

[00:00:00] Hey, what's going on? It's Dr. Mike T nelson here, and we are back with the Flex Diet Podcast. All things to improve body composition, add muscle, improve performance, do all of it without destroying your health. In the process, today on the podcast, we've got my good buddy, Joel Jameson. We're talking all about the impact of the aerobic system, training, and doing a more deep dive on heart rate variability.

[00:00:34] So Joel is one of the original people who was into HRV way back in the day. He was one of the original people with at that time was the Omega wave system. So I've been fortunate enough to know Joel for, man, probably over a decade and a half now, and it's been great to. Bounce all sorts of items off him over the years, and I think you'll enjoy this podcast covering everything HRV related and more.

[00:01:05] I wanted to let you know that the Physiologic Flexibility Certification will open again starting this October 14th, 2024, so if you're looking for ways to increase your body's ability resilient, increase your recoverability, I guess if that's a word, become more anti fragile with the next level interventions.

[00:01:30] The Phys Flex is for you. So in this we cover the four main pillars, which are temperature regulation. So everything from cold water immersion to sauna to exercising in the heat. Number two is pH changes. This includes everything from true high intensity work. How do you actually do that? What does that look like?

[00:01:53] What are the ways you can measure it? Breathing techniques and even all the way down to breath holds super ventilation methods, and then also zone two cardio. The third part is an expanded fuels related to metabolic flexibility, but here we're focusing primarily on lactate and ketones. So lactate happens primarily when you run a ton of carbohydrates through the system.

[00:02:20] And then ketones happen when you run primarily a bunch of fat through the system. And there are some actually very cool cases for both of those. And then pillar number four is regulation CO₂, basically breathing. So you hear everything again from different types of breathing techniques. Nasal breathing, should you do it all the time or not?

[00:02:44] How does your body regulate oxygen and CO₂ for better performance? So if you're interested in that, check out the link below, go to physiologicflexibility.com for all the info. If you're already on the newsletter,

you'll be able to get all the info coming up very soon. So I'm super stoked about that.

[00:03:06] Speaking of ketones, we've got our friends over at Tekton. If you're looking for an exogenous ketone ester, I know those are all kind of big words, but you can consume a ketone drink and get into a high state of ketosis all without doing a ketogenic diet. In fact, you can get high levels of ketones within about 20 minutes.

[00:03:28] And this is very cool because you don't have to do a ketogenic diet to get the benefits of ketones. You can still do this in the face of your normal diet with ketones. And we talk about this in the PhysFlexer. You can even do this in the wake of higher amounts of carbohydrates at certain times also. Which is pretty cool.

[00:03:47] And then, we do have the Flex4 this week. Go to [MikeTNelson.com slash Flex4](http://MikeTNelson.com/slash/Flex4), F L E X, 4. And due to, we had limited time with Joel, I wanted to get the maximum amount of information I could from him. So, I did the Flex4 this week. So if you want to hear from me and want to hear what my top four things are related to HRV in less than about five minutes go to miketnelson.com/flex4. That'll also put you on to the daily newsletter. You get all super cool fitness insider info for free delivered to your inbox. If you're already on there, then you will get the Flux4 for this week delivered to you directly. So without further ado here is Joel Jamison and enjoy.

[00:04:40]

[00:04:40] **Dr Mike T Nelson:** Welcome back to the flex diet podcast. And we're here with Joel Jamison. How's it going, sir?

[00:04:46] **Joel Jamieson:** Doing, going well. How about you?

[00:04:48] **Dr Mike T Nelson:** Doing good. Thank you for coming on here. I appreciate it. I've been following your stuff for quite some time. And I, the first time we officially met in person was back in the.

[00:04:59] It was the Paleo Effect days, I think, we had a panel together at some point, I think. Yeah, that sounds

[00:05:04] **Joel Jamieson:** right, that was a long time ago. That was a long time ago. I don't know, 12, 15 years ago. I don't know if paleo effects is even still a thing or not. But yeah, I remember those days.

[00:05:14] **Dr Mike T Nelson:** Yeah. So again you give a great talk out in Vegas at a ROMS event last year.

[00:05:18] So it's great to see that. And one of the things I want to talk about is you're one of, I call the original people with HRV. So when I started doing HRV, it was a few mega wave people. And that was about it. Do you want to tell us how you got involved with HRV, especially back in the day when no one really knew about it, plus it's an entertaining story.

[00:05:42] Yeah,

[00:05:42] **Joel Jamieson:** it was really early on. There's a guy named Randy Huntington and Randy was the head in track and field jumps for USA Track and Field and coach Mike Powell was just a very experienced, very knowledgeable coach and was in my area and I just asked him for, I don't know, tips, strategies, advice, that kind of stuff.

[00:05:59] Cause I was young and in the game and we talked some train stuff and then gave me a phone number to call and said call this guy, which was a an unexpected thing. But I'm like, okay, Randy knows what he's doing. So call this guy up and he's got a thick Russian accent and still doesn't really tell me what he is doing or what I need to learn.

[00:06:15] But it says, meet him at an airport hotel down by Seattle. That's not sketchy at all. Yeah. It's not Russian

[00:06:21] **Dr Mike T Nelson:** dude, an airport hotel. If it wasn't

[00:06:24] **Joel Jamieson:** Randy, I probably wouldn't have gone, but I'm like, boy, next time young, I trust Randy. And so I go down to the airport and this dude comes out of the trench coat with a briefcase and he's six foot two, like literally looks like KGB and has an accent to match.

[00:06:38] And basically proceeds to tell me to lay down on the couch and take my shirt off as he then connects a bunch of electrodes to me and I'm like, what is going on here? What am I doing? Yeah, what is happening? And so he proceeds to have me go to this, just to sit there basically for two and a half minutes and then starts telling me about my recovery and sympathetic function and starts using a bunch of jargon that at the time just didn't make a whole lot of sense, but he was, pretty spot on with, how I was built physiologically and what I'd done for workouts and heart rates.

[00:07:06] And he just knew a lot of stuff that was mind boggling to me because this is, again, this is, I think back then mobile phones were at like snake level or maybe it was still pager. I can't remember.

[00:07:16] **Dr Mike T Nelson:** What is this one? 2003, 2004?

[00:07:19] **Joel Jamieson:** I know it was before that. I want to say it's 2001 or 2002. Oh wow. Okay. So, again, like I think phones were around at like the Nokia 900 or whatever that one was.

[00:07:28] And pagers were still around. So it was really early technology days. There was not Fitbit and Ura's and Apple, like none of that, no, no apps. So it was just completely mind boggling to me that someone could plug me into a computer Connect me to electrodes with that and then have any knowledge about my training history and recovery levels and all that sort of stuff.

[00:07:49] And, I'd study the Russian stuff. I'd spent some time at Mel Siff's house, for those who are familiar with Mel Siff, and read all the old Russian and Eastern European weightlifting manuals. And so I, I recognized that the Eastern Europeans and the Russians were, Very different in their approach to training than the Americans were.

[00:08:05] And, this seemed like the perfect Russian secret, right. Which, was intriguing, obviously. And so long story short he tells me this thing is like 35 grand and tells me the story of the omega wave, which is what this thing is. And of course, I don't have 35, 000, but I, was ambitious and I offered to help at the time I was interning at University of Washington.

