[00:00:00] **Dr Mike T Nelson:** Welcome back to the Flex Diet Podcast. I'm your host, Dr. Mike T. Nelson. On this podcast, we talk about all things to improve body composition without destroying your health in a flexible framework. This may include adding more muscle, losing fat, all those wonderful things. And on the program today, we have my good friend, Christa Reimel, and we're talking all about GLP 1 agonists.

This is the fancy term for the new white loss drugs, such as Wegovy and all the others that come with it. And we're talking about what are some of the pros of them? What are some of the cons? What should people who are using these via prescription through their physician watch out for? What is the role of the fitness professionals in this area?

We even talk about some new Models going forth into the future and this is one of the areas that I think we're going to get a lot of questions on I get a fair amount of questions on this right now, but I think it's only going to continue again, we didn't do a super huge deep dive into all The weedy areas, but we did get down into what are these drugs kind of some of the basic mechanisms.

How do they work? What are the differences in some of the brands, mechanisms, et cetera. And Christa, we met her through the Points Retreats. I've been fortunate enough to do some presentations up there. We'll put a link down below if you are in the Minnesota area or looking to book a trip would highly recommend it.

She does a lot of education for health professionals. She worked as an RN for many years in the area of Diabetes education. So she was actually working with these drugs, which were initially for diabetics. Some of them do now have an okay or basically a clearance from the FDA to promote directly as weight loss.

Some of the other ones are what they call off label use, meaning that the drug can be used for other things under the recommendation of a physician. So she has a lot of experience working with these drugs also. So I really enjoyed this chat with her. Also brought to you by Tecton. Go to the link below, which is tectonlife. com. Use the code Dr. Mike, D R M I K E at checkout.

You will save 20%. This is my favorite ketone beverage. So we'll put you into a state of ketosis just by consuming the beverage. And I've been using it down here in South Padre, Texas, primarily for in between kiteboarding sessions. And So I'm trying to learn some new skills or just been out doing a lot of reps and my brain just feels Fatigued but it might be in the evening and I don't really want to have any more caffeine or anything else I'll have a bunch of electrolytes

and then I'll have some tecton and My brain seems to work much better again And there's also some other literature showing that it may be protective for concussion and TBI again, that's not a medical claim, but there is some research that has been published looking at ketogenic diets and the use for traumatic brain injury and concussion.

I did a whole educational program for that for the Carrick Institute if people are interested. But either way, if you're looking for a ketone beverage, check out tectonlife. com. Use the code Dr. Mike. Last but not least, we have the Flex Diet cert, which is opening again. It'll be the last time it'll be open this year.

Most likely the following one will be January of next year. It's crazy how fast time is going. It'll be open for one week, June 17th through the 24th, 2024. If you'll want to learn all about nutrition and recovery for better body composition and performance in a complete system and cover everything from carbohydrates, fats protein.

And even talk about NEAT, so non exercise activity, thermogenesis, walking, movement, sleep, micronutrition. There's eight different pillars. It's over about 30 hours right now. We've got expert interviews from everyone from Dr. Stu Phillips, Dr. Jose Antonio, Eric Helms, Dr. Hunter Waldman, Dr. Stephen Guillén, Dr.

Dan Pardee many others. So if you want to check that out, go to flex diet. com. You'll be able to get on the wait list. You'll have some cool bonus items that will roll out to that. It does open this June 17th and be open for one week through the 24th, 2024. That link will be in the newsletter here.

So thank you so much and enjoy this conversation with Christa all about GLP 1 agonists.

[00:05:09] **Dr Mike T Nelson:** Welcome back to the podcast. Thank you so much for being here, Christa. I really appreciate it.

[00:05:14] **Christa Rymal:** Thank you for having me on your podcast, Mike.

[00:05:17] **Dr Mike T Nelson:** Yeah, nice to chat with you. We've been at your events in the past, so if people are interested in kind of what do you do, give us the short kind of couple sentences of what you're involved with now and we're going to dive into all the, new weight loss drugs and the pros and cons of them.

[00:05:35] **Christa Rymal:** Yeah, absolutely. So currently I am the owner and operator of The Point Retreats, which has been up and running for, gosh, we're going into our seventh year now. Oh, wow. I know, time flies, right? Yeah. You were an OG, you were at one of our first retreats. Yes,

[00:05:53] **Dr Mike T Nelson:** and it was amazing. I highly recommend people check it out.

It's phenomenal.

[00:05:57] **Christa Rymal:** Thank you. Thank you. It's yeah, they've been a lot of fun. Everyone has some kind of personality topic focus. We historically, we offer continuing medical education credits at our retreat. So we tend to attract a lot of healthcare professionals or, and, or just, high level professionals in general which goes to my background, which is why I'm here today.

I am a registered nurse. I have my, Masters in healthcare leadership. And with that, I went into the diabetes and endocrinology world and was the director of that department in four hospitals and 28 clinics for a handful of years, which was a really interesting time. And I actually love this topic because it was during my time as the director when GLP ones came on the market.

We're treating people with diabetes. So it's fascinating like you, like the rest of the world, watching where these drugs have started to now to where they are now. And yeah it's. I would not have predicted what's happening today back in, 2009 when we were first using them on patients or with patients, I should say.

Yeah, interesting times for certain.

[00:07:08] **Dr Mike T Nelson:** Yeah, and like we were saying before the show too I feel like I've been out of the loop because I've heard about him for a while, and I pessimistically thought, because you hear anecdotal reports of people losing weight loss, obviously there's a diabetic population, and I'm like, ah, okay, it's just a few people, eh, because, pharmaceutical companies have spent how many bazillions of dollars looking at weight loss drugs for general population, and historically all of them have struck out, whether they have, big side effects, they don't make it through clinical trials, etc.

And then it's just seemed like to me, maybe because I was so pessimistic, I just stopped looking at any of the things. And then all of a sudden you're like, Oh, we have weight loss drugs that appear by both research and anecdotal to be

highly effective. We've swung from one direction almost to the other end of the spectrum, like right away.

[00:07:57] **Christa Rymal:** No, absolutely. It happened really fast. The drugs have been around since 2009. That's when the first GLP 1 drug came on the market to treat individuals with type 2 diabetes. And that was Exenatide, which is otherwise known as BiAIDA. And I remember when we first got that in our hands and our team of endocrinologists, primary care docs, registered dieticians, nurses, diabetes educators, we had about four 40, 000 patients that we were responsible for the bulk of those being with type two.

And, with any new drug you're a little cautious, you're a little reserved, you use it slowly. At that time, we were not sure how clinically relevant it would be in terms of, the thyroid cancer that had been found in lab rats, if that would cross apply to the human population.

And anybody with thyroid disease or thyroid cancer history, we were really cautious. About prescribing the GLP1s too, but that subsequently has played out over the last 15 years as showing it was just relevant in animal studies thus far. But we were really excited about this new drug because it has a lower incidence of causing hypoglycemia or low blood sugars.

And it also has the benefit of white loss. So we discovered as we started using it and in all honesty, a lot of medications. Classes of medications that we use to, to manage blood sugars in people with type two diabetes have the side effect of being weight neutral at best. And a lot of them actually have a side effect of weight gain.

Primarily insulin has a high propensity to cause weight gain. So it's really counterintuitive because you're telling people in one side of your mouth, like for most people. Lose weight and the drug that's going to make you gain weight. So that never felt that I was felt like a conflict of interest.

But of course, if you need insulin. It's a lifesaving medication. But we were really excited to have this new drug on the market that had a lower risk of low blood sugars and a higher propensity for weight loss. And we did in fact, see that play out. Now, interestingly, for people, what we found out after using these drugs now for 15 years is that people with type 2 diabetes tend to have a lesser degree of weight loss relative to people who are using these drugs without diabetes.

So the statistics I read most recently is those with type 2 diabetes tend to have, like, a four to 6 percent weight loss reduction. Those without diabetes who are using GLP one medications tend to have some anywhere between six and 17% reduction in weight loss, depending of course, on which GLP one medication you're using and a whole host of other factors to, if you're incorporating lifestyle changes in the middle of that or not.

