in the hands of someone else? No. Like, you can get so much benefit from staying conscious, staying, you know, very present, adding some magnesium, because that's also very powerful for the nervous system.

And you can really change the channel with with those tools I like I like to get patients a little dissociated, though. I like to kind of give them some warnings and kind of it, because I like that dissociated state a little bit.

But the other thing that's evolving here at our program as well as nationally, is ketamine assisted psychotherapy. So we'll actually give maybe a slightly lower dose of ketamine, where people are just a little bit more interactive and be doing in-depth counseling with them during that period.

So that's pretty intense too. And we because we found that people needed kind of a debriefing after some ketamine infusions because they were so emotionally and psychologically disruptive that we have to have them sit with the counselor after the ketamine session.

So as a group out of San Francisco that's pioneered ketamine associated or assisted psychotherapy, that's doing therapy while and you have to lower the dose a little bit because usual ketamine doses.

I just tell people just to close their eyes and get you out. And now you want them to communicate a little bit. So yeah. Yeah, you kind of have to prep them. You can have to prep them.

They know a lot of people don't respond real well to like totally loose and control. Like not recognizing their hand. Right. I said is that, you know, now, it's not a total LSD trip where purple monsters are coming after you or something, but it's a little, you know, the walls might be vibrating a little bit.

It's a little weird for people. There is microdosing of sublingual ketamine that I've started to use for some patients who, are struggling with some of the mood stuff, and we're using that for medication assisted therapy.

And yeah, getting some really good results with that because it's it's not an IV. And we're using very microdosing of sublingual. And so even that has been really helpful.

And being able to shift some, some big things in therapy I'd like to learn more about that. I think that's a I think the microdosing thing is very popular, and I think it's a growing movement.

I don't have any experience with that. But, you know, we actually had some we used a custom compound nasal spray for depression patients at home. We've kind of gotten away from that for two reasons.

One is the FDA product became available. So then like a lot of compounding, pharmacies didn't want to make it. And then there was some patients not associate our clinic, thank goodness.

But there was a case case in came out of Oregon where somebody had taken ketamine and just went berserk. And it was a bad outcome and a, bad lawsuit and whatever.

So, I don't I think liability wise, I don't want to be doing take on ketamine anymore, but the, but I think microdose and ketamine, especially if you can do it with therapy in the office.

You know, I think that's I think that's very powerful. And you don't have to deal with I. V. infusions, but sticks in nursing. Yeah. I'd like to learn more about that, too.

Okay. Well, that would be my hooked. Have us connect again after this interview. Yeah. Yeah, I think that's I think, well, there's so much going on now with psychedelic research. Yes.

You know, I'm, I'm, I'm, in conversations with several groups that are putting a lot of investment into, you know, the manufacture and distribution, legalization of psychedelics.

And that's can be very, very powerful tool for mental health. Yes. A very growing field. There's so much, so much potential. There's so much growth that's about to happen.

Yeah. Good. Well thank you Doctor Star thank you for this time. Thank you for sharing all of your experience. And expertise. Appreciate it. Well thanks for having me.

Yeah. And thank you for joining us today. I'm Doctor Amy and together let's find that next level of health and aliveness.