[00:08:23] And I think that back then, and they were trying to get it into, collegiate scene and the professional coaching ranks of America. And so I just said, Hey I'll help get this thing out there as much as I can. And I'll spread the word and I'll do this and I'll do that. And so he basically made a deal where I could make payment plan on it and pay them monthly and.

[00:08:41] Get a much discounted system rather than spending 35 grand, which I couldn't have ever done and away I went. So I actually got an old used system and very little education to go with it. Cause I think they were just trying to get it to me as cheaply as possible and say, here you go, figure this thing out.

[00:08:55] And so that's, that was ultimately what I ended up having to do. But yeah, it's, it was, it's. 24 years ago, basically, or close to it. So it's been crazy to

see the journey as I'm sure you've witnessed from those very early days and now it being on millions of devices all over the

[00:09:11] **Dr Mike T Nelson:** place. Yeah, it's pretty wild.

[00:09:13] I think the first time I heard about Omega wave was 2003, 2004, at the time it was like this mythical Russian system that was 30, 000 and they could do all this stuff non invasively and. At the time, I didn't know anyone who actually had one, and I hunted down Landon Evans when he was on the Pacific Northwest.

[00:09:37] So I

[00:09:38] **Joel Jamieson:** actually introduced, if I remember correctly, I think I introduced Landon, well Landon was, Connected to McLaughlin, Mark McLaughlin. I think I introduced Mark McLaughlin to it though. I could be mistaken on that. I can't remember, but he was one of the early guys as well. And I don't remember if I introduced him to it or somebody else did, but he was one of the other really early guys into the whole thing.

[00:10:02] **Dr Mike T Nelson:** Yeah, and I remember going to ACSM conference somewhere near him and just dropped him and I don't know if I got his email or what and said, Hey, I want to learn about Omega Wave. Like how much do you charge for a consulting session? And he's I don't know. Just take me out to a fancy steak dinner and I'll just answer your questions.

[00:10:19] I'm like, Oh yeah, cool. So the, he was like three and a half hours away from the conference. So I get in my rental car. Drive out there at night, go have a steak dinner with them. It was super cool. I can answer a lot of questions and then it's 10 30 at night. He's well, do you want to be tested on it?

[00:10:35] I'm like, sure. So he brings me back to his facility at 10 30 at night, hooks up all these electrodes. And I was like, Oh, this is crazy. I drive back to my hotel. I think I get back there at three 30, four o'clock in the morning, sleep two hours, go to the conference or whatever.

[00:10:52] And it was. To me the most fascinating thing about it was, the little data I had on myself was, it was pretty accurate, like it was telling me, detox pathways, and aerobic performance, and I was like, it appeared to be relatively close, and I was just blown away that something that was non invasive, you're basically lying down, it was like a three minute test they did, And it spits out all this information that, again, my N of 1 appeared to be pretty damn accurate.

[00:11:22] Yeah, and that was exactly

[00:11:23] **Joel Jamieson:** my experience. Again, you're like when you're trying to understand training, there's just so many unknown variables and you're, let's be honest, there's just so much guesswork, right. And for someone to be able to look at you, put objective numbers around different parts of your physiology.

[00:11:36] And then to be accurate was mind boggling. It still is in some ways, but yeah, it was really groundbreaking. That's why I was just like, I've got to figure out how to have this thing. I don't care what I have to do or negotiate or whatever it takes. I'm going to figure out what to use this thing.

[00:11:48] Cause I just, I was like this, answers so many questions and this can provide so much insight into the black box of training and fitness and health and all the things that go along with that. So it was something I really felt strongly was going to be the future. And, it's taken 20 years or whatever to get to that point.

[00:12:03] But I think I was on the right track.

[00:12:05] **Dr Mike T Nelson:** And early on, once you had the full system, so then I proceeded to basically pester the ever living shit out of everyone I could find who had a full system. I know I sent Landon a bunch of questions. I know Caldeet's eventually bought a system, which was hilarious.

[00:12:19] Cause he's it's yeah, I got an OmegaWay system. I was like, Oh, that's cool. He's don't tell my wife how much I spent on it. Cause the university wasn't going to buy it for him. So he just bought it with his own money. That's crazy. Don't do that. That's not wise. I'm like, Oh, okay, great. What did you find using that system that you found was the most useful?

[00:12:40] Did you use it like on a. A daily to try to figure out what to do for training. Did you look at more just trends over time or both of those?

[00:12:48] **Joel Jamieson:** Yeah. So, when I first started using it, like I think I was finishing up internship, University of Washington, and then I followed a strength coach named Bill Gillespie over to the Seahawks and then I opened up my own facility not too long after that.

[00:13:00] And the first thing I noticed when I'm just measuring people and seeing what it's looking at, I said, I want to see what's the difference between a

Seahawk athlete and an average person, you're like, holy shit, like they are just built very differently. Their recovery was incredible.

[00:13:14] Their performance metrics that it showed you across your different heart rate zones was very different. Like their CNS was higher, just all the sort of stuff that you would expect in a professional athlete was very obvious when I looked at that. And then the second thing is when I really started measuring just everyday people coming into my gym, I had a mixture of athletes, Microsoft executives, high school kids, kind of anybody and everybody.

[00:13:35] The most obvious thing to me was that the workout was a much smaller part of their recovery and overall stress than I expected it to be. Because as a coach, you just think that, the workout is everything and the lifestyle is a small piece afterwards. But you just see that flipped on its head.

[00:13:50] You realize that the 23 hours they're spending outside the gym have such a big impact on their, recovery and everything else compared to just the one hour they spent in the gym. And you realize Oh, I didn't, this person didn't do a hard work at yesterday. I made it took the day off. They still don't look very good today.

[00:14:04] Well, what happened? And you find out, Oh, they slept four hours. Cause there was a big deadline at work or there was something going on. And so for me, it was incredibly eyeopening on, Training and lifestyle and the balance between them. And it just makes you recognize that the body, is under stress at all times to some degree.

[00:14:20] And even though you're under high level stress for that workout for an hour, you're under different types or lower levels of stress, but for 23 hours and sleep and all these things play such a huge role. And I just, Didn't know that until I could start seeing the data of how people were reacting to the their lifestyle Not just their workouts with me.

[00:14:39] **Dr Mike T Nelson:** Yeah Would you agree that if we want to put a definition to recovery so training? Obviously, we're gonna be pushing the system away from homeostasis on purpose Yeah, would you agree that recovery in my little air quotes is just? Getting back to homeostasis faster. So we can basically just shove it away from homeostasis again.

[00:15:02] **Joel Jamieson:** Yeah. I think there's kind of two aspects really. The first is that process, you said, if we need to restore homeostasis and get back to where we were, and I think there's also the adaptive part where, we're probably

close back to homeostasis if we were to measure, blood pressure and blood sugar and these sorts of homeostatically driven things, but.

[00:15:17] We still have to increase protein synthesis to adapt that workout. And really the reason our body adapts that workout is so the next time we face it, our homeostasis is less disrupted. That's the whole point, right? That's why our body adapts. So I look at this recovery as just, this is a process, like step one, get the body back to normal physiological ranges where it's comfortable.

[00:15:35] And number two, make sure the next time you encounter the same thing, You're not as, you're not as disrupted. You're not as pushed away from normal. And that's where the adaptations coming from or why they're there. So I think it's just this process of what it goes through as part of that that end goal of

[00:15:49] **Dr Mike T Nelson:** survival.

