

Episode 96 Transcript

Jaclyn (00:01.07)

So I'm very excited about our guest today and the opportunity to introduce him, Dr. Craig Koniver. He has over 20 years experience in performance medicine. He graduated from Brown University, earned his medical degree from Thomas Jefferson University, and then completed his residency at the Medical University of South Carolina, which is where his practice is now. Dr. Koniver focuses on improving internal and external health, really using a wide variety of...up and coming therapies and well-established therapies to optimize the body's potential. He's also trained and mentored hundreds of medical professionals in performance medicine and aesthetic medicine at his Charleston facility. So I'm so excited to get the chance to talk with you today a little bit more about your practice and about performance medicine and what patients are asking for and what you're providing. So welcome today to the DUTCH Podcast.

Craig Koniver, MD (00:49.011)

Thank you. Yeah, thank you guys for inviting me. Happy to be here.

Jaclyn (00:52.728)

So I'd love to start by just understanding like what is a typical patient coming to you asking for complaining of, you know, what brings them to your practice?

Craig Koniver, MD (01:00.701)

Yeah. I think if I think the majority of our patients are the well who want to be super well. we certainly see our fair share of patients with complicated medical problems who are either fed up with the conventional medical system or not getting the help they think they need and looking for outside the box therapies and thinking for sure. But I think the common denominator beyond that is, know, it's the peak performers of the world. It's, it's, you know, whether it's someone who's a professional athlete or a weekend warrior with people who like to excel, execute, and achieve.

Jaclyn (01:33.934)

That's cool. So tell me, are there some like commonalities amongst those people that are like, what are those things that are kind of preventing them from getting to the next level?

Craig Koniver, MD (01:41.949)

mean, if I'm going to be totally honest, it's the type A people who don't know how to put their foot on the brake.

Jaclyn (01:43.747)

Please do.

Jaclyn (01:48.17)

Okay, definitely. That's interesting because this morning I went to a restorative yoga class thinking myself that I was one of those people and I'm not doing enough break work.

Craig Koniver, MD (01:55.817)

But this is why to get right into this is why I love the Dutch test and this is why we're gonna be doing more and more is because understanding someone's you know how someone internally is handling stress in their universe in their world to me is maybe the most important aspect to understanding them as a human

Jaclyn (02:13.772)

Yeah, I'm so glad that you brought that up and thank you for mentioning the Dutch test. Of course, we have this area of the HPA access, which is what I think you're referring to, kind of this more complete evaluation. And it is so interesting because you see a lot come up for people where they might be surprised because they don't perceive themselves as being under stress. And I think everyone has a different level of resilience. And typically these high performers can take a lot before they break. That's what's allowed them to kind of get where they are.

But we all have a pushing point and also sometimes our own like mental emotional perception of where we're at is very different from what's happening physically. Have you seen that too?

Craig Koniver, MD (02:53.715)

Totally. I mean, I think with these people who are high octane, you know, they're used to and what served them well is the grit, the working hard, you know, not taking time off, always thinking about work, always pushing. These are the types who feel like it's additive, right? And think that's the message from a lot of podcasters and influencers is it's additive. Like you got to do all the peptides, you got to do all the hormones, you got to do all the sauna, the cold plunge, the high intensity workouts, you got to eat a certain way. And if you don't do all of it, you don't do any of it. And I just find that that's very stressful for people.

Jaclyn (03:26.974)

I mean, it's a lot when you think about all the things that you could be doing, you know, and then you're doing that on top of a job and on top of a family and on top of everything else going on in your life. It is, it's like a full-time job to be well. What are the things that really stand out to you of like those core foundational pieces that people need to start with before you even layer on? I've heard this described online, which I think is great. It's like if you're doing the cold plunges, but you're not, you know, meditating or eating well or kind of managing the basics.

Craig Koniver, MD (03:34.654)

Right.

Craig Koniver, MD (03:39.836)

Thank you.

Jaclyn (03:56.216)

You know, you're focusing on the cherry and not the ice cream.

Craig Koniver, MD (03:58.375)

Yeah, I think like my perspective is what I've learned in my practice, it's evolved. But what I've learned is when people come to see me, what they ultimately want is to feel better first. And so that's what we work on first is how to get someone feeling better. And I think that, you know, at large conventional medicine misses this point, certainly when I was trained and continued on today, it's all about getting the diagnosis.

Jaclyn (04:23.0)

That's right.