The medications, and really, my, it was just, January of 2023 when semaglutide, the only approved GLP 1 for weight loss, came on the market for weight loss only. So it's pretty new. There's, that's a little over a year and as from being in research, most of your career.

It takes a long time to let that play out. And a lot of things that we'll talk about today, it's somewhat hypothetical. We have the longer standing history of how it's worked in treating and managing, glucose metabolism and people with diabetes, but we have a longer runway yet to learn exactly all of its implications for weight loss only.

So it's an interesting time.

[00:11:17] **Dr Mike T Nelson:** Yeah, and how would you describe what glp ones do at just a relative high level? So some people may be listening to this and they're like, ah, i've heard about this class of drugs, but I just I don't understand much beyond that. Like, how would you describe what is, at least there'll be no one research as one of the main mechanisms of how they work.

[00:11:37] **Christa Rymal:** Yep. Yep. Good question. So GLP ones are otherwise known as glucagon like peptides, right? So they're a group of peptides that are primarily made out of amino acids. And so the drug is making a synthetic. of that because our bodies naturally have these hormones in our gut. They're known as Incretin hormones, which is an endocrine hormone.

Part of that metabolic management hormone profile and people who have diabetes and obesity tend to have lesser, a lesser degree of Incretin hormones in their gut. And then of course, like everything else as you age, that particular hormone tends to decrease naturally also.

So they developed a synthetic version of this incretin hormone to mimic what it would naturally do in your gut. So you don't tend to have a lot of this GLP 1 incretin hormone in your gut when you're fasting, but it starts to rev up as soon as you start to eat. So It has its greatest impact on your post prandial blood glucose, meaning your post meal glucose.

It tends to stay in your system for about 15, or kicks in at its peak about 15 30 minutes after you eat. But Not only does it decrease with age and certain comorbidities, but then you also have this enzyme in your gut called DPP for enzyme, which it's job. I always think of just like Pac Man.

It comes in and eats all the GLP one up, right? So there's another set of drugs that can be used to inhibit that from happening. But in essence, the GLP one medications are to rev up and amp up and multiply that incretin hormone in your gut. To help mitigate those post prandial blood glucose spikes that can happen.

It is that glucose regulator I guess for lack of better words, but really meant to target that post meal blood glucose spike that we often see for people.

[00:13:38] **Dr Mike T Nelson:** I would just say a, maybe a main effect, depending upon the classification or a side effect, is that Your hunger just drastically goes down because of all of that.

[00:13:49] **Christa Rymal:** Yeah. Yeah. It's interesting, and GLP ones and ghrelin and leptin kind of play in there with each other too. So that's another interesting little endocrine hormone loop, but it does, it reduces your appetite, it increases satiety, it decreases gastric motility. So you tend to have this delayed gastric emptying, meaning that your.

Food is moving through your stomach and gastrointestinal tract at a much slower pace than normal, leading to free, leading most people to feel, less hungry over time. They have a more, satisfied feeling that hunger drive is regulated. That feedback loop is quieted down.

So that's the positive results of the GLP 1s. And then the newest drug on the market that actually is not approved yet for weight loss only, but it is being used to treat type two diabetes is trizepatide. And that medication also includes, it's called the twincretin. So it actually has Two mechanisms of action in the incretin hormone world.

And that has G I P one, which is gastric inhibitory polypeptide. And that along with GLP one, those two incretin hormones are responsible for about 60 percent of your insulin release from your pancreas post meal. So not only, so some megalotide just has the GLP one and now they're. Creating, newer medications in the GLP world that now have dual action creating an even bigger impact in terms of all those things we just mentioned with, delayed gastric emptying

increased satiety and again, so far, triseptide is having the best outcomes around A1C reduction.

and weight loss. It's currently only FDA approved to use for people with type two diabetes. However, as people and physicians and clinicians go off label all the time when it's appropriate. And they're thus far, trizepatides results are pretty impressive. I would say in terms of kind of that, the world of the GLP one medication.

[00:15:55] **Dr Mike T Nelson:** Do you I have this little pet theory that it's I'm sure I stole this from someone, I just don't remember who, that There's also, I think, some type of central effect, like possibly on, my guess is endocannabinoid system. Like the, there's been targets towards that system in the past. I think Rymel Bant was one of the French pharmaceutical, I think that, because if people know that if you target say certain cannabinoid receptors you get the munchies and you feel like your appetite is higher.

So drug companies have tried to do the opposite of that. Ooh, can we block these receptors and have this sort of appetite suppressant effect? So far the drugs they've tried have had, side effects and haven't been improved, but my guess is because Hepatite regulation is so multifactorial and it's so Survival based that my guess this is purely my guess.

I don't have any data. Maybe you do that we'll find some of these drugs are having central effects too in the brain or maybe on the endocannabinoid system. It just seems hard for me to believe that just targeting one or two peptides only has that dramatic of an effect, but it definitely seems to have a big effect.

[00:17:07] **Christa Rymal:** I second what you just said, Mike, it's so intriguing. And generally speaking, I would say anything that sounds too good to be true is

[00:17:13] **Dr Mike T Nelson:** physiology is not that simple. It's

[00:17:17] **Christa Rymal:** not. And I have to say, if this was a new drug that just came on the market today and we were saying all the things we're saying, I would be rolling my eyes, five years, we're going to have enough, like.

cardiovascular events and we're going to pull it off the market and be like, that was a big mistake, a big mess, which we've seen with other drugs. This has been around for 15 plus years now that the class of medication and generally speaking, the, big side effects that you would want to avoid are not happening.

I can't say there's, of course there are some side effects, but the most common ones being nausea, diarrhea some vomiting. Most of those can be mitigated with increasing doses slowly and appropriately for each individual. They can also prescribe other medications to mitigate some of those problems like Zofran and Pepto whatnot.

The bigger things you worry about a little bit are, the increased risk of pancreatitis and then, the gastroparesis or kind of that small bowel obstruction risk which again, everyone can, everyone argues this a little bit differently. So I'll just tell you my take on it.

What you said early, just a minute ago, Mike, as food and eating and consumption and our dietary habits are. Really complex. There's psychosocial impact. There's socioeconomic impact. There's a familial impact. There's stress, there's hormones we eat for so many different reasons.

And clearly, our obesity rates are doing nothing but multiplying. We're approaching, being half of our US adult population being obese. And this is amidst having more gyms, more knowledge, more resources, more access to information. So our problem isn't really, it's multifactorial.

It's not any one thing, right? Like you said, it seems a little bit impossible that these incretin hormones can have that big of an but they do seem to have the central nervous system kind of ripple effect, right? That, and that's what I'm actually really intrigued by at the moment is it's cardiovascular protective mechanisms.

And even the, the brain and the central nervous system health benefits that they're finding from the drugs are intriguing. As my mom passed away from Alzheimer's just a couple of years ago, and I happened to Carry the same APOE 404 genotype as she does, so I'm always intrigued at what they're finding to prevent Alzheimer's and they're finding this that the GLP 1s kind of have this general anti inflammatory effect systemically.

They have this antioxidant effect, which benefits the brain, right? And my heart. So it reduces your oxidative stress, meaning You might have a better way to explain this, in the metabolic process you release these free radicals, which I always say are a little bit like rust in your body floating around, and then the antioxidants need to come and eat that up and get rid of it in your body.

But like GLP 1s, our antioxidants also tend to decrease with age. and comprehensive health. And it's really interesting that GLP 1s are showing that

antioxidant benefit, which benefits the brain and the heart. It's showing that it can prompt and stimulate your endothelial cardiacs, endothelial cells and lining in your heart to produce more nitric oxide, which kind of vasodilates your blood vessels, lets them relax a little bit so your blood can flow better.

It's decreasing lipids. It's decreasing blood pressure. All of these ripple beneficial side effects are really intriguing. So I'm excited to see where those continue to go equally as much as I am to see how it can impact, our obesity epidemic, which You know, I'm a little cautious to say, like, this is all definitive because I still think, like, something could come out from left field and throw us all for a loop.

But generally speaking, the risks of the GI side effects. are far lower to me than the risks of continuing to be with a BMI above 30. That's my two cents, I'm sure other people feel differently, but I think obesity and all of its complications. The list of obesity complications are You know, very long.