[00:15:51] And related to that, and then I'll ask you about the bio force and some HRV stuff. What have you that helps the most with recovery. And the second aspect of that question is what parts of that do you feel are trainable, right? So I'm thinking like aerobic base. So people have a big aerobic base. I've noticed they just tend to recover faster.

[00:16:15] Aerobic capacity is something that's also, pretty darn trainable in most people.

[00:16:20] **Joel Jamieson:** Yeah. And I think from a training standpoint, that's definitely the most impactful thing that you can develop. And it's simply because in my mind, the recovery that happens after the workout is entirely driven by energy from the aerobic system.

[00:16:33] You're not producing anaerobic energy to recover. And the, the more efficient and the better aerobic capacity you have, the more there is that potential to recover a bit faster. And then, there's also just, we know that higher levels of, VO2 and overall fitness are associated with higher levels of vagal tone, which the parasympathetic system, which is, driving recovery in most aspects.

[00:16:53] So we know that there's the clear mechanism, mechanistic relationship there. And then, outside of the sphere of training, I'd say sleep isn't trainable per se, but sleep has. a huge impact simply because that's when your body is the most shifted towards recovery since it's not having to expend energy doing anything else.

[00:17:10] And the more you can impact sleep in a positive way, the more you can facilitate recovery happening more efficiently. And then I think on top of that, I wouldn't say trainable, but you can start to add in some recovery modalities. Which, honestly, a lot of them are either just these little stimulations that cause that parasympathetic system to react afterwards or things that are just relaxing it through sympathetic systems too active, those little recovery strategies and different techniques can definitely play a role, but they can't really override if you have a shitty Diet and lifestyle and sleep is bad and your training is bad any sauna or whatever, cold plunge, whatever you want to do isn't really going to make much difference if your lifestyle and your training is the shit you begin with, so it starts, I think it starts from lifestyle number one, training number two, and then, everything after that.

[00:17:53] **Dr Mike T Nelson:** Have you seen the different people respond to different sort of recovery things? So, for example I've seen Some rather high level athletes who, when I first started working with some of them, I just thought, Oh my God, what am I going to do with these people? Like their nutrition is probably just amazing.

[00:18:09] I'm not going to really be helpful to them at all. And then you look at not all of them, but a high percentage of them. You're like, You're making 4, 000, 000 a year on fucking Skittles and God knows whatever else you're eating. And some people just, nutrition doesn't seem to affect them as much.

[00:18:31] And there seems to be different variables, but the one variable I've noticed that affects everyone is sleep. More sleep, it just seems if you're not getting enough sleep unless you're a duck to mutant Which there's only a few walking around that seemed to impact everyone at some point But I would see crazy stuff on nutrition as long as they got enough calories like they seem to be okay Acutely we could argue long term.

[00:18:52] They might do better Have you noticed that there's a variability even in recovery so that these general statements are true But if you drill down to an individual level that I think it's more variable than what people realize from the outside looking in You

[00:19:05] **Joel Jamieson:** Yeah, no, I agree 100%. I think the biggest thing, if you wanted to take away one single thing away from using higher variability, and you're looking at thousands of people, is that everybody is different, like you said, there's definitely some universal truth in that your good quality sleep is better, and that, Some foods are probably better than others in general, but

like you said, there's a lot of variability there and genetics make a huge difference.

[00:19:27] And that's something that you take away from this is I view you and me and people as this, we're this net product of our genetics. impacting our lifestyle or impacting our environment throughout our entire life. So if you're 45 years old, like I am, and you have certain genetics and you've been raised and you have certain, history of training and diet, like you're going to be very different than somebody who is at a different age with complete different genetics that grew up doing very different things because all those interactions have been vastly different.

[00:19:54] And they're going to end up being very different in terms of what they respond well to, what they respond poorly to, how they perform, all those variables. are very individual. And I would say it applies to recovery. It applies to training. It applies to diet. It applies to, how you deal with mental stress really applies to everything where we're very different.

[00:20:11] Even though we have the same underlying physiology, we're very different. We look at the big picture of how we interact with things around us, including training and nutrition and all that. And secondly, I would second that point of what you just may or just made, which is we have this idea in our heads that these elite level athletes are there because they like, Train like robots and they eat all these perfect foods and they focus on recovery and they do all these amazing things like bullshit like some of them.

[00:20:37] Yes. There's no doubt. There are some of them that fall in that category, but the vast majority of them. No, these people have just been better than everybody else since they were born because they were born with the right genetic lottery. And don't get me wrong. A lot of them have worked hard and most of them have worked hard and been consistent.

[00:20:52] And then you still have to train and do those things. But when you watch people win, like NFL, MVP, rushing, Titles on Doritos and Mountain Dew. And, like I said, Skittles probably for snacks and maybe not getting great sleep and having relationship problems in middle of season. It doesn't matter.

[00:21:08] They can just go out and run for touchdowns because that's just what their body is genetically predisposed to do. And they're just. built differently than everybody else and they can succeed despite their training or despite their lifestyle rather than because of it a lot of times. Now, I will say that one thing where I've seen that maybe play out is over the length of a career, so you see

that you see the athletes have really shitty lifestyles pay the price for it sooner or later, eventually down the road, they tend to have shorter careers.

[00:21:34] I think in the pros than the ones who were smarter and really do take care of themselves and train right. But I've seen, again, I've seen people win world championships and all kinds of titles and all these things with poor training and bad lifestyle, but you win the genetic lottery and you can get away with a lot.

[00:21:52] **Dr Mike T Nelson:** Yeah. To me that's what's crazy. And you see some of their HRV scores because you think, at least my thought going into it was, Oh, okay. They're just really good at compensating. Like they're paying an acute cost. Like they can just compensate for it. And then you see some of their HRV scores and you're like, Son of a bitch, that looks pretty damn good, like, how'd he Yeah.

[00:22:11] It's like, how do you do that? That's so crazy. Yeah. You just, like I said, until you start looking at the data and working with these athletes, you just can't get an idea of how many of these athletes are just God given gift, however you want to look at it. Like they're just built in a way that allows them to get away with a lot of stuff that the average person just couldn't, like they just couldn't.

[00:22:32] **Joel Jamieson:** It's just how we're built. Like I said, my, my grandma smoked cigarettes for 70 something years and then finally died of lung cancer, like 86. Oh wow. She got away with it for 70 years drinking and smoking. The average lifespan is like 78 for men and like an 81 for women. And she smoked for 70 years, drank for 60 plus years.

[00:22:50] Didn't work out a day in her life. Didn't eat well. Makes it to 86, other people can eat really well. They can have healthy lifestyles and they get cancer in the fifties, like It's just the way the nature card works.

[00:23:04] **Dr Mike T Nelson:** Yeah. I remember talking to Ben House about this too.

[00:23:06] And we're both remarking how the more people we've worked with, the more impressed about the variability from one person to the next. And when you're dealing with the elite of the elite they are with almost Out exception, the statistical outliers of everybody else, you start getting one, two standard deviations away from the norm and it's crazy different.

[00:23:32] Yeah,

[00:23:32] **Joel Jamieson:** exactly. I remember growing up, I was obsessed with bodybuilding, like probably a lot of kids are there, back in the day it was flex magazine, muscle fitness. You start lifting weights. And then you're like, I just don't look like these guys no, I don't have the symmetry. Like my calves are half their size.