Craig Koniver, MD (04:23.687)

and the diagnosis, then you work the diagnosis and you plug in medicines or then you have functional doctors plugging in nutraceuticals, but it's the same paradigm of treating this for that. And in the mix of that, by and large, patients get lost because they, not that they become labeled as a number or a part of the assembly line, but they're not being listened to in terms of what they want most. And I think for all of us at any stage in life, we just wanna feel our best.

So that's where I like to start, you know, and we have success with that. You know, whether that's starting people on peptides or doing hormone testing or we'll talk about NAD, all these different tools are geared towards at first getting people to feel better. And then once people feel better, again, I talk about this a lot is then when patients feel better from the interventions we're making as providers, then they're going to have a little bit more trust in the advice we give them. And then they're going to want to do, start doing more of the heavy lifting themselves. Then they're going to be more reflective about what can they do in their life to continue on this path or make this path better. And I think that's such a key element, right? And in the conventional medical world, which is insurance-based, based on this made up standard of care, which is absolutely failing and means nothing. I mean, if we look, not to get too serious about it, but I mean, it's horrible. Our standard of care absolutely sucks. We're not making any impact on cancer, heart disease, neurodegenerative disease, autoimmune disease.

Right? mean, greater than 50 % of our population is overweight, tired, depressed on multiple pharmaceuticals, but that's the burden. Like that's the standard bearer. And I don't think that's good enough.

Jaclyn (05:56.566)

Yeah, you're touching upon a couple of things that I really want to dive into and pick your brain on because I think they're really important points. I mean, the first one is I think this disease based model of care that's not enough for a lot of people. And I love that you focus in on, you know, they're not feeling well. We want to get them feeling better because I think there are so many people who they don't really have a place where they fit in right now with the medical system because they feel like junk, right?

I don't know what our rating is on our podcast. Can I swear on that? I don't think you need to, but they're feeling terrible. However, they're not diagnosable with a disease. And I see this like with GI illness as a great example. There's a lot of people walking around with really dysfunctional gut that has a humongous impact on their life. They don't go out. They don't eat out because they're afraid to leave the comfort of home close to a bathroom that they're familiar with.

Craig Koniver, MD (06:36.072)

I agree.

Craig Koniver, MD (06:50.163)

Sure.

Jaclyn (06:50.67)

But they don't have Crohn's disease and they don't have IBD. Of course, maybe they have IBS, but they don't fit into that diagnosis drug solution process. so they end up, and I guess the GIs don't really know what to do either, although I think that's starting to evolve a bit. But they get dismissed not because of their suffering not being real, but that's what it can feel like to patients sometimes.

Craig Koniver, MD (07:14.087)

Yeah. And I would, I mean, I totally agree. And then I think even broader than that, which to your point is so many people with some adrenal gland, you know, dysfunction, they don't have, you know, Cushing's disease, which is excess cortisol production. And they don't have Addison's is where they're not making enough cortisol, which is how the conventional world sees it. You're either black or white. There's no gray. The vast, vast, vast majority of us live in that gray. And that becomes to me the cornerstone for helping people is understanding that stress response and understanding the significance of how they perceive stress and then how do they modulate that stress.

Jaclyn (07:40.834)

Yeah. Yeah, and we're kind of earlier on in that the HPA axis model transforming or getting a better understanding in language around the nuances, I think, compared to gut function that we talked about first, because it is not just a black or white. However, I think some of the language that's been used historically wasn't scientifically accurate, like failure of the adrenal glands, which we know they don't fail like an ovary does. They're not fatigued. There's just dysfunction and dysregulation. And we've kind of set ourselves back, I think.

Craig Koniver, MD (08:04.296)

Yeah. Right.

Jaclyn (08:22.954)

in the functional medicine world while we check ourselves and study a little bit more. And you know, the phenomenon is real and the way people are feeling is real, but the way we were describing it didn't make sense scientifically for a long time. And I'm glad there's providers like you out there that are, we're starting to really change that language and help patients change the language. Cause it is certainly a very real phenomenon to have dysfunction going on with your HPA axis. Probably one of the biggest things we see in this type A group.

Craig Koniver, MD (08:54.215)

I think, I mean, I think it is the biggest. I would say it's the biggest. mean, that's where, and I also, to me, it's the biggest, but it also provides the biggest window of opportunity because it's, it's not just helping people in the short term. I these are longer term issues that, like you said, like you may be a peak performer and, and, know, go all in on your career and all the things you're doing, but there's going to be a trade off, which there just is in life and people burn out.

Jaclyn (09:24.194)

Mm-hmm.