And everything from cancer to, cardiovascular to stroke, to dementia, to kidney gallbladder disease, it's multi-system. Comp compromised. When you have, A BMI above 30 there are not no risks associated with the GLP one medication, but I think they're pretty manageable relative to the risks of being obese.

[00:21:51] **Dr Mike T Nelson:** And how do we, what are your thoughts about disentangling the effects of weight loss versus some of the benefits you just said about just the GLP 1s themselves? Because their main mechanism is also related to Weight loss. And maybe there's a trial that's been done where they showed benefits and there wasn't really any weight loss.

Cause we know that weight loss in general is associated with almost all of those effects too. So do we know like, how much of that is because they are losing weight or how much of it is because of the hormone or what kind of, it's probably a mix somewhere in between I would imagine.

[00:22:29] **Christa Rymal:** Yeah. And that's such a great point to make, right?

Cause you reduce your fat on your body and potentially increase your lean muscle mass. And you're going to have a reduction in complications overall. And so how much of the benefit is that versus the direct mechanism of the medication. I, they're still playing that out. The studies, if someone is a researcher, the three studies are the the scale and surpass.

So those are the three S studies. They're The

[00:22:57] **Dr Mike T Nelson:** three S studies. We'll put that in the notes. Yeah, they're kind

[00:22:59] **Christa Rymal:** of still being teased out. They're still in, some of their clinical trials and clinical phases, but they're really trying to, differentiate, like, what is the difference in the mechanism of action for people with type 2 versus people who are just looking for weight loss.

Trying to tease out that, like, is it the weight loss or is it the medication offering those systemic protective mechanisms? And to be honest, considering, we've been using these drugs for weight loss for specifically for really just a year or two. I just, I don't think they know yet.

So I think still to be determined, but. I think you and I both are keenly aware of the fact that, we know obesity and morbid obesity is going to create a lot of complications. And then, even things like mobility and all the complications and that go along with reduced mobility it's pretty significant.

And, for people, I always think of this too, like for people going under general anesthesia for any surgery they might need, if they are obese or morbidly obese, the risk of those surgeries is really high. And that can be anything, from getting your gallbladder out to really like getting your knee replaced.

When you're in an obese category, which is half of our population, really your complication risks go up. So If I, I guess I would say the complication of pancreatitis and small bowel obstruction are real and relevant, but they're still really small and compared to the risks of being obese and the trickle down effects of obesity.

But, I know somewhere in here, you said, well, what happens when you go off the medication? And again, newer information, but it seems like people are gaining roughly two thirds of the weight. So it's not 100%, weight gain coming back on but there's definitely that risk for weight gain and how much, and this is where I think Mike, where we miss things in medicine we prescribe these medications and I'm making a generalization, but, we don't always in healthcare anyways, take along really concrete plans for.

maintaining muscle mass and changing lifestyle and behaviors. And that's where I actually am excited about the fact that places like lifetime restore hyper wellness, they're coming up with programs that are more comprehensive and you're working with a personal trainer, you're working with a dietitian so that

you are not just taking a medication and saying, well, this is going to solve all my problems because you can eat through gastric bypass surgery.

You can eat through GLP 1. You certainly can. If you don't start to change your behaviors, it's not going to lead to the results that you're probably looking for anyways. So the best answer is to do both make lifestyle changes and take the GLP 1. And some people can successfully reduce them or microdose them so that they have adopted these new lifestyle changes and their eating patterns have changed.

So they can get off of them or reduce them significantly and still have maintained the majority of the weight loss. But I am really, I used to like have this vision for bringing preventative medicine, lifestyle medicine. fitness trainers and health coaches into the healthcare world. And someone far smarter than me was like, Oh, that's actually not like, that's not going to probably happen.

It's just the opposite. It's brilliant because healthcare is so hard to break through for so many reasons. So I love that lifetime has been creative enough to say, can we take this medical model? On our turf, and we're going to merge them both to provide the best of both worlds in theory restore hyper wellness is doing kind of a variety of that too, or at least they're measuring muscle mass loss and they're measuring weight cause as I know, sarcopenia and muscle mass loss is one of the greatest risks.

And this is one of my favorite slides of Ben houses that I was like, why did we not learn this in nursing school? And they don't learn it in medical school, but like muscle mass is. Having adequate muscle mass is one of the greatest predictors of reducing mortality and comorbidities. Oh yeah. So then you have this medication that's Making you more likely to lose muscles.

So what are we gonna do about that? And of course, of course what our society wants to do is I just read that they were thinking of creating a new drug that's a GLP one, helps you maintain your muscle mass. I'm like, oh, we're steroids. Exactly. Of course, come up with that solution when we could be like, Hey, how about workout with a personal trainer?

How about lift? How about eat more protein? We want pharmacological answers for most things, so that's probably on the horizon.

[00:27:42] **Dr Mike T Nelson:** Yeah, that's a little follow up comment says, I think people also forget if you're very high or obese, just the risk of anesthesia

for any procedure is astronomically higher, even if the procedure itself is rather simple.

So I have a lot of friends, I'm sure you do, that are nurse anesthetists, anesthesiologists, and their worst nightmares are an overweight redhead. Because redheads respond differently to anesthesia, and you've got someone who just has a large body mass. The predictability of the drugs is different than someone who's not.

And then you've got procedure times. They're trying to be crunched down. So like, they want the person out, the second the surgeon walks in the room, and then awake when they're done. And so your expectations become Unrealistic there too, because again, doctor, what you said, you're, we're trying to jam everyone into the same medical model that just gets crunched for time, and physicians have, what is the average time now?

Like eight minutes per patient. It's like, you can't even talk about protein with someone on eight minutes, much less you're supposed to be a good listener, go through their whole history, do a complete exam, whatever testing you're going to do, whatever results they have coming back. It's just, I think like you said, that.

Moving it outside of the medical model, at least to me, is That's the only answer like, so maybe like lifetime hyper wellness, other places you have a physician, you have someone you talk to who might do the prescription, but the lifestyle modification is done by trainers and RDS and professionals in that area who can also devote shocker actual time to working with patients.

Cause it's not even with drugs, it's not an easy fix of, oh, okay you're good now. Where I think, like you said, the medical model is. We'll just give you a prescription and then that's it, and expect that's going to solve all the issues like it's a The biochemical pharma solution and everything and I get why that happens is because you don't have any time to do anything else I know.

[00:29:39] **Christa Rymal:** I know. I feel

[00:29:40] **Dr Mike T Nelson:** like I'm just ranting away now. No,

[00:29:41] **Christa Rymal:** I know. I can rant right with you. Trust me. I know. It's one of those things where the farther we advance, the more sick we become, which is the irony of it, right? And it's a complicated factor. And obesity is not, it's an individual's responsibility, but it's a, Nationwide responsibility, right?

So we do not do it's such a oxymoron. We have more gyms than we've ever had. And then we have more fast food restaurants than we've ever had. And it's like, they don't really mitigate each other. And the hard part too in all of this, Mike, is that, obesity rates are highest in, those with the lowest income status, right?

So there are people who are never probably going to be able to see these drugs for at least another decade until they become, More widely and readily available and covered by more, state and public insurance plans. So it's complicated, but in all honesty, you brought up such a good point where, we can get really frustrated with health care.

And I think we're really at this juncture where I think we just need to accept that health care is really. For lack of better words, it's just not healthcare. It's sick care. And we need that. We have a really sick population of people in our world and our country, and we absolutely need sick care.

The role that they play is immensely important. You and I have both had family members suffer from very quick, traumatic complications and thank God they're there. No, they don't. They don't have time to talk about nutrition or exercise or lifestyle changes. It took us 10 minutes to get through our hello.

And that could have lasted two hours. A Minnesota hello and goodbye. So you can hardly, just touch base with your patients very, before you have to quick address their one or two big things and you can't get to anything else. And so they're really constrained, which. Quite frankly, is leading to a huge burnout in our healthcare system.

Yeah, a lot of physicians

[00:31:24] **Dr Mike T Nelson:** who went into the field, it's not what they wanted either.

[00:31:27] **Christa Rymal:** No, I

[00:31:27] **Dr Mike T Nelson:** know a fair amount of physicians, nurses, et cetera, who went into the field and just after two years, they're like, I just can't take this. This is not why I went to med school. They're like, I'm out.