[00:23:47] And you just get frustrated. Cause you read these magazine programs. You're like, Oh, here's my bicep program. Here's my ab program. And you do those and you're like, I still don't look like these damn guys. And then you see somebody like you come across like an actual high level bodybuilder.

[00:24:00] And you're like, Oh my God, this guy's training just must be so. Smart and so unique. And you watch them work out. You're like, what the fuck they're doing the same shit. They're not doing anything differently. And you realize like they can do the exact same workout or they can work out less and they're just going to boom, look like a pro bodybuilder and there's obviously drugs involved and all that.

[00:24:20] But even without those, like you will just never look like them because you just don't have the genetics that they have. And that was my first realization that I could train like anyone, I could follow a pro bodybuilder's workout and it would not make me a pro bodybuilder. And so, it's this realization that following somebody else's program because they can do something really successfully is probably not most often the best recipe for success because that person can do that because they're that person, not because that program is maybe some magic thing that, they have the secret answers to.

[00:24:50] **Dr Mike T Nelson:** Yeah, I remember seeing a picture of Lee Priest when he was like 18 or something and you're like, what the holy hell is that? And I think the rumor was he had started training when he was 13, but still you're just like that's insane That's with a couple years of training. I remember hearing guys used to lift with Paul Dillett And saying that you would do tricep press downs with 50 pounds, get a pump and then just walk out of the gym, she was like notorious for just ah, like kind of half assing, most of the training, no one ever really saw him train too terribly hard.

[00:25:26] And yeah, the guy was a freak,

[00:25:28] **Joel Jamieson:** Chris Cormier over the last train, trained at the gym. I was at for quite a while, same thing. Like I, you just watch him and you're like, why isn't he doing something different than I am? Cause. He looks way different and you just again, it was, I was like 18 and I think when I started watching him train, I'm like, I can do that same shit all day long.

[00:25:44] And I don't look anywhere close to that. And you just, again, you see the genetic influence, the genetic anomaly thing. Body bones, a good example of it. Cause it's so visually obvious that you're not like them. And unfortunately you don't see that on the like performance side. A lot of times athletes I don't know, a pro baseball player or.

[00:25:59] A pro a football player look different, but a lot of players, pro golfer, or these athletes that have remarkable skill levels and they have things that aren't as visually tangible because they don't look different than you and I, but they still have something way different than we don't because we're not them and we're not that level.

[00:26:14] And of course, training plays a role, but they just, they have something genetically different than everybody else. Otherwise you couldn't get to the, the elite of the elite in sports where there are hundreds of thousands or potentially millions of people doing it. And you're talking about the top 100.

[00:26:26] There's a reason they're in top 100 and genetics play a big role. Yeah, the two stories that makes me laugh is my buddy, Sean Mishka. He was training. I can't remember who the two players were, but NFL players, professionals, one guy on his right side, he was working with, and he was just training both of them.

[00:26:44] **Dr Mike T Nelson:** The guy on his left side had a left ankle injury or something like that. So they were walking them through training. So he's working with the outfit on the right and they were doing some box jumps, just, jump up to a box type thing. And he looks over and the guy on his left is standing on top of the box.

[00:26:57] He's What the hell are you doing? Like I told you, you're not supposed to, jump up. You don't want to injure your ankle or whatever. And he's Oh, it's okay, coach. I just jumped up on one foot. And he's Holy shit.

[00:27:09] **Joel Jamieson:** Yeah. Yep. They're just that's the game. Again, Kent Johnson, who was a strength coach for the Seahawks.

[00:27:13] And I was there, he was telling me cause he worked with Brett Favre and Reggie White, the Packers for a number of years. And I was like, Oh, do you have any good stories about any of those guys? He said that. The Reggie White

[00:27:22] **Dr Mike T Nelson:** story is the best.

[00:27:23] **Joel Jamieson:** Yeah, he said Reggie White had wanted to learn Olympic lifting because Kent had an Olympic lifting background and I think he basically said he was like, he'd never done any Olympic lifting.

[00:27:31] He lifted weights, he was strong, but he'd never done any Olympic lifts. And so he like shows him, I think with a bar, then he puts 125 or 135 on. He's showing him a hang clean and just trying to get some basic here's the mechanics, work on a little bit. And he like walked away.

[00:27:45] It was working with somebody else. He comes back and he's hankering four or five.

[00:27:51] Might not have been the best technique in the world, but he was just doing two or three reps, like four or five. Never did it before. Didn't matter. Like he was just machine.

[00:28:01] **Dr Mike T Nelson:** Yeah. It's like Andy Bolton. That's supposedly the first time he. Ever lifted, I think he squatted 500 and deadlifted like 600 or, or something like that.

[00:28:10] Granted, he went on to be the first guy to, pull over a thousand pounds, but still, it's just like bonkers.

[00:28:17] **Joel Jamieson:** Well, I had Bob Sapp come in the gym many years, 20 years ago. And Bob, I know Bob for a long time, Bob hadn't lifted weights in like a couple of years at the time. He had been just fighting.

[00:28:29] Low and actually a high level stuff at K1 and he just wasn't lifting. He was just because he's so damn big and he's just been doing trying to, learn the skill of fighting. So he really hadn't been lifting and he's I haven't bench pressed in three years or something. I'm like, well, take it easy, Bobby.

[00:28:41] He close grip incline 405 for a triple. Oh, Jesus. And he hadn't lifted in years, hadn't benched in years, but, and he's got massively long arms. He's 6'5 It's not like he was, he's

[00:28:52] **Dr Mike T Nelson:** a massive

[00:28:53] **Joel Jamieson:** human. Yeah. Bob's about as much of a genetic example as you can possibly get. It's just a monster.

[00:28:59] So

[00:28:59] **Dr Mike T Nelson:** yeah. Yeah, last NFL story is until you've interacted with these athletes in person to see like some of the linemen and see how Big they are and then to watch them move in person to me. That was just yeah That was mind blowing because you see him you're like, okay. I know this is a good athlete. I know they're And then to see them move that fast of a human that's that large, that to me was, that was, that just blew my mind entirely.

[00:29:28] **Joel Jamieson:** Oh, I think NFL linemen, and then I would say like some of the big NBA guys because the NBA guys, the NBA athletes, when you look at The totality, I still wouldn't say they're probably in my mind, the great, the greatest combination of athletic skills because they are fast as hell.

[00:29:42] They have great aerobic endurance cause they're running up and down the court all day. They're explosive. Obviously they can jump, insane amounts or insane heights. They're very coordinated to be able to dribble and shoot the way that they do. They have just this total set of skills and they're huge.

[00:29:57] They're monsters at the same time. So I think if you look at just physical and just all around performance characteristics, like they are to me the kind of the highest level, cause they've just got so many different skill sets and our physical sets, I should say. And there's just the monsters physically at the same time.

[00:30:14] **Dr Mike T Nelson:** Yeah. Ability for high level athletes to compensate is crazy. I was working on an NHL guy who was one of the top NHL guys for deflecting pucks midair into the net. And we were doing some visual stuff on him, just basically trying to find any errors in his visual movements. And so I was with this other guy who was working with him and we found one thing where he saw his eyes skip a little bit and then came back on target.

[00:30:40] And then I went back to repeat like the exact same movement again. And the athlete had already subconsciously fixed the eye movement. And I asked him, I'm like, and I talked to the coach behind me. I'm like, do you see

that? He's yeah. And I asked the athlete, I'm like, do you know what you just did?