Craig Koniver, MD (09:24.347)

And then they don't think that like the way they fix it then is to try harder, which isn't necessarily the way they need to fix it. And it's hard for these people. I mean, I had a patient I saw just a couple of days ago, very successful woman, I she's 62. And she doing all the things, right? Like all the things she has all the contrast therapy, the sauna, the cold plunge, she's on peptide, she's on hormones, she exercises six days a week. And I asked her, I said, what do you do for downtime?

Jaclyn (09:32.291)

Yeah.

Craig Koniver, MD (09:55.337)

And she couldn't answer the question. And she's like, why, why did I struggle with that? I said, I knew you would. said, because you value doing more than being, and you have the, know, and it's served you well. You've been very successful in your life, but it's not going to serve you in the next 30 years of your life. I can guarantee you because it doesn't work that way. And she couldn't answer. Like she didn't know like, oh, you know, and I call it deliberate, you know, contemplative exercises, prayer, meditation, journaling, like to me, that's way more important than the exercise someone does. And I say that sincerely, and people are like, no, no, no, I need to exercise. Like you may need to exercise for sure, not saying don't exercise. But if you don't put the attention on how to make your adrenal glands stronger and become more resilient to the cumulative stress that you experience that's ever growing in a very complicated world, it will catch up to you faster than not exercising.

Jaclyn (10:51.992)

So why in your experience, you've obviously talked to lot of patients about this, why is this so hard for people? Why is there such a disconnect? I mean, there's obviously societal pushing to go, go, go, but why does it feel like, you know, you could go to six CrossFit classes a week, but then to consider journaling or meditation or a slumber practice, it feels really daunting for people.

Craig Koniver, MD (10:53.097)

Yeah. Right. Well, think, well, I mean, to get philosophical, it's because we value material things more so than even emotional or spiritual things. Right. So for, for, I tend to disagree with a lot of people in this space who are like, okay, the way to longevity is by having the best cholesterol or the most muscle mass. I don't agree with that at all. I think the way the most important thing that people care about as they age is how much peace they have inside. And if that's not how you're, you know, going about your day, your week, your month, that's fine, but I don't think you have as meaningful or fulfilling life. And that's been my experience. And it's hard for people because we reward doing. That's all we do. We reward doing and accumulating, right? You're not rewarded for just being alone. Like I just spoke to a patient this morning and he came back from a 10 day silent retreat. Didn't talk, didn't have internet, nothing. And he said, what a gift he gave himself, but how hard it was.

Jaclyn (11:55.278)

Hmm.

Craig Koniver, MD (12:12.617)

but how valuable. 99.9 % of people would never do that. They'd say there's no value there to just learn how to be introspective. Like I'm not doing, like I have to be doing. And I think that's a lot of programming, but I also think that's what we value as a society, right? We like buying stuff, accumulating stuff, and we like getting the gold star.

Jaclyn (12:32.458)

It's almost like disconnecting yourself from the dopamine hits that you get from that type of external validation. And that might be things, it might be a car you drive, but it might also just be likes on social media, for example, that drive that for people. So, I love that our conversation's gone here, because I think it is getting really to the root of wellness in a lot of ways, in the root of stress management. And part of it is releasing the pressure you probably put on yourself to be listing those accolades.

Craig Koniver, MD (12:44.445)

Totally.

Jaclyn (13:01.878)

I mean, that's very relatable for me growing up as like the youngest child over performing at everything. But you get accustomed to that and you have to really unbreak those habits.

Craig Koniver, MD (13:13.011)

Well, think right. But I think it serves us. Like I think people who are higher achievers, it serves us, but it reaches a point in my kind of estimation or observation of this is most people can handle that type of stress really into the fourth decade of their life. This is what I see. But usually around when people hit their forties, it accumulates and people don't realize it's, it's could be things like you're eating the wrong food, right? Like you're having trouble digesting. That's a cumulative stress. could be that you're exercising too much. That's a cumulative stress.

Jaclyn (13:38.798)

Mm.

Craig Koniver, MD (13:42.057)

It could be that you wound your nervous system so tight because you're responding to messages all the time. That's cumulative stress. And it catches up with people, right? And I think when we're in our 20s and our 30s, for the most part, by and large, we're flexible from that. What I tell patients is like a rubber band. Like you want to pull it, comes back to center, pull it, it comes back to center. Well, eventually you're going to pull it, it's going to break. And I firmly believe it's when it breaks. This is when...

Jaclyn (14:03.022)

Mm-hmm.