[00:31:39] **Christa Rymal:** Absolutely. It does.

It doesn't bring them the joy and the purpose and why they decided to go into medicine. And I'm one of those, here I am leading the department that should be

most immersed in lifestyle medicine. And everything I wanted to implement that was around lifestyle medicine was like, oh, that's cute.

You could go write a grant for that. Okay. I see where this is going. So I just had to jump out and, take a different path, but this is where I grew such an appreciation for everything in that realm of preventative medicine, which I include health coaches personal trainers, nutritionists and It is such a luxury that they have that hour of time to repeatedly, weekly or monthly get to spend with their clients or patients.

And that's really the only space you can realistically start to drive behavior change. You and I both know behavior change is the hardest thing to address in a human. I've experienced it myself. I think, you probably have too. You and I are both sitting in this space where we know quite a bit relative to the rest of the population.

And I still have to push myself at times to do the right thing, right? Oh, sure. And so just having that accountability with a coach or a trainer is so important. Having that consistency, having that time. And so I hope we see more of this model of. Prevent what can be preventative and therapeutic coming into the preventative medicine space, because we have to keep working on merging those two, or we're going to get nowhere, really.

Medications can do one layer of the work, right? But then there's a whole deeper layer underneath that tip of the iceberg that has to get addressed, or you're making just small changes or temporary changes. And we can do better, I, I think this is an opportunity for us to merge both of those really well using this drug as a gateway for that, right?

[00:33:30] **Dr Mike T Nelson:** Do you think with the drugs themselves, there is a loss of Muscle mass, or do you think it's primarily driven by, cause just a handful of the consults I've done with people who are on the medication. The resounding theme so far, again, it's only been a handful of people definitely blended their appetite.

They definitely ate a lot less. They didn't have, I would say, proper coaching or guidance at all, other than what they were Googling. And in a couple of cases, they lost a significant amount of muscle mass, which you can see in some of the trials too.

[00:34:02] **Christa Rymal:** But I keep

[00:34:02] **Dr Mike T Nelson:** wondering. Is that something inherent to the drugs themselves that we don't understand?

But then when I look at just a handful of case studies I've seen, their protein was almost non existent. They worked weight training. A couple of them did cardiovascular stuff. But that was it, right? So we know the main things to mitigate loss of lean body mass They weren't doing either.

[00:34:24] **Christa Rymal:** That's such a good question, Mike.

And I'd love to see a study. This would be a, I

[00:34:28] **Dr Mike T Nelson:** haven't seen one yet.

[00:34:29] **Christa Rymal:** We should do this together. Study together and we'll throw in some CGMs and all the good stuff. Yeah, there we

[00:34:35] **Dr Mike T Nelson:** go. It'd be

[00:34:36] **Christa Rymal:** so interesting to see that data, wouldn't it? And yeah, these medications. In conjunction with weightlifting and resistance training, three times a week and adequate protein and adequate sleep and all of those lifestyle measures that we know can be so impactful.

So would people, I think right now the data is showing around like a 30 to 40% lean muscle mass loss. In conjunction with the weight loss associated with the GLP 1. So that's pretty darn significant. But I don't know what in someone who's losing, say 15 percent of 15 percent of their body weight.

How much of that without this drug would be, expected in muscle mass? That's a question you can probably answer better than anyone.

[00:35:19] **Dr Mike T Nelson:** Yeah I don't know because. It gets convoluted between muscle mass and lean body mass. So if you look at the data, there's definitely even the best case scenario going to be a loss of lean body mass.

But people outside the fitness world are like, Oh, we're gonna be muscle. Like no. Lean body mass is everything that's not fat, right? So you think of all the connective structure, all the other just tissue you need to have to support a large amount of body fat. So I don't know, to be honest because some of the studies in people who are not super overweight, yes, muscle mass and lean body mass do tend to correlate pretty well.

But you start getting into the far end of that spectrum, they diverge out too. And so I, I don't know on that.

[00:36:02] **Christa Rymal:** It's hard, right? Studies are so tricky to really try and isolate and can, control them in the way you want to without all the other elements coming in, especially around obesity and, diet and nutrition and exercise.

So to answer your question, I don't think they know. I've seen a little bit of research stating that they do think the drug might have some direct impact on muscle building capacity. Then you add in there's some, it's a multifactorial, right? Like then you add in what we're seeing in our population of men and women around testosterone, decrease, which has also seemed to expedite itself, or at least we have more data around it, in the last 25 years, we're seeing younger and younger people having lower testosterone levels and. So it's like, is it a testosterone level thing? Is it a glucose management thing? Is it a glp one thing? Is it actually how do we know like what's causing the muscle mass reduction? I don't have a good answer and I don't think anybody completely does at this point, but I hope they keep looking at, studies that can help pinpoint that more accurately.

My guess is it's probably somewhere around 50 percent the drug and 50 percent all the other things, but that's just a,

[00:37:10] **Dr Mike T Nelson:** Yeah.

Yeah. And that's what's hard too, because We may not know the exact mechanism, which I a hundred percent agree with on the flip side, we could easily both agree and argue that we know the top things that probably are preventative, like some more protein exercise, sleep, maybe if your hormones are really low, potentially, testosterone replacement, et cetera, maybe

[00:37:31] **Christa Rymal:** I would

[00:37:31] **Dr Mike T Nelson:** argue, get all your other lifestyle fixed first and then see where you land.

But. We do know the things that are helpful. And sometimes I get annoyed when that's not mentioned as effective countermeasures. We spent all this time. Arguing about the mechanistic and we don't know, and I agree, that's a question we should have research on. We hopefully will have a better understanding in the future and that would be beneficial.

But we also know stuff we can do to help at the same point too, and it just, it seems to be people want to do an either or. It's like, ah, it doesn't matter about the mechanism, we know what to do, or, ah, the mechanism is all super important. But you're not doing the things that are beneficial to it. You can do both.

[00:38:13] **Christa Rymal:** It can be a both and right. And that's why I wish, we weren't such extreme and, we didn't polarize our approaches, right? Like, they should have a greater interaction. The other thing to that point, too, Mike is. You lose muscle mass with every decade past 30, right? And so a lot of these studies are being done in people who are 50, 60, 70 and older.

And so their muscle mass is already, naturally just by the aging process starting to reduce. So it's hard to tease all of that out. And, clearly we need research brains like yours, to help set those studies up to give us the data that we're really looking for, but. And then also to be completely honest, who's going to fund the study that shows that eating and training three times a week is going to prevent the muscle mass loss when they can potentially come out with a drug that might be able to be promoted as, it helps you retain your muscle mass.

[00:39:04] **Dr Mike T Nelson:** Yeah,

Yeah,

[00:39:06] **Christa Rymal:** the

[00:39:07] **Dr Mike T Nelson:** same thing in the osteoporosis market, there was, a drug and then we'll just add another drug. And I'm like, Well, weight training, maybe

[00:39:14] **Christa Rymal:** hundreds of thousands of trainers and coaches that can help you. And it's, I almost wish we were setting GLP one medications up like we do people who are going to have gastric bypass surgery.

Yes. usually people who are going to qualify for gastric bypass surgery have to have x amount of sessions with a psychologist or psychiatrist. They have to meet with a nutritionist. They in some clinics have to meet with a trainer. And so I wish, and I get, we just all want a quick prescription, a quick fix, but I wish we could incorporate some kind of pre prescription protocol like we do for gastric bypass where we're really not just throwing this stuff haphazardly at people and watching them lose all this weight and, just clapping our hands and not realizing there is a ripple effect to it.

But I wish we were being more proactive and preventative and our approach to prescribing these. And like you said, what is your protein? What is your weight lifting? Look like in a week. What does your sleep hormone stress? How is everything looking? And let's coach you on that before we.

Just, throw surgery or medication at you. And, fortunately places like, like I said, like lifetime is the only place that's coming to mind right now that I know is actively piloting GLP 1 medications in conjunction with lifestyle changes. So that's why I keep referring to them, but I think that's like merging the best of both worlds and how it should be done.