[00:30:55] He's no. Subconsciously had already figured out the air and fix the air and had no idea that he had actually fixed it. And that was like the only air we could find in his system for five minutes of doing stuff. It's just, yeah, crazy to see.

[00:31:11] **Joel Jamieson:** It is, yeah. So, moral of the story is, unless you are these athletes, you don't need to try to copy what they do, or do their workouts, or their program.

[00:31:19] You need to figure out what works for you, because you are a very different person than they are. And, related to HRV for differences, do you still find that If HRV is showing that someone is more on the parasympathetic or sympathetic side, if they do want to do different training or recovery modalities, do you still have people do different things?

[00:31:40] **Dr Mike T Nelson:** The thought being there that you're trying to get them back to baseline faster, but if someone is, very much on the sympathetic stress side, you might do a different intervention than if someone's showing that they're really more on the parasympathetic side.

[00:31:54] **Joel Jamieson:** Yeah, to some extent, everything, I think you're, if someone's really shifted towards a sympathetic and they're just not coming down then I'm much more inclined to use relaxation type things, meditation, whatever it is, music, whatever it is, you can get them to just turn that sympathetic tone off.

[00:32:10] And I don't usually, for most people want to use like a, Sympathetic stimulus, unless I know I've used it before and then it worked for them. But most of the time, if someone just jammed that sympathetic system on, I want to try to do things to get them to just relax and activate that parasympathetic system.

[00:32:24] Sometimes if you see someone the opposite, like they're really parasympathetic, using a little bit of sympathetic stimulus to turn that sympathetic system on can help. Bring that back down and get them back to where they should be. But again, I would say the same thing applies here. It's a very individual thing.

[00:32:36] You have different strategies will work differently for different people, even sometimes different times that work differently. So I think that's just the one thing you can never really take for granted is like, there's no one formula or one protocol. You're like, Oh, in this situation, this always works.

[00:32:49] Like the body's just, it's too dynamic to be that predictable.

[00:32:54] **Dr Mike T Nelson:** Yeah. And you find that. What I found is that if people like doing a certain thing, it just generally seems to work better too. Yeah, absolutely. Yeah.

[00:33:03] **Joel Jamieson:** There's a study that Sapolsky, if listeners know, he has talked about where there was.

[00:33:07] There was this mouse study, if I remember right, where one mouse could run on a wheel voluntarily. And then the second mouse was forced to run on the wheel when the first mouse was running. And then they looked at the actual physical benefits, in terms of like health markers or whatever, and the mouse that was forced to run when the, Mouse was give the other one was given the option to like the forced mouse didn't have the same benefits.

[00:33:27] Like it was worse for them, even though they're doing the same physical activity, you would assume there'd be like the same physical outcomes in terms of changes and whatever they were measuring. But there weren't like that. It actually, their mental stress of always being like, shit, I don't want to run.

[00:33:40] When do I have to run? What's going on? This guy's just that mental, physical connection of stress. change the outcome of the workout. So it's, I think it's the exact same thing with physical recovery measures. If you hate doing something, then it's probably not recovery. If you really enjoy it, then it probably activates circuits in the brain that make it more beneficial to you.

[00:34:01] **Dr Mike T Nelson:** Yeah. And so then you went on initially to do, I know HRV with bio force, which we met up with Simon. And was the goal with that just to get an app based, a little bit more inexpensive system to more of the masses instead of the 30, 35, 000 Omega wave system?

[00:34:19] **Joel Jamieson:** Yeah, exactly. So I, I initially talked to Val and the Meg wave team about, I said, you guys need a mobile app.

[00:34:25] Like this is got to get out to more people. And at the time they were very focused on The sport market and the performance market, that's where

their company had been built from. So, I worked with them for about a year. I went down to their headquarters in Eugene and tried to work with them to build a mobile app.

[00:34:40] And it just became quickly, they just didn't have the bandwidth. They didn't have the development team and the funding that point in time to develop it. And so they were just not going to do it. I just recognized like, As much as they want to, they just don't have the team in place.

[00:34:53] It was a bunch of like hardcore Russian developers that were working for them. And, they just didn't have the capability of pivoting. So that's when I was like, I need this to be more accessible to the athletes that work with, because the biggest problem is I'd only be able to measure them when I could see them.

[00:35:07] Like they'd come in the gym periodically and train, but I had no idea what was happening other than that. And I had athletes I was working with in different parts of the world that were coming for a training camp, but I could see them and then they would go home and want me to give them a program. And I'm like, I don't know, because I don't know if your recovery is in your home.

[00:35:21] You get so used to that data and using it. So yeah, the bioforce was just my first. Attempt at making it accessible and affordable, and yet still try and make it as accurate as possible. And so I basically took, the athlete with Simon, and then I measured a bunch of data with the mega wave. And I tried to replicate the results I would have seen in a wave with what the.

[00:35:42] Data was showing in at that point by a force. And so I just took their algorithm, changed the testing protocol, changed the filtering, changed a bunch of the data and tried to make it as close to what I was seeing with the megaweb as possible because the megaweb was to their credit. Make wave gave you every measure of.

[00:35:58] At least every, all the main measures of HRV. It gave you a lot more data than most people are used to seeing, and it was accurate. And so I wanted to try to develop something that was as close as possible without being 30 grand in the process.

[00:36:12] **Dr Mike T Nelson:** Yeah. And that's where I was at the same time I met up with Simon too.

[00:36:14] And I was through my buddy, Dr. James Heathers, who said, Hey, this guy's got a map. And I think it might've been Carl Valley who introduced me originally that can do HRV. And I was like, What? What are you talking about? I had 20 grand of used equipment at the University of Minnesota to cobble together and frickin write MATLAB code to get it to spit out into kubios and all this monkey motion.

[00:36:35] And long story short, I was like, oh wow, this is crazy. And that's when I realized I could do more online training because now for inexpensive people could do it daily. They didn't have to come into the lab. They didn't have to go to a center. They didn't have to do all that stuff because as it's Once you get used to seeing that data with people is it's so useful and you can do quizzes You can do questionnaires and you can do other things, but I found especially in high level athletes They just tended to lie and other people were oblivious to what their stress levels were going on So it was nice to have an actual Physiologic marker to be like hey This is what your physiology is telling us.

[00:37:17] So now let's try to figure it out. Yeah, exactly.

[00:37:20] **Joel Jamieson:** Without it's, did I get told the analogy? If you get used to driving between point A and point B using GPS and there are different places you haven't been, and then you want to try to figure out how to get there without a map do you really want to go back to that?

[00:37:30] Yeah, I'm going to tell Google where I want to go. And it's going to tell me how I want to, how to get there. And it's feedback. It's turn left here, turn right there. And HIV is not quite that specific, but it's giving you a lot more data of which direction you're going. So you can make sure that you're headed the right way.

[00:37:46] And if you go back to train them without that, it's just so much guesswork. And, like you said, you can ask them, how'd you sleep or how you feel in, or how's your diet been? Like most people either don't know. Aren't going to answer accurately, they do know, it's just it's like pulling teeth.

[00:37:59] So it's, it just reduces the amount of guesswork tremendously. If you have objective markers that are valid and accurate to be able to use and make changes to programs and coach them with it, without it, like I said, don't get me wrong. You can still get good results and everything, but it's a whole lot harder.