Craig Koniver, MD (14:07.175)

And I'm talking about our adrenal system and not being able to respond to stress because cortisol is such a powerful hormone, reserved buffer, anti-inflammatory, you name it. When you break it, this is where heart disease, cancer, neurodegenerative disease, all of it starts in my opinion.

Jaclyn (14:22.968)

Well, because you're really at that cellular level and not able to restore and heal at that point, you know, or your sleep gets affected. And then of course, sleep is such an important time for us to be rebuilding and healing and resetting. So yeah, absolutely. It all plays in here. So when you talk about people that are coming in, not feeling well, are there like three or four areas of health that are those first indicators that something is wrong at that, you know, stress management level?

Craig Koniver, MD (14:49.385)

I mean, think when, you know, the whole goal, the challenge I should say, is that when seeing new patients is are they gonna be open and honest to tell you the truth, right? And I think that that's not talked about enough because I think patients are guarded and reserved because they've been through the medical model or they're not listened to or validated. So not saying that every patient lies, but I understand that they don't wanna be totally forthright.

So I think it manifests usually in the big things like people say they're not sleeping well, they can't focus, they can't manage their weight, they have brain fog. But I think those are just symptoms of more underlying core issues. But again, for me, we like to get people feeling better. So whatever it is, we want to start, meet them where they are, help them feel better. And once we do, hopefully, then they're going to be willing to open up and want to take that next step.

Jaclyn (15:40.012)

Yeah, that was another area that I wanted to just kind of reemphasize. I love that you're bringing that up because as a provider, you have to fix what people care most about. And I think we've all sat at the table across from a patient where they are, maybe they have this like incredibly high cardiovascular risk factor, but they're complaining about insomnia. And you as a provider know that you've got to manage these risks for them. You know, they're a walking stroke or MI.

Craig Koniver, MD (15:50.089)

Yes.

Jaclyn (16:09.218)

but also they're not gonna come back to you unless you fix what their problem is. And I think there can be that push and pull. And I love that you're bringing that up because it's really something that you have to learn in practice is like you have to build trust with patients, especially if they have a long road ahead of them to healing. If you're only focused on what you wanna work on or what you know they need to work on, sometimes you can miss the opportunity altogether.

Craig Koniver, MD (16:32.304)

And totally, and then to take it probably a different direction, but it's worth bringing up because it's coming is, and I don't think providers realize this, but with AI and what's about to happen, like most providers are going to be out of a job if they do not learn how to bring humanity back to medicine. That's just not like.

Jaclyn (16:42.498)

Hmm.

Jaclyn (16:46.38)

Yeah, I mean, certainly you're right. And the providers need to be part of the medicine. And I think that's an important piece. That relationship is critical. Like you are part of that healing journey. And I think that's not something to overlook or underestimate as we consider how we're present with people, how we're building relationships.

Craig Koniver, MD (16:51.827)

They are part of it. Yeah. It's all of it. Yeah.

Craig Koniver, MD (17:03.513)

Yeah, mean, I you know, like you mentioned, we train a lot of providers over the years, which is something I really enjoy. And I get it, they come from this and they're most of them are leaving some part of conventional medicine that they're dissatisfied with most most of the time, it's because of the insurance based model. And they're seeing patients every five to seven minutes. And you really can't make progress with someone. So they're feeling less than valuable. And what we try to help them learn is you'll be more valuable when you'll be more present.

Jaclyn (17:31.169)

Hmm.

Craig Koniver, MD (17:31.279)

And when you're more present, then your patient will receive that and then there'll be more trusting of that relationship. And it's paramount. It's paramount. This is why people collect doctors now. It's very common. know, people don't have just one doctor. They say they have five. You know what mean? Why is that? It's because they don't trust the people that they're talking to. So they're going to bounce things off of other doctors all the time.

Jaclyn (17:52.942)

Especially the clientele that you're working with because they want to make sure they have the right advice. And you with part of what you're right, it's like with so much data out there, everyone can find the data. I think about that sometimes with, you know, when you think I talk to providers when they're building a program or something, it's like anyone can actually go online and find all the information they need to lose weight or to whatever. what you offer is how you uniquely put that together for them.

Craig Koniver, MD (17:57.235)

Totally, totally. It's true.

Jaclyn (18:21.846)

and make it easy and make it palatable and, you know, build that relationship to help them be successful.