I wish it was being done like that in healthcare and, like, Clinicians are trying to do what they can, their time is limited. And quite frankly, a lot of them, their knowledge is limited around lifestyle medicine too. I, this could be an opportunity for us to, we know better, let's do better, but we'll see if it plays out like that.

It's hard to say.

[00:41:01] **Dr Mike T Nelson:** Yeah. I think there's a huge opportunity for outside companies that do like the lifetime model to have a physician or nurse practitioner or whatever licensing you need. have professionals manage the whole system. So yes, it's within the healthcare model. It's legal, it's ethical, all that kind of stuff.

Maybe you use insurance, maybe you don't. But then that's bridged with, like we talked about, some coaches of some kind, whether that's nutritionists, trainers, et cetera, to walk them through all the lifestyle changes. Because I just have this huge, Fear that in like five years we're gonna realize, Oh, you mean we can't just throw drugs at people and expect them to keep all the weight off?

And then if I put my little tinfoil conspiracy hat on, it's like, oh, pharmaceutical companies aren't going to want to pay for that because that's going to cut into the money. Like they, their model is based on having people take drugs as long as possible because they make more money. So I shouldn't expect them to roll out this solution.

It's a problem that's going to cut into their problems either, other profits.

[00:42:08] **Christa Rymal:** I know it's so complicated. Part of my role when I was director of the department was, I was the gatekeeper of the pharmaceutical reps. Cause non profit healthcare systems, which is what we primarily have in

Minnesota, the physicians and clinicians really just, try and be as non biased in their approach as possible.

And pharmaceutical, I have some good friends who are pharmaceutical reps, I do that street medicine can do amazing things. But it's just, it's very siloed. It's a siloed approach. And everyone has a bias and everyone has ulterior motives really. Especially. I guess I would say that's pretty strong in the pharmaceutical industry and it's a for profit industry and they make really big profits.

I have seen them to their credit do things like give us ample amounts of insulin samples to also give to people who would otherwise not be able to afford insulin. And for those, that don't know with type 1 diabetes, insulin is a life saving medication. It is an Absolute must in their daily life.

And for those with, advanced type two, it's the same. And a lot of insulin is expensive. The medications, especially in the U S are expensive. And so I appreciate when pharmaceutical companies will do that, but there has to be a, I hope someday, if it's not in my lifetime, my kid's lifetime, we just can all play together a lot better in the sandbox for the benefit of everybody because we're clearly not getting anywhere.

Like, we're not really improving our obesity epidemic thus far. I, hope that this can be the start of some change, but it's going to be multidimensional, multifactorial. not just going to be these drugs. And that's what I worry about probably the most, like you do, right? Like we put this drug out there and we're like, Oh, it solves all our problems.

And it's like, well, it solves a component of them. And it's pretty powerful. I'm an advocate for someone who has, Ongoing body mass index above 30 and or morbid obesity. I would absolutely recommend these medications. I get a little worried then too, we have this body dysmorphia in our society, right?

That's pretty profound. And I have also heard on the opposite side of that, if people were like, well, I just want to lose five or 10 pounds, I'm going to go into GLP one. And I'm like, really? I don't know if I would go that route, but. So it's coming up. Yeah, I know. So you can, everything has a pro and a con and GLP ones are no different, but I think they have a strong purpose in place.

And I hope they can, sometimes I'm sure you've seen this, Mike, this is what I think of. And, you can even see this in your own self if you can go introspective, but when you feel like. You're making even a step or two in the right direction. It pushes, your motivation to keep going.

So some people around weight loss, whether it's genetics or lifestyle habits, like they just don't feel like they can even get one foot in front of the other. And. Having worked with a lot of people with type two diabetes, and this too, food addiction is a really big problem. And people would be surprised.

I've worked with patients who are drinking 12 cans of Mountain Dew a day are eating 12 sticks of butter a day, like really interesting food addictions that really truthfully I can't, I don't even think I could coach them out of like, I, I need an assistant. And if the GLP one can do that and allow them that win of like, Oh, look at that five pounds.

Like I can do this. And like another five pounds, I can do this. It increases engagement, which is in and of itself, a really big driver of lifestyle changes. So it's easy to say, well, just get up and work out more and eat better. And like, how helpful is that? Like, nobody finds that really helpful.

Thank you. So I think, we have to let people get some wins. And you, when you're morbidly obese, I've worked with patients who are 500 plus pounds, and it is really hard to get momentum for change in that scenario. And, if this gives them that push forward, I am all for that, because sitting at 500 pounds is no way to live.

And the trickle of complications. Far surpass the GLP 1 complications. So I'm all about getting people the wins to keep the momentum going. And I wish our society we lived, we didn't live in a obesogenic society that like everywhere you turn, I validate people. It's like, it's hard.

It's hard to make the right choices because our lifestyles that surround us have a lot of products and lifestyles that don't promote health at all. And it's hard. I've told

[00:46:37] **Dr Mike T Nelson:** people like if. You want to be successful with weight loss and live a healthier, better life. You are in some sense of the word, going to be a weirdo.

Like you just are like, because you are going to be the weirdo in society who is doing things that not all of society is doing. Like, if you don't believe this, go to a mall and go to an airport and just stand at the bottom of the staircase and just see how many healthy people who do not have any biomechanical restrictions, as far as I can tell.

Humans are wired for efficiency. And you have to do some thought ahead of time and make those new habits. But even then, It takes so long for those to be just almost semi permanent, and then even then you're going against what general society wants you to go and that's, you're like the little salmon trying to swim upstream and that's, it does get easier, I don't want to sound like that it's been, I'm not saying that it's impossible, many people have done it, but it is.

It's definitely difficult and you are going to be the kind of odd person in some circles of your friends for sure.

[00:47:44] **Christa Rymal:** That's such a great point to make and I love your salmon swimming upstream analogy because it's true in our society. It isn't right. Especially around, I think our nutrition and food industry, we're really lacking in what we promote right there.

And that would solve a huge component of our problems in general. If we could. Flip that switch. But you and I probably tend to, we walk in a similar circle where probably at least the bulk of our friends and colleagues, try to live a healthy lifestyle. Oh,

[00:48:09] **Dr Mike T Nelson:** definitely.

[00:48:09] **Christa Rymal:** And I still find it challenging.

I had a 30 day window where I was going to follow It a macro program. I was going to follow really strict, no alcohol, really striving for eight hours of sleep, which is tough for me. And I had to find myself saying no to so many social invitations. Cause I didn't trust myself, nor did I trust my friends.

I had to be like, Oh, she's going to be the lame one. Who's not going to drink any wine. Like, come on. She's no fun. And so I literally had to decide to say no and remove myself from a lot of social situations to make that 30 day goal. And most of my friends are relatively healthy or live healthy lifestyles.

So imagine someone who doesn't have that, and it's your family, right? It's your family is the one encouraging you to stay on your unhealthy track. Cause if you become the healthy one, you're the odd man out. And you're a pain in the ass to everyone else. And, it's tough to fight through those psychosocial familial dynamics that are deeply rooted.

So it's no joke. I, our intrinsic morals and values on nutrition, diet, exercise, or are deeply rooted and it's a little bit of a swim upstream to do something different than what we've been taught. So yeah. And it's

[00:49:17] **Dr Mike T Nelson:** also hard to, and I've told this to some clients, I'm like, Reality is you might need some new friends, I'm not saying ditch everyone in your life right now.

And I get it. Do you have obligations? Do you work? You have family. I get it. But that's also why I'm a big fan of recreation. Like pick a new sport where people are at least more healthy or kiteboard or getting outside and not the kiteboarders are the healthiest people on the planet, but just pick pickleball even for Christ's sake.

Do something where you're trying to be around a culture that's a little bit more active, a little bit more movement based, like if you eat a high protein meal, they don't think it's weird and you're going to destroy your kidneys, like you don't, and try to, because it's, Easier to do that than it is to be the salmon going upstream all the time.

Like there's only so much motivation, willpower, whatever you have. And if you're exhausting that just being around your friends all the time, you can still do it. Like people have definitely done it, but it's a lot harder. You're like, try to rig the system a little bit in your favor, which again, is, it's not an easy request.

It's not an easy task to do either.