[00:38:15] Cause you're just facing so much more unknown.

[00:38:18] **Dr Mike T Nelson:** Yeah. And like we talked about with the variability, like you don't know if that person's variability response to what you're doing. And again, there's general things and general trends that are beneficial. But what I found that's super useful is to figure out what's their number one rate limiter.

[00:38:35] Is it really nutrition? Is it sleep? Is it other things? And you can play with different things and see what their physiologic response is. Because most people only have so much bandwidth to do so much change at once. So that kind of allows me to figure out and pick my battles of, oh okay, if we do this change we're gonna, it looks like we're gonna get a little bit bigger response from it instead of trying to, fight some of those battles for a smaller response.

[00:39:01] **Joel Jamieson:** Yeah, exactly. You just, you're always trying to, I agree with the idea of you're trying to find the limiting factor that you can remove the easiest to have the biggest impact and the higher up you go of the athletic world, the trickier that becomes. But, if you don't have any objective data, again, you don't really know how much their sleep impacted them.

[00:39:18] If they aren't sleeping, if they are, you don't know how much their diet, like there's so many unknowns. And I'll say too I would never know like ADHD medication can have huge implications for that. If you don't know someone's taking it or you didn't see the data, you wouldn't know that.

[00:39:31] Recently I had to start going on shitty statin, which I don't particularly like cause I've got this terrible family history of heart disease and some. trying to prevent that as much as I can. And I've seen that actually impacting it's exacerbating the workouts stress level. And you see it in the higher levels of creating kinase in the studies.

[00:39:48] Now I'm actually seeing my HRV is much more variable when I use it or since I've been on it. So it's even still like that, you don't know that people are taking medications that might significantly alter their responses until you start looking at the response. You're like, Whoa, what's causing this?

[00:40:00] And they're like, Oh, by the way, I take this medication or whatever. And then you can, Oh, okay, this makes sense. But now I have to be aware of those sorts of things. So it just gives you so much more more information to make decisions from is what it comes down to.

[00:40:11] **Dr Mike T Nelson:** Yeah. I've seen that multiple times now.

[00:40:13] I remember the first time I saw it years ago one person, their HRV on I think score, I want to say dropped by, so we're like, 11 or 12 or 15 points or something overnight. And it just stayed there. And I asked him, I said what the hell happened here? And we went through every everything. And they're finally, they're like, Oh yeah, my, my doctor put me on ADHD meds.

[00:40:34] And I'm like, oh, it's empathic memetics. Like things that, stress your body out to get you to focus. Like it's rushes your HRV a lot of times.

[00:40:46] **Joel Jamieson:** Yeah. It was an interesting too. I was on Peter Tia's podcast a while back and he was asking me about. And if I'd seen anything, people on some Glutide or Zempic, cause that's such a big weight loss drug.

[00:40:55] Everyone's taking it and I don't really work that population much, honestly, but he is saying they'd seen a bunch of people's HRV decrease, fairly significantly when you're, on it. And, that makes sense, just intuitively thinking about it. If it's suppressing appetite to the extent that it is, there has to be some sort of, influence there on the sympathetic parasympathetic system in some capacity.

[00:41:16] So, anyway you just recognize like different medications can have pretty profound impacts on people that they might not be aware of. And they definitely aren't aware of how much it's impacting their, Ability to train or recovery or recover, see those sorts of things. So, again, that's where HRV is such a valuable tool for the individual and for the coach.

[00:41:34] **Dr Mike T Nelson:** What would you say to people who the criticism of HRV is? Well, I don't measure it on my athletes because what if it's like red or it's really bad before a big competition?

[00:41:46] **Joel Jamieson:** Yeah, I get this email all

[00:41:47] **Dr Mike T Nelson:** the time.

[00:41:48] **Joel Jamieson:** I get that one all the time too. It's If HRV could predict performance on that level, like I would have retired a long time ago because I could have been betting on people that we have data from.

[00:41:56] But, like physiology is, as is just not that Oh, HRV is 65, like you're going to score four goals a day, or, HRV is 62. You're going to go get injured today. Like number one, I just try to make them recognize like performance is

intersection of so many variables that a single physiological reading on a given day is not going to predict.

[00:42:17] Their performance. And then secondly it's normal for the body to have decreased HRV and anticipation of a high stress event. That's the body's ramping up its system to be able to, go out and perform and it needs that sympathetic system turned on so that there's nothing wrong or physiologically abnormal about having low HRV in a competition day or whatever.

[00:42:36] And then I would say third, if the athlete is so mentally worried about a single number on a screen, they're probably not. Dialed in the way they need to be mentally anyway. They're not focused on what really matters. So, I tell, look, if you really don't want to measure it, cause you're that worried about it's not going to make a difference either way, but I don't think there's any downside to doing it as long as the athlete understands that, it's not a predictor and there's no formula out there where I could say, oh, your score is this, so here's your ability to perform today.

[00:43:03] It's just a, it's just not a predictor. Real factor to consider. It's not going to ever predict your performance or your injury in a given day. And I think once they start to understand that they relax and understand that it's not such a big deal.

[00:43:15] **Dr Mike T Nelson:** Yeah. And I've even had them do simulation training.

[00:43:17] So for example, if it's a power lifter. That, if we've got 12 weeks before a meet, their HRV is red, their HRV average is good. I may even change their training and be like, Hey, yeah go, if you feel good, go for a double or a triple, see if you can get a PR. And most of the time they're like, Holy shit, I did.

[00:43:34] And you're like, cool. Right. Cause like you said, it's just showing that you are more on the sympathetic side. A lot of times in a pure output sport like powerlifting, which is easy to measure. It was not skill components and other things. A lot of times you do better, but again, we're not going to want to see your HRV read every single day, because that's telling us you're going to be impaired.

[00:43:54] You can't do the quality work and everything that you need to. And usually then, so you know, it's probably going to be read the day before a competition. You're just like, Hey, remember when we did this like 12 weeks

ago? Oh yeah, I did good. Cool. Like you're, you'll do fine. It's a single competition.

[00:44:09] Take a few extra days off. You have the luxury of taking time off in that circumstance. Not always the case, but. And then usually they're like, Oh, okay. They're fine.

[00:44:17] **Joel Jamieson:** Yeah. Really if I looked at someone's HRV trend over 30 days, I saw it really obviously spiraling then.

[00:44:22] Yeah. I might be a little concerned about their performance, but that's not from one day. That's from looking at the last 30 days. And the other thing is if someone's really had the wrong direction, you Not see that in their actual training performance. Like you wouldn't see the weights moving great if their HRV was tanking or their, you would see actual physical output measures change.

[00:44:42] If there was real fatigue or real things in there that were going to have a big impact on performance. So, yeah, I definitely have the conversation quite a bit. And once you explain it, then people usually a lot more relaxed about it.

[00:44:54] **Dr Mike T Nelson:** HRV as it's the cost of everything you're doing. But I think sometimes people get caught up in measuring, all these things on Aura and HRV and all this stuff and I'll email them back and I'm what was your output?

[00:45:05] If you did a max 2k on the rover or you did a whatever testing you're doing, what did you actually do? And unfortunately, sometimes they're like, Oh, I don't know. It's well, you better be measuring the output because that's what matters. So don't forget to do that. Yeah,

[00:45:23] **Joel Jamieson:** no, exactly. It's people get really caught up.