Craig Koniver, MD (18:26.825)

Yeah, and I think it's hard for people to want to make change in their life. you're saying, people know what to do, but the question is why aren't they motivated to do it? I think it's in large part because they don't know what success looks like. They literally have no idea that if they put in the time, energy, and effort in doing lots of different things, that it's going to lead to something different. So if you don't know what the map shows you, or you don't know what success looks like, I get it. This is why it's hard for people to make change in their life.

Jaclyn (18:33.006)

Mm-hmm.

Jaclyn (18:54.766)

Well, let's shift our focus a little bit because I'd love to talk a little bit more about your process. You know, when you're looking to optimize health for patients, I know you mentioned the Dutch test. What other testing are you typically running in this group when you're trying to really understand their full health picture?

Craig Koniver, MD (19:09.821)

Yeah, I think the, again, there's no perfect test. so it's one is building relationship over time.

So you can see data points that change, right? So in an ideal world, we're going to do things at the same time. So we'd like to do serum blood testing at the same time as doing saliva testing is the same time as you're doing urine testing. And sometimes we'll do hair testing as well to look like, you know, minerals and metals and those types of things.

And so it feels more like you're understanding how the person is kind of operating in the world they live in as opposed to blood testing is great, but it is just a snapshot. For example, people do hormone testing is literally a snapshot of what's in their bloodstream at that moment. And I don't know if most providers understand that they're like, this is their cortisol level or this is their testosterone must mean that no, it means that at that moment.

Jaclyn (19:58.798)

Mm-hmm.

Craig Koniver, MD (19:59.909)

And so then if you then, you know, really get to know your patient and they're telling you things about their history and how they're feeling, and now you can look at their blood, but now you can see what their cortisol is doing throughout the day, how they're metabolizing cortisol, how they're metabolizing testosterone. Like that's more of a picture. Is it perfect? No. But if you get to know a patient on their journey with them, you can do that multiple times and make interventions and see how they respond.

Jaclyn (20:24.726)

Yeah, it's so interesting. mean, and thank you for bringing up that kind of saliva versus urine difference because they are looking at different things, you know, and I've always done, sorry, not saliva, serum. I've always done serum testing in my practice when I'm evaluating hormones because I think it is a really important baseline to look at, especially for females. They have menstrual cycles. We know where things should fall in specific days of the cycle.

But again, testosterone in men is such an interesting example because the fluctuations hour to hour can be upwards of 30 % across the course of a 24-hour period for men. So that is a reason why we like to look at urine because when you take four points and average them over the course of a day, you're getting area under the curve and you're less likely to get a peak or a trough that misleads you as a provider. Yeah.

Craig Koniver, MD (21:09.925)

Sure. Yeah. No, I love that. I agree. I agree. And I think, you know, and I think there's some bias, right? People are trained a certain way. So they say one is better. No, I don't think any is better. I think it's actually the combination of how you can interpret them that makes it stand out and makes it individualized for the patient. So I like all of it.

Jaclyn (21:25.176)

Mm-hmm.

Jaclyn (21:29.006)

Yeah, I completely agree with you. Well, I want to talk a little bit about a couple of the therapeutics that you're using in practice as well that I think our listeners are really excited to learn more about. The first one is peptides. Tell me a little bit about how you got interested in peptides and what types of things you're using them for.

Craig Koniver, MD (21:42.344)

Yeah. Hmm. Yeah. So we started with peptides. It's probably been eight or nine years now. I have some, you know, high level athletes as patients. I remember some were really competitive crossfitters came to me and said, Hey, you know, in this community of crossfitters, these people who are really high level competing are using these different peptides at the time. Was these growth hormone releasing peptides like semerelin, epimerelin. And so that's how we started. And we would just, you know, one peptide per patient kind of see how they did and learned a lot. Now the whole field has changed, obviously, in that time. Now there's so many different peptides, but we've been really impressed, number one, because of the safety profile. Like it's very hard to find a negative side effect of peptides. Now there are certain ones you have to be more leery of and careful of. Some of the growth hormone releasing peptides, you have to a little bit more respect and understanding. But by and large, mean, you're hard pressed to find a negative side effect. So one meets that criteria, very safe.

And then two, just doing a lot of it, we've learned that people respond really well. So by and large, people are going to get benefits within a matter of weeks. And that's huge. And then going back to that theory that to me, people want to feel better first. If you can help them do that, and that's why I think peptides are a great accelerator of health and wellbeing, then they're really going to start to buy in more. So we use a variety of peptides now from growth hormone-releasing peptides to anti-inflammatory peptides, immune-modulating peptides, peptides for the nervous system.

Jaclyn (23:00.654)

Mm-hmm.