[00:50:24] **Christa Rymal:** No you're spot on Mike. That's so true. And that's and I don't mean to like, I'm, when I'm saying lifetime, like I have, obviously I have connections with Anytime and I love them. And so it's not like I'm just saying, Oh, lifetimes, but they do have some things to figure it out in this space or they're actively working on.

They're trying

[00:50:39] **Dr Mike T Nelson:** to, yeah.

[00:50:39] **Christa Rymal:** Just what you said is a part of it. Like, so you're into a community. That's built in, like you have pickleball partners, you have swim partners, you have, do whatever calls you and interest you, I always find it intriguing when people are like, well, I was told I need to run on the treadmill for, five to 10 miles a week.

I'm like, well, do you like running on the treadmill? I'm like, well, then stop doing that. Like do something that love you love and it fills your cup and it gives you a social network. That's really positive. Because your social network can deter you really quick. And it's hard to, it's hard to swim upstream with your friends and your family.

Maybe they're going to see you and, want to move towards your direction. But, a lot of times there's at least a moment of friction. And there that's hard to work through. So create new friends, create new outlets, create new habits is so important. And again, for people who are obese and morbidly overweight, it's easier to do that.

If you are, it can take off 10 pounds, 20 pounds, or 30 pounds that you're caring so that you can be active. And if the GOP ones give you a jumpstart in that all for it really truthfully. And I think there is definitely a strong use for it. In, arguably close to half of our population.

But I just would like to see the message getting out there that it should be married along with lifestyle medicine and lifestyle changes, which I think you and I probably both share similar philosophies in that realm.

[00:52:05] **Dr Mike T Nelson:** Yeah, and I like the phrasing you use, as a jumpstart, not as the only solution you'll ever need the rest of your life.

Right.

Because people hear that like, Oh, Bob lost 40 pounds or whatever. It's like, I'm just going to take this drug and I'm not going to do anything else. And

[00:52:20] **Christa Rymal:** You

[00:52:21] **Dr Mike T Nelson:** could counter argument could be, well, hopefully maybe you start losing five, 10 pounds and then maybe you get motivated and you want to do more lifestyle change.

But I like the phrasing you used is as a jumpstart to help people get going in the right direction in conjunction with all these other things that we know are going to be beneficial because At some point, you're probably going to want to cycle off the drugs too. And if you don't have those, it's like training wheels.

Like if you don't know how to ride the bike, yeah, training wheels are great. Like by all means, definitely use them, please. But at some point, the end goal is

to not use them. And hopefully you can, if you use some of these drugs to get to your ideal weight and then you've got the lifestyle in place at that point.

Great, to me that seems like a better solution instead of, I think we tend to, at least media in general wants to over promise one single factor and people are attracted to that because that's an efficient thing. And then they do it for a while and then maybe it works or it doesn't, or they go off and they gain 10 pounds and now they're even more like mad about everything and feel completely lost and nothing works.

And yeah,

[00:53:28] **Christa Rymal:** yeah, I know. And that's so frustrating and you can't prevent all of those, like, speed bumps that you hit when you're definitely right, but I think there's also this concept that I'm hearing more about micro dosing it. So once you get your optimal weight, just maybe it's only going to be like a two milligram dose.

You're going to need to just hold yourself, take a little bit of that edge off. And I think You know, I hope there's more studies done around that too. So it's not always these, big gun doses that you need to take. But, and I do think it's important for people to recognize, the drug has two applications.

Those people that are obese tend to have compromised microbiomes, right? And, compromised metabolic function, but it doesn't always mean that they have diabetes. So there's a, there's one application for weight loss which is actually better in those without diabetes. And then there's also the application that you have with people who have type two.

It's not typically used in type one diabetics but in type two and type two, your first and foremost goal is, blood sugar regulation, right? And balance. And then it's great that weight loss tends to be, even though in a smaller magnitude, but a benefit, a side effect that has a benefit.

And really we're looking and approaching on half of our U. S. Adult population, having type two diabetes or pre diabetes. When you combine those two numbers together, about half of our U. S. Population also has one of those. So They cross over, and they each have their own unique applications whether you're, both are disease processes but they're playing out just a little bit differently with the drugs, and that I find really interesting, and I think, again, they still need to tease that out a little bit but clearly the GLP 1s are making people more insulin sensitive, less insulin resistant and my theory on that Why

they're seeing some differences in the people with diabetes versus without is, you have to look at people's pancreatic function who have type 2 diabetes and it's compromised.

The beta cell function is typically compromised. So I think the GLP 1s can only prompt so far. The pancreas to kick in where if you catch people prior to a diagnosis of type 2 diabetes. Maybe even pre diabetes, their pancreatic function and beta cell function is more optimal. And I think the GLP 1's capacity to make a positive impact is greater, which is probably again, why you're seeing the better benefits and outcomes with those just seeking weight loss.

[00:55:50] **Dr Mike T Nelson:** Yeah. My thought on that is it's the further you get away from a healthy baseline, like 30, 40 percent or whatever. But if you are up here versus here. Your starting point is so much different, right? So you're, if you're really more metabolically compromised, you're just that much farther away from baseline.

[00:56:11] **Christa Rymal:** And in

[00:56:11] **Dr Mike T Nelson:** general, we know that obesity at some point done for long enough with the rare exceptions. You are going to have metabolic consequences, right? The rare exceptions would be NFL linemen and sumo wrestlers who are like extremely active all the time,

[00:56:27] **Christa Rymal:** right?

[00:56:27] **Dr Mike T Nelson:** Outside of those populations, the longer you're at a higher level of obesity, your odds of having metabolic issues.

It's unfortunately almost guaranteed at some point.

[00:56:38] **Christa Rymal:** Yeah. Yeah. 100%. And. The latest statistic right out of UNC, the data shows that 12 percent of U. S. adults are metabolically healthy, based on our five medical markers. Yeah, that's so crazy. It's like, woo! And I'm sure I've flipped in and out of that myself.

It's like, It's interesting how we're evolving and we have to get back to an earlier, generation in terms of our, our evolution of how our body mass is going. Cause right now it's trending in the wrong direction and we've got to, I think take, multifactorial approach to solving that.

Yeah. Yeah. It's complicated. But you are absolutely right. And, now. Not only with diabetes, but obesity, it's, increasing in leaps and bounds in our youth, right? So type one diabetes used to be most common in 18 and younger, and now it's type two diabetes, which is more related to lifestyle is most commonly diagnosed in our 18 and younger population.

So obesity is quickly following that trend. So it's. Like I said it's a multi disciplinary problem. It's, we all have to own it, to be quite frank, because we're all impacted by it. If only 12 percent of us are metabolically healthy, well, it leaves a lot of us to have some work to do.

We collectively have to come together on this problem, I think, from a individual, local, state, national level, global level, quite frankly and look at how we can really tackle this. And GLP 1 is just. One one solution and in the big pond, right? It's a big problem

[00:58:06] **Dr Mike T Nelson:** Yeah, the pro which I would argue is that if you came to me even five ten years ago and said Okay, we can die in a drug.

It'll be effective, but you can only have it be one Main effect and the outcome is better body composition for general population

[00:58:21] **Christa Rymal:** Yeah, if

[00:58:22] **Dr Mike T Nelson:** I had to pick only one effect It actually would be severely blunting their appetite.

[00:58:27] **Christa Rymal:** Yeah. It's

[00:58:28] **Dr Mike T Nelson:** crazy that the thing that is probably has the biggest carryover, again, it's not a single solution to everything, but we seem to have a pretty good solution to that.

And if you would have asked me at that point in my lifetime, when we have a drug that would do that appears to have low side effects, I would have said, No, I don't think so.

[00:58:48] **Christa Rymal:** And now

[00:58:48] **Dr Mike T Nelson:** we have it. Now we have this huge opportunity to integrate it with all the other things that I think we know is helpful.

So I think there is a huge. potential there. But again, like we talked about, there's a lot of, still the same pitfalls that come with that too.

[00:59:02] **Christa Rymal:** A hundred percent. I talked with a couple of my endocrinology friends about a week ago and one of my obesity medicine doc colleagues, and they were saying that they're even seeing it curb, other addictions.