[00:45:25] And again, HRV is hugely valuable, but it is just one internal physiological metric we're looking at. It has to be in context of what you're doing in the outside world. People will be like, Oh, my HRV was really high. Is that mean I'm parasympathetically over trained? I'm like, What'd how's your performance?

[00:45:40] Oh, it was great. Well then no, you're not over trained. If you're really over trained, you will know it because your performance will reflect that.

You can't just be like, oh, I'm over trained because my HRV was too high. Well, no. What did you, what is your actual real performance look like? So it's all about context.

[00:45:58] HRV is like anything else. It's about what it's reflecting in that, it's more than just. One number it's the rest of the things that are part of that too, and that's the output like you said

[00:46:09] **Dr Mike T Nelson:** Yeah And if you have really frank overturning syndrome not just overreached like you're probably lying on your couch like drooling on yourself Like you're not doing shit for quite some time.

[00:46:19] Unfortunately.

[00:46:20] **Joel Jamieson:** Yeah, I got one email not too long ago. Oh My heart rates at the same speeds were lower and my HRV is higher. Does that mean I'm over trained? No, that means you made progress.

[00:46:30] **Dr Mike T Nelson:** Yeah, that's efficiency. That's a good thing.

[00:46:31] **Joel Jamieson:** You're going the right direction. But they read somewhere that if you're parasympathetically over trained, that your HRV will be high and your heart rates will be low.

[00:46:39] And I'm like, yeah, but that means you aren't putting out the same power output. And you tell me you're going the same speed at lower heart rates. That's me. Build aerobic fitness. So keep doing that.

[00:46:49] **Dr Mike T Nelson:** Yeah. And speaking of aerobic fitness, tell us a little bit more about Morpheus and why you came up with it.

[00:46:56] **Joel Jamieson:** Yeah. So Morpheus is really just the evolution of BioForce. And there was two things I wanted to do there. The first is, BioForce, just judge your HRV. And that was really But as we've talked about, there's a lot of lifestyle and things out to the gym that influenced that. And so I wanted to use Morpheus to basically show that their data whether it was measured with Morpheus or not, I wanted to have something that you could pull in data from, Fitbits and Apple watches and whatever other devices people had to see how activities and sleep were connected to their HRV so they could help connect those dots.

[00:47:26] This is before a lot of those devices were measuring HRV, now a lot of them are, so it's not as unique to put those things together. Secondly, most importantly is I wanted to connect that data to people's actual workouts. And so what Morpheus does now is it takes their HRV, it takes their different lifestyle variables, and it does two things.

[00:47:42] One, it gives them heart rate zones that apply to them on that given day, because I think we had this idea that, our heart rate zones are just based on percentage of max and they never, shift, but heart rate zones represent intensity and intensity is, shifts relative to your workout status and your recovery and everything else.

[00:47:57] So just I don't know if you're powerlifter and one day, 400 pounds in the bar and the squat feels light. Next day it feels heavy. That's the same weight, but it's a different intensity to you because your recovery is different. And so it's the same rules of heart rate zones. So what we do is we just.

[00:48:11] Adjust people's heart rate zones based on their recovery and their fitness levels and try to give them a much more Accurate gauge of what their intensity is on a given day And then we also now are able to look at their levels and give them a weekly target for how much Time they should spend in each level of intensity We have three low moderate and high intensity and we say basically hey other people that had similar parameters to you That we saw improvements in trained, 200 minutes a week and they're low intensity zone and 25 minutes a week and they're moderate and 10 minutes in their high intensity zone or somewhere about that.

[00:48:41] So we give people these moving targets to try and improve their aerobic fitness. And then we adjust those over time. So my whole idea was, let's not just say, here's a bunch of data, figure out what it means. Let's take that data, give them heart rate zones that are accurate to them on a given day.

[00:48:56] And then help them make the decisions about how much volume intensity I didn't do. I need in a week if I want to improve my HRV and improve my aerobic system. Now we can give them some targets that were built around real data rather than just, whatever they made up.

[00:49:07] **Dr Mike T Nelson:** No, that's super cool because you've probably seen this.

[00:49:11] Although I think the trend is getting a little bit better. I either see From just general meatheads of all forms, no cardio, because I just lift weights and I'm going to be fine. And I did a couple of med cons to,

[00:49:24] **Joel Jamieson:** I'm going to think that in that case, lifting weights somehow makes me more, more aerobically fit because my heart rates up.

[00:49:29] **Dr Mike T Nelson:** Right. Yeah. Well, Well, bro, I was squatting and my heart rate went up. Right. So that's a row. I was in my zone too. Yeah. Or the, Ooh, I'm going to do HIT. But if I really look at their output 30, let's say 30 on 30 off, right, just to pick something arbitrarily round one's pretty good. Round two is okay.

[00:49:49] Round three is like 20 percent off. By the time you get to round six, you're like. 50 percent off your output. And I think people, there's one thing that I've changed in my program in the last several years is I program a lot more, I'd say low to moderate, longer duration, just pure old school aerobic stuff.

[00:50:07] And that really seems to work. And I think from talking to you and some of the stuff you put out, what do you found because you're actually measuring outputs and measuring HRV and measuring everything through Morpheus, have you found that. Most people in general would do better on the aerobic side with the kind of low to moderate intensity and not nearly as much high intensity work.

[00:50:30] **Joel Jamieson:** Yeah, we'd so like when we're building the algorithm, I just want to answer one question, right? It's. If we look at people over periods of time, and we chose 12 weeks, I think that's long enough to be significant. If we look at people in Morpheus that had trained for 12 week intervals, we looked at, can we figure out differences in volumes and intensities and the people who saw improvements in the aerobic fitness?

[00:50:50] And we define that in two ways. One was improvement in their average HRV and two is a decrease in their resting heart rate, which would be, correlative, then causative at the same extent. So we said, can we see different patterns in people who saw improvements? Versus people who saw either no change or even potentially went the wrong direction.

[00:51:08] And then we also broke that down into, are there differences in people who are at the low, moderate, and high levels of fitness to begin with? Are there huge differences there? And the moral of the story was that the people

who saw improvements more than overwhelmingly across all three groups were the ones who spent the most times at the lower intensities.

[00:51:26] And less time at the higher intensities. And in some cases, just less time, the thing that we saw in the lower level of fitness, It was sometimes people who spent less overall time that saw better improvements because I think their recovery just couldn't take the higher volumes because we would see people who would do crazy volumes of low intensity, but their fitness level was low.

[00:51:45] So you just, they couldn't recover from that much work. And then we saw the highest levels. It really took a high, like the people who had very high HRVs, lower than how it started with like HRVs and Morpheus, at least in the nineties and resting heart rate in the forties. Like they need a lot of volume, just a lot of volume and very little.

[00:52:00] Cool. Intensity percentage wise, the grand scheme of things, but maybe not surprisingly, it shook out around like that number you hear of the 80, 20 rule, like it was pretty close to that actually, like most people that saw improvements somewhere on 80 percent of their total time was spent at the lower intensities and around.

[00:52:17] 1520 ish was at the higher intensities. And we saw people that spent, 25, 30 percent at the high intensities almost always went the wrong direction or at best case, they just plateaued and didn't really improve. And so it just proved, it showed us that the idea of, Hey, like you really do need a lot of lower intensity work relative to high intensity work, because most people just can't recover from that amount of height, real high intensity work.