Craig Koniver, MD (23:17.569)

with mitochondria on and on and on. What we like to do is combine them in kind of unique combinations like stacking peptides and we just have a lot of experience and absolutely love it.

Jaclyn (23:28.536)

So for our listeners, how do peptides differ from proteins?

Craig Koniver, MD (23:32.125)

They're just smaller. So peptides by definition are chains of amino acids. We call it a peptide if it's 40 amino acids or less in sequence. We call it a protein if it's 41 amino acids or more.

Jaclyn (23:42.574)

And then tell me a little bit about how these are dosed because I think there's injectable, there's oral.

Craig Koniver, MD (23:48.711)

Yeah, I think by and large they're going to work best if they're injected. So we use them subcutaneously. We've also used a lot of peptides intravenously over the years, very, very safe and have good results. But I think subcutaneous is the best. There's these bioregulator peptides that people are trying where they're very small, like two or three amino acids in length. Supposedly there's a lot of track record and helps if..you know, specific organ system. We haven't seen the same clinical results at all compared to injectable peptides. you know, there's peptides, you know, unfortunately the FDA came and banned most of the tried and true peptides in October of 2023. So they can't be compounded anymore. So people are able to get research peptides to inject, or you can get, you know, over like over the counter supplement peptides that are oral.

Jaclyn (24:17.037)

Mm.

Craig Koniver, MD (24:39.581)

But again, our experience oral peptides aren't going to work nearly as well as inject.

Jaclyn (24:43.48)

Yeah, there's been, the FDA has been very active in like minimizing what can be compounded now. That's affected a lot of practices. Another, and a lot of people, a lot of patients too, who'd been receiving benefit from it, which is, you know, understand, yeah, definitely. So another therapy that I want to talk about is NAD, because this is another one that we're hearing a lot about, a really important nutrient. Is that something that you're utilizing in practice?

Craig Koniver, MD (24:48.937)

Sure. yeah. And a lot of people.

Craig Koniver, MD (24:56.851)

Totally. was a big blow.

Craig Koniver, MD (25:11.027)

We do, you we got lucky. I would say we started with NAD probably about 10 years ago. So we've been using it longer than most. And we've, you know, I've said before in podcasts, I think if I had to pick one compound that I would recommend to people, it's NAD, you know, cause as a singular compound, I've observed the most transformational changes in people's health in a very short amount of time. Like we've treated thousands upon thousands of patients with NAD. Doesn't work for everybody, but for the vast majority of people there is an upleveling of their nervous system to start. So people come back and say their brain is getting bigger, they feel more creative, they sleep less, but have more energy, colors look brighter, languaging is easier. The thing is just, know, life is easier to navigate when your nervous system is working, you know, at a higher level of efficiency, which makes sense, right? Because there's not just one mitochondria per nerve cell, there's thousands. And it seems that we know from academic research over the last five to 10 years that as we age and stress out our bodies, we can't keep up with NAD demands. And so as you add NAD back to the system, we have good things that happen, like really, really good things. We're big, big fans.

Jaclyn (26:18.606)

So let's talk a little bit more about NAD like as a molecule and you'd mentioned mitochondria and it's kind of its relationship because we've not covered this on our podcast before and I think listeners probably have heard about it elsewhere but start with that at the beginning. I mean this is like metabolite and coenzyme that we make on our own.

Craig Koniver, MD (26:34.983)

Yeah. So I just break it down to keep it very simple because it's easy for my brain. So there's three ways that we're basically making ATP energy. The first is glycolysis, right? We break things down to a glucose molecule, which is six carbons in length. We split that glucose through the process of glycolysis into two pyruvates. Each pyruvate is three carbons in length. As a result of that split, you get a mild making of ATP. I know. I know.

Jaclyn (26:38.04)

Great.

Jaclyn (27:01.836)

You're bringing me back to biochem for first year of med school.