Yes, I've heard

[00:59:14] **Dr Mike T Nelson:** that.

[00:59:15] **Christa Rymal:** curbing the food addiction. So even one of them told me this woman, confessed she had an addiction to Amazon, which I could argue, what does that look like?

[00:59:26] **Dr Mike T Nelson:** How many boxes are outside your door right now?

[00:59:28] **Christa Rymal:** Exactly. It's Amazon's knocking on the door. But, he said it's even curbed her addiction to online shopping, gambling.

So it'll be interesting to see if this cross transfers over to other applications, such as recovery and addiction, if it can. I would argue, as you probably would, like food addiction is one of the hardest addictions to break. And if it can, solve an element of that problem, where else can it be cross applied?

Which I think is probably coming, if you want me to be exact. It's a little bit like naltrexone, right? That's one of the more commonly used weight loss drugs that, they've also found to now treat a lot of other addictions. And so I, my theory is it's probably going to happen with GLP ones too. Which isn't a bad thing.

If it quiets down that. Hypothalamus and that you're, it quiets down that addictive receptors. Then again, these are things that are hard to treat. So if we have something that can be, a good solution or at least a player in the solution paradigm, it's important.

There are other things too, Mike, and you probably have more things at your fingertip than I do that people can think about if they're considering a GLP 1. One, is insurance going to cover it? Well, you have to have a BMI of 30 or greater and, or 27 or greater and a comorbidity diagnosis.

So a lot of insurance companies are not going to qualify, if you're looking to lose 10 to 20 pounds, you may or may not qualify for that. And out of pocket, you're looking at probably 600 depending on your dose and depending on which medication

[01:00:55] **Dr Mike T Nelson:** you say per month,

[01:00:55] **Christa Rymal:** it's not a cheap medication to take if your insurance doesn't cover it.

So obviously you and I are huge advocates for like, I, if I told anybody like what would be the number one thing I meant, I would suggest people do to improve their health, hire a coach, hire a trainer, start their number one thing if you have some extra income or you can like get rid of some other things and a lot of people are like, well, I don't have income to do that.

And I'm like, well, I saved myself a lot of money. I do not have, I did not win the genetic lottery. I have a lot of genetic predisposition to a lot of disease. And so I had to make a conscious decision in my late thirties, as my parents both had terminal illnesses, that I was going to spend more money in the gym than I was going to spend at Walgreens.

So that was a choice. So you have to sometimes give up some things to make that happen. But when you really look at it closely, a lot of times there's more wiggle room there than people think. But that's my little soapbox on that. But then, there are cheaper things that you can definitely consider.

I would just say talk to your clinician before starting any of these things. I'll just throw out there. They're easier to get. They're far less expensive, but they do have metabolic implications. So if you are prone to having low blood sugars you just have to be a little careful starting these, but, you could look at berberine.

which has had some great studies head to head with metformin, the first line drug that we use in pre diabetes and diabetes. But it legitimately can cause low blood sugars, so It's desired outcomes are there, but you have to just be a little careful. You can take Akkermansia, that's a probiotic that just helps your general gut health.

A lot of times if you're have pre-diabetes, diabetes, obesity, or gut health and gut microbiomes off anyways. So Akkermansia can help. Butyrate can be of benefit. Again, supporting the gut and immune health or naltrexone is, a combo

drug now that use can be used for weight loss has been around a really long time and really affordable.

Don't go out and buy these, based on this conversation, we can also they can work against or with other medications that you're taking. And of course you have to look at your whole profile of health, like, your kidney function and pancreatic function. They are definitely something to consider if you cannot afford GLP 1s and you're looking for assistance in losing weight.

Those are some other alternatives that are easy to access and affordable and can also have positive outcomes. Not maybe quite as dramatic as the GLP 1s, but They might just give you a little boost. So I always just like to mention those things because GLP 1s out of pocket are not in a price range that most people can afford.

Of course, that will change, as they become more readily available. They should, in theory, become less expensive, but we're probably looking at a, around a decade before I can see that happening in any real profound way.

[01:03:40] **Dr Mike T Nelson:** Yeah, I would add that potentially exogenous ketones may have some appetite blunting effect too, which is interesting.

Not nearly, I'd say as profound as, frank pharmaceutical drugs, some people have, Like I just did a fast yesterday for 20 hours and had 20 grams of ketones. I haven't fasted for quite some time and

[01:03:58] **Christa Rymal:** it

[01:03:58] **Dr Mike T Nelson:** was like pretty, pretty easy. So there are, like you said, some other things that they can have, not to the same effect size, but maybe enough to get people moving in the right direction and get things going on track.

[01:04:11] **Christa Rymal:** Yeah, no, that's another really good recommendation, Mike. Yeah, no, you're absolutely right. Those can definitely suppress the appetite and hold you through a fast really well. And all the good

[01:04:19] **Dr Mike T Nelson:** stuff people already know more fiber, protein, exercise, movement, sleep, all those never go out of style.

I know.

[01:04:27] **Christa Rymal:** I remember when Dr. Ben house and I, we were looking at a new macro program and he's like, you need 16 servings of vegetables to fiber. And I was like, well, that's a full time job, Ben. I'm like, that's a lot of vegetable chopping. But it's true. And I ate that many vegetables, which didn't sustain over time.

But, for a few weeks I made a valiant effort. You're like, I physically could not even eat anymore. I was like, I just cannot even do it. So fiber and vegetables is a huge player in terms of appetite to appetite suppressant. But again, it depends on, yeah, your access to those kinds of foods, your ability to afford them, but.

I always tell people, buying a little healthier food, exercising, coach, trainer, generally in the long run are going to cost you less than the drugs that you're going to go pick up at Walgreens. So it's taking that proactive approach versus reactive. But life happens and it's a lot of times, easier said than done.

And I get that too. So it's complicated. It's a complicated formula, but I second everything you're saying, more protein veggies. And I keep working on it too. Yeah. I imagine you're working on it. We're all working on it. Even those of us who are in the industry, we have lots of imperfect days.

[01:05:33] **Dr Mike T Nelson:** I was just in Mexico eating tacos and drinking beer.

So yeah.

[01:05:40] **Christa Rymal:** I know. I I think I

[01:05:41] **Dr Mike T Nelson:** don't live in Mexico.

[01:05:43] **Christa Rymal:** Totally. Well, and it's that, you have to like, you have to live too, but you mitigate what you can, when you can, and you also have to enjoy life and kind of decide what that means. Like what does enjoying life look like for you? So yeah, I know we've laughed about, I still think about, I love the fact that anytime I put a continuous glucose monitor on you, you get so excited, right?

Cause you're like, for the sake of science, I get so excited. just because I need to see what it does. So to you and your great study on metabolic flexibility, reducing weight, increasing muscle mass gives you more metabolic flexibility, so you can then go to Mexico and enjoy those beers and tacos and not have to Panic that, some big metabolic dysfunction is gonna happen in your body.

So I think that's kinda at the end of the day, what everybody is, looking for is that metabolic flexibility where you can have those moments and en, enjoy the things that you like, but also have the willpower to get through the day without indulging in the things that you know are gonna harm your health over the long term.

So

[01:06:41] **Dr Mike T Nelson:** yeah, and the good part is once you get to more of a stable point, then it actually becomes. Easier, like I lost and well, the week before, if I count the week before when we left, cause we're in Orlando for a while, the two weeks in Mexico, and then, give myself one or two days of weight stabilizing.

I got home during that three week period, I actually lost five pounds and did I have more tacos than I've ever had? Probably, but I didn't really eat that much for lunch. I walked 10, 000 steps. I went kiteboarding, either did some type of lifting every third day, did a few easy runs. It was nothing crazy.

It wasn't like walking around for 20, 000 steps a day, but it was, relatively active in between, doing computer work and stuff. So once you get to a point where you're at, yes, it still takes some work to do it, but you can, we just decided we're not going to really go out for lunch.

So we would just have, whatever we had, wherever we're staying, we'd make a bigger breakfast and we usually go out for dinner. So I cut my meals from a normal five to like three. And, it wasn't too hard. I was a little bit hungry during the day, it was fine. But the good part is once people get to a point of where they want to be and they did it in a healthful way.