[00:52:38] It just validated that. And that's where the recommendations now come from in Morpheus.

[00:52:44] **Dr Mike T Nelson:** And do you have a rough, if you go in hours per week, like how much that kind of low to moderate aerobic stuff is, and I know it's going to vary depending upon if you're, but someone who's like in an intermediate to higher kind of fitness level, because I think hearing it in time is probably more than what people intuitively are going to think.

[00:53:02] **Joel Jamieson:** Yeah, I would say it's two to four hours. Yeah, depending on, the fitness level, everything else of that sort of steady state work. Now, I think it's more because we couldn't measure exactly what they were doing. So we have to infer that to some extent, but I think it's a pretty safe bet to

say that somewhere between two and four hours is where the vast majority of people are going to sit, see benefits.

[00:53:20] Now, if you want to get to the really high levels, you're going to have to go. Five, eight, if you're an endurance athlete trying to push limits, but your average person who needs to improve aerobic fitness for longevity person longevity purposes, I would say two to four hours is the kind of sweet spot to be in the low end and four being the top part where if you want to do five, six, seven hours, you better have decent recovery and, lifting weights on top of that is another stress.

[00:53:43] So you got to. Just put that all together. Awesome.

[00:53:47] **Dr Mike T Nelson:** Well, thank you so much. I really appreciate it. And how can people find out more about you and Morpheus and everything else you got going on?

[00:53:53] **Joel Jamieson:** Sure. Just eightweeksout.com is a website with articles and videos and courses, all that sort of stuff.

[00:53:58] Certification for coaches and then trainwithmorpheus.com is where they can find everything at Morpheus. So I'm excited. We just have started actually redesigning Morpheus from the ground up, just Taking what we've learned over the years and what we really wanna improve and, rebuilding it from scratch.

[00:54:13] So I think by the end of quarter, one of next year in 2025, maybe before that, we'll have a re really big redesign with a whole bunch of new cool stuff and apple Watch app and all kinds of fascinating stuff that we're working on. So, I'm excited to get that out there. I think people are gonna love it.

[00:54:28] **Dr Mike T Nelson:** Cool. Can you give us a little hint on anything that they might see in the new version, or is it still top secret?

[00:54:33] **Joel Jamieson:** Still top secret, but the biggest thing we've been getting asked for a long time has been the Apple watch app. So we will have an Apple watch app. We're going to have a web dashboard for the people really want to dig deeper into their analytics.

[00:54:45] And eventually we'll be able to deliver workouts through Morpheus and coaches can deliver workouts. So all 12 different train methods that I've built over the years to do different types of cardiovascular training. And the next

step will be putting those into actual workouts that you can do yourself and share with different people.

[00:55:05] And the cool thing about Morpheus is again, because, like I said, everyone's individual, but we can now give you a prescriptive. Guideline of, Hey, spend roughly this many minutes, each of your heart rate zones, as long as you're doing, that many minutes per week, how exactly you do them is a bit less important.

[00:55:20] I'm not saying lift weights for cardio, but if I'm doing a workout where I spend 20 minutes my blue zone in 10 minutes to my red zone or whatever the case may be, I can then share that with other people that want to do the same workout and get the same number minutes in, but those zones are then unique to that individual.

[00:55:34] So what I'm basically trying to say is we can make working out. A little bit more shareable and still be very individualized. The same thing, which is the hard part.

[00:55:43] **Dr Mike T Nelson:** Yeah. Which I think is super cool because that makes it more. And for people doing coaching, like one of the hardest things I think to teach people is how do you actually set up their aerobic training if they're not really necessarily an aerobic athlete.

[00:55:58] Because like you said, there's a sweet spot where you still want to see positive adaptations, but we don't want to burn them out doing this because that's, they're not endurance athlete, that's not the main thing they're doing. So to have people find out what that sweet spot is. So they're seeing those positive adaptations.

[00:56:13] That's super cool. Yeah. And that's one of the does not seek or anything, but one of the main biggest things we do want to do in the rebuild here is give people a lot more insight into the, where they're heading, because there's just a lot of data. If you're talking about looking at heart rates for each workout in their sleep or objective markers, all these other things, there's a lot of information coming in.

[00:56:31] **Joel Jamieson:** And so what we really want to be able to do now is say, Hey, you're going this direction and here's the things we think you need to either adjust if you want to improve or the things you need to keep doing, if you want to keep improving or whatever. So we're really trying to. Dig deeper into the analysis and give people a very clear roadmap of where they're headed.

[00:56:49] And that's the hard part of data is making it really usable and easy to use. And so that's what we're working on.

[00:56:55] **Dr Mike T Nelson:** Last quick question on Morpheus. Is it just off a Bluetooth heart rate strap? Do they need any other extra equipment now?

[00:57:02] **Joel Jamieson:** Yeah So for people that want to just use Morpheus to work out and record their workouts and look at different heart rate zones They can do that with any Bluetooth chest strap For them to get the actual HRV and the recovery side the weekly recommendations they need our chest strap our Morpheus chest strap simply because There's such a wide range of Bluetooth devices out there and the quality of the signal and getting the R intervals is such a hit or miss thing that we wanted to really standardize the HRV piece because that's what we're using to do all the research.

[00:57:31] And so for measuring HRV, you need our Morpheus chest strap, but for working out, you can use really any Bluetooth device you want.

[00:57:40] **Dr Mike T Nelson:** Cool. And that's just that eight weeks out is your site and then train with Morpheus dot com. Correct. Yep. Yep, exactly. Cool. Awesome. Well, thank you so much for all your time and really appreciate it.

[00:57:50] Yeah, no problem. Great talking to you, and I'm sure you'll see you around again one of these days. Yeah, sounds good. Thank you.

[00:57:55]

[00:57:56] Thank you so much for listening to the podcast. Really appreciate it. A huge thanks to Joel for coming on the podcast. Make sure to check out all of his great stuff. He's got there at his website. He's got some great certifications. Check out Morpheus, which is awesome. Especially if you're not working directly with a trainer, you don't have Kind of oversight to watch your training intensity.

[00:58:20] Or you're just trying to learn the ropes even of HRV and how it affects it. Morpheus is a great system to check out. And what I thought was super interesting, like we talked about on the podcast, on some of the data he has from that for people who are lifting and doing cardio, Doing more lower to moderate intensity cardio is something I think most people miss out on.

[00:58:44] Yeah, there's time and place to still do high intensity, but if you're using a system like Morpheus or even HRV you'll be able to figure some of

these things out for yourself and for your clients, which is great. If you want HRV, go to mikejennelson.com forward slash flex for FLEX number four.

[00:59:02] and you will get those directly. Also puts you on the insider newsletter list. We've got the PhysFlex certification coming out very soon, October 14th on Monday. It'll open for exactly one week till October 21st, 2024 at physiologicflexibility.com. If you're already on the newsletter list, you will get all of that information automatically too.

[00:59:27] So thank you so much for listening. Really appreciate it. A huge thanks to Joel once again, make sure to check out all of his stuff. If you have time, please forward this podcast to someone who you think would enjoy it give us the old download and subscribe and all the other cool whiz bang things that help us with the old algorithm there to get this into more people's ear holes.

[00:59:49] So thank you so much. Really appreciate it. Talk to all of you next week.

[00:59:54] What do you suppose they call that? A novelty act? I don't know, but it wasn't too bad. Well, that's a novelty.

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