Craig Koniver, MD (27:05.135)

Right. And then you take that pyruvate, it's converted to acetyl-CoA. This is happening in the cytoplasm. This is not in the mitochondria itself. Then you take that pyruvate, you convert it to acetyl-CoA. That acetyl-CoA is run through the Krebs cycle, right? And through the Krebs cycle, you're making these intermediate molecules. One of the big ones is NADH. And you're also making some ATP. Well, now that NADH and some other of these intermediate molecules are shuttled to the mitochondrial membrane, where we undergo oxidative phosphorylation, right? And so the way I think about this, there's five hubs that sit on this mitochondrial membrane and the goal is to exchange electrons for protons so that eventually we can get to the fifth hub, the fifth cytochrome, which turns the ATP wheel and you're maximizing your ATP output. It's so NADH is used at cytochrome one or that first hub. Now, why do I think it happens? Again, oversimplifying it. I think the traffic jam, so to speak, in electron flow happens at cytochrome one. So when you give people NAD, you're basically opening up the free flow of the traffic. So now you can exchange more electrons for protons and you can run those electrons down from cytochrome one to two to three to cytochrome C oxidase to cytochrome five. Now it's easier to make ATP and as you make ATP, you feel better. You're gonna have more energy. Life gets easier. And that's kind of the oversimplification of where NAD fits into that.

And it seems that the majority of people, again, this is just, I'm a clinician, so I'm just observing what people do. When you give them NAD, and we do a loading dose intravenously, when they come back after the loading dose, the vast majority things have gotten a lot better in their life. So it would make sense to me then that the traffic jam is happening at cytochrome one.

Jaclyn (28:41.975)

Yeah.

Jaclyn (28:46.156)

Well, and I know you mentioned nervous system, but I think it's important to highlight that mitochondrial health and function is so critical for really every system of the body. And then there are some systems that are really even more dependent upon mitochondrial function than others. Depending upon how many copies of mitochondria are in a cell, reproductive health is a big one. When we see hormonal imbalance, actually, we've seen a lot of underlying deficiencies in NAD that you can even get people

In the fertility world, they're seeing restoration of ovarian function when you're focusing on supporting the system. So it's definitely really interesting.

Craig Koniver, MD (29:15.305)

100%. Yeah. Yeah. Yeah. I think we've helped many, many couples get pregnant using NAD for sure. Yeah. Yeah.

Jaclyn (29:24.962)

Yes, not surprised, not surprised. So this end up feeling – I mean, I think in our world, we're talking about it almost like it's a magic bullet. And it sounds like most people can do – can benefit from, you know, increasing their exposure. Are there any patients where you're thinking like this is probably not a good idea for them?

Craig Koniver, MD (29:41.481)

So the only three contraindications we found are pregnant women. So we don't like to give things to pregnant women in general, congestive heart failure and chronic kidney disease, not because of the NAD itself, but because of the fluid requirements if we're putting NAD in 500 cc of saline. During the pandemic, we obviously continued doing intravenous NAD, but then we shifted to doing more at home, like peptide shots. So we're doing more patients are doing it at home where they're giving them self-injection subcutaneous NAD. so that honestly, outside of pregnant women, don't...

Jaclyn (29:53.709)

Mm.

Craig Koniver, MD (30:11.091)

think there's any contraindication, literally. There's no medicine, no diagnosis outside of that. Again, doesn't mean it's gonna work for everyone. If you're a 25-year-old super healthy and fit and you do NAD, you probably won't feel it because you're super healthy and fit. Does it mean you could benefit from it? For sure, but you may not wanna continue it because you don't see the benefits right in front of you. Yeah.

Jaclyn (30:14.092)

That's great.

Jaclyn (30:34.962)

Right. And when you're weighing the cost, the benefit, you know, will see a bigger impact when you have, you know, later on in life when you start to have a little bit more deficiency or efficiency and energy production even.

Craig Koniver, MD (30:37.235)

Exactly.

Craig Koniver, MD (30:44.668)

100%. Yeah, and so you take a 55 year old male who's stressed out, who's, you know, lived

55 years. In general, they respond very well to NAD. You know, it's like the light turns on, you see it come back in their eyes and they feel their coloring gets back. They feel so much better. That's what they subjectively tell you. A big hole here is, you know, we don't have a way to measure someone's NAD status, right? And it's been a problem, but hopefully that gets, you know.

Jaclyn (30:54.382)

Mm-hmm.

Craig Koniver, MD (31:11.495)

remedied at some point.

Jaclyn (31:12.92)

So that's interesting, right now what are you utilizing to kind of determine how frequently someone might need an infusion?

Craig Koniver, MD (31:19.175)

Yeah, I mean, again, we don't have any objective measure outside of just from doing this a lot. What we came up with is what works best is when people do a loading dose, five treatments in 10 days, and then on average, people do one treatment a month intravenously. Now we have plenty of people who do more and plenty of people who do less, but on average, that's about right.

Jaclyn (31:23.598)

Let's hear it.

Jaclyn (31:38.766)

Great. Cool. Are there any other therapies that you find that are just really helpful and relevant that you're looking at all the time? I think about like some of the peptides like BPC157 is another one that gets utilized very frequently with especially joint issues and kind of restoration. Are there others that stand out to you that you think people really need to know about?

Craig Koniver, MD (32:00.541)

Yeah, I mean, we love BPC until the FDA pulled it. So now we're using the new BPC, which is called pentadeca arginate or PDA. It's very similar to the BPC molecule. think, you know, if you had to ask me, people are coming back and seeing faster results with PDA compared to BPC. So I think we're off to a really, really good start. Yeah. You know, I think people are getting into methylene blue. It's not a peptide, but it's mitochondrial enhancer, whereas NAD works on cytochrome 1.

Jaclyn (32:03.054)

That's great.

Craig Koniver, MD (32:28.681)

Methylene blue works on the cytochrome C oxidase or cytochrome 4. That's like a super nutrient, right? That's going to up level the effects of the mitochondria. helps with oxygenation. It's antiviral. It's anti-inflammatory. I think there's going to be some data anti-cancer. Very, very safe. Different than AD, it can be absorbed orally. So most people can take methylene blue orally and get amazing results. It's also a cognitive enhancer. So that's something we're doing a lot of as well.

Jaclyn (32:55.95)

Maybe that's why, that's what you can say you have that backdrop for, to reflect the importance of methylene blue. That's great. Anything else that stands out to you for really kind of exciting nutrients that are up and coming?

Craig Koniver, MD (32:58.825)

Yeah, in the background. Yeah, yeah, exactly. Yeah.

Craig Koniver, MD (33:10.097)

I don't know about nutrients. mean, we're always playing around different nutrients, but I think it's the combination. Like what we're interested in is how do you combine these different energy devices like PEMF and different light devices with different compounds to maximize how things are utilized and working? So that's kind of our next goal is starting to figure some of that out because whether it's people do sauna and cold plunge or they do PEMF, red light therapy, it's obviously a becoming way more popular. It's how can we maximize that? Can you take something and get under the red light and really, you know, synergistically improve the outcome?

Jaclyn (33:50.094)

Well, hopefully we'll see some data on that in the next five to 10 years for sure. Another kind of interesting question, have there been any like health trends that you have a lot of patients come in on that you're like, really wish that people weren't into this as much as they are?

Craig Koniver, MD (33:54.749)

Yeah, I think so. I think that's the next big push. I mean, it's happened over the years with, I mean, I don't know. I've seen where a couple of years ago is Epstein-Barr virus, right? Where everyone thought they had Epstein-Barr virus, which is real. Like reactivation of Epstein-Barr virus is real, but I don't think people realize how rare it is to actually have, you know, lab, you know, diagnosed where your titers have to be a titers a certain way to

actually have reactivation Epstein-Barr. I'm not, the jury's out for me on mold. Mold's the big thing now. You know, I'm sure there's a lot of mold illness.

I think a lot gets lumped into that, it was the, you know, it seemed to be it went from Lyme to Epstein-Barr, now to mold. I think the underlying theme there is there's a problem with inflammation, these people's immune system. And so it doesn't necessarily matter what the instigating effect is, it's more of like, what's not getting better and how to like rework an immune system that's, you know, unstable or not responding appropriately.

Jaclyn (34:56.173)

Hmm.

Jaclyn (35:03.116)

Yeah, it's a great way to think about it because ultimately we should be able to handle exposures, you know, through detoxification and our immune system function. We are made to be able to process through exposures like that. And if we're not doing that well, you know, is the problem the agent or is the problem our system?

Craig Koniver, MD (35:07.411)

Totally, I totally agree.

Craig Koniver, MD (35:19.697)

Right. And it's hard to tell. And so it's easy, right? It's easy to say, well, I have mold. It's harder to say my immune system is not keeping up. And it's just a symptom of the worst, worst problem.

Jaclyn (35:29.806)

Great. Awesome. Well, I've really appreciated your time today. I've learned a lot and I think our listeners have too. If they want to learn more about your practice or how to reach you, what are the best ways for them to do that?

Craig Koniver, MD (35:35.273)

So good.

Craig Koniver, MD (35:40.723)

Very easy, our website's Koniverwellness.com. It's the same on Instagram, that's where we're at. I'm the one who posts, I don't keep up too much, but we certainly can be reached that way. But our website will hopefully make it pretty easy for people.

Jaclyn (35:54.562)

Fabulous. Thanks so much for all you do and with your patients and for spending the time with us today.

Craig Koniver, MD (35:58.089)

Thank you for having me. I appreciate it.