It does take some effort, but it's not a heroic effort. I didn't feel like I was white knuckling my way through like, three weeks to do it either.

[01:07:57] **Christa Rymal:** Yeah, no, that's, it's such a great point. And I think we underestimate the value of walking.

[01:08:02] **Dr Mike T Nelson:** It's,

[01:08:03] **Christa Rymal:** it's incredible what it can do for you.

And probably why Europeans generally speaking are healthier than Americans, because they tend to walk more. They live in closer proximity to their life. I've

been making the same effort and it's interesting, I'm almost 50 and going through paramenopause, which is a whole nother podcast.

But that's like a really interesting time in a woman's life. And their hormones are all over the place and you're always trying to balance things and fix things. And sometimes I'm finding, my drive is like, I got to do more hit. I got to work out harder. And it actually took me a while to rewire my brain to go, everything I'm reading is saying, do more just that, neat activity, right?

Like get the steps in. And so I was making an effort on that and boy, did it change? Like my cortisol changed. My weight started to change. Like walking is super powerful. And oftentimes when we had someone with pre diabetes or early onset type two, I would give them the choice of like, well, we can start you on metformin.

Or you could walk a half hour or, once or twice a day, because really at the end of the day, they're going to do about the same thing. And people are always like, really? And I'm like, well, yeah, try it. Like wear a continuous glucose monitor and let's just try it for two weeks before you start the metformin.

What happens when you walk? How low can you get your blood sugars? And literally eight out of ten times, it was enough to avoid starting metformin. So it's movement is powerful. It is medicine literally. So sometimes it's giving people the choice and they don't even realize like you could take the metformin, which is a well studied, well tolerated cheap medication, or you can walk.

It's your choice. Like what's going to work for you? What are you willing to do? And. It's good to give people choices.

[01:09:38] **Dr Mike T Nelson:** Yeah, and I think that's the key of giving them a choice and telling them, Hey, these two things are about the equivalent. And then which one do you want to do? Where too often, it's just take this drug and everything will be fine.

It's like, no, you should, people should have, An option. I see the same thing, but this hormone replacement, I'm not against it. Yes. For either got males or females, like have a conversation with your physician, but at least on the male side, I see too often of like, your lifestyle is a disaster. You sleep five hours a night.

Your nutrition's horrible. And Oh, you exercise, but everything is like, like your ball sack on fire. Every time you go to the gym and snort pre workout off the

counter. Like, yeah, I would expect your testosterone is going to be horrible. Like what? And now you're just going to put a band aid over that?

[01:10:24] **Christa Rymal:** Yeah.

I'm

[01:10:26] **Dr Mike T Nelson:** not saying I'm against it, and if that, again, if that's a temporary fix and you're going to work on those other things, it may be great, but too often it's like, wow, this is my new solution. It's like,

[01:10:35] **Christa Rymal:** you're like, I'm not sure that's going to land you where you want. But yeah, I know it's hard to undo those things.

I think we also have to accept too. Of course, I'm, getting a greater perspective on this as I get closer to 50, but what worked in one decade of life might not be what's going to work in the next decade of life. Your hormones change your a lot of things change, right? So you just have to look at every decade and go, okay, what happened in my thirties might look a little different.

My forties different, my fifties, I'm assuming it's going to look a little different in sixties and seventies. What kind of movement you really need, what kind of caloric intake you need, macros and protein you need. General rules apply, but decades, change what we need. So having some awareness about that too is really important.

So you're almost turning 52, I think, correct?

[01:11:20] **Dr Mike T Nelson:** Yeah, I'll be 50 this August. Yeah. Yeah, the only thing I would add to that too is that, if you haven't done something for a while, just because you're older, you are literally more de trained in that particular thing. So a lot of times, I'm not saying age is not a thing because trust me, it definitely is a thing, but for myself, I realized I just let my aerobic system go to shit because I wasn't years ago, wasn't actively working on it.

And I just thought it was because I was just getting older at the time of like 41. And then I realized I'm like, well, wait, I'm an idiot. I haven't specifically worked on this for five years. Why would I expect it to be better? Shocker, and then you do more work on it. Oh, it's better. Oh, okay. Again, that's not to dismiss or not to say that there are not actual aging effects, which 100 percent there are.

[01:12:08] **Christa Rymal:** A lot of

[01:12:08] **Dr Mike T Nelson:** consults I do with people, I'll point out that, or they're like, Oh, but I'm just so much weaker now. I'm like, You haven't strength trained for five years. Like, what do you think you were like, Oh yeah.

[01:12:23] **Christa Rymal:** One of those moments you want to hit your head against a wall, but they happen, right? We all have blind spots, but yeah, you're so right.

If you're not what you don't use, you're going to lose. And yeah, it's. And I sometimes think about this too Mike. I don't know if you do but I think how fortunate I am to be in the industry and have the knowledge I do and the colleagues I do and the support that I do and the information that I do.

It's still an effort and it's still work for me. So then I always have to think, okay, what's it like for someone who doesn't have this community of support information? And it's hard, right? So I think that's why working with a coach or a trainer is so important because they can really help you uncover what you love to do, what you need to do, what you really need to avoid or what you can potentially mitigate.

And. We're as humans, right? We just get in our own heads and our own narratives. And sometimes we need someone to pull us out of that, which I know you do an incredible job of with everyone that you coach. And I just think that's an integral part of our health care paradigm that we and we need to value far more than we do.

I wish we were talking about that as much as we are about GLP ones, but it's not, I don't know if it's not as sexy of a topic or just, we're looking for the quick fix, which I get but it's like sometimes we got to go back to the basics and, that's where we can really see the greatest opportunity for long term change.

So GLP ones are great for short term change and. Hopefully we can add in some of those other expertise to really help people sustain the changes that they get upfront, to have them carry through. So

[01:14:01] **Dr Mike T Nelson:** yeah, I'm very similar. Like I'm lucky that I just find this stuff fascinating. So this is like all I've done for 30 years.

But in clients, even to myself, the people I've seen who are the most successful long term Are people who have the knowledge, but have also been able to execute on that knowledge and a system that worked for them,

[01:14:22] **Christa Rymal:** because

[01:14:22] **Dr Mike T Nelson:** a lot of people who have not lost 30 pounds or whatever weight thing, the only thing they have is negative reps.

Like the only thing they ever know is failure. The only thing they ever know is like, I tried this diet. It didn't work. I did this thing. It didn't work. Now we could argue adherence execution. Maybe it was a good idea. Maybe it was a stupid diet, whatever.

[01:14:39] **Christa Rymal:** But in their

[01:14:39] **Dr Mike T Nelson:** brain, they're like, I've never successfully been able to do this thing.

[01:14:44] **Christa Rymal:** And the people

[01:14:44] **Dr Mike T Nelson:** I've noticed who paradoxically are the least worried about body composition, et cetera, are people who have the knowledge and have already executed it. It just may not be a priority in their life.

[01:14:56] **Christa Rymal:** But one of my

[01:14:56] **Dr Mike T Nelson:** goals is to get everyone to that point where, okay, you had a period of six months, a year, two years, whatever it is, where you were successful.

You 100 percent know what to do now.

[01:15:07] **Christa Rymal:** Yeah. But even

[01:15:08] **Dr Mike T Nelson:** if you veer off a little bit from here, You have this knowledge set and the skill set to get back to it when you want to do. I think a lot of people don't have that. And it gets very nervous and very fearful that the only thing they've ever done is not be successful at it.

So just getting them over that sort of hump. And once you get them through that. To me, that's like a lifelong skill, just like being able to do good with your finances, et cetera, but again, those are things that no one's ever really taught either.

[01:15:39] **Christa Rymal:** It's so true. I know, gosh, if I could go in and make a big reform in our school curriculum, it's like, how about if we start teaching kids how to really be healthy?

Like, would that be a great thing to add? But we just don't write and so you're absolutely right when you've had when you've been defeated so many times, it's really hard to get back up and want to try again and again and again. Yeah, that's a big component of people's success stories and I think that's easier to do.

Again, this is, my bias coming through, but I also think it's a really relevant and valid bias, but having like we all need a coach in life, right? Oh, totally. 100%. No, you can get to that next state, that next place. Just hang in there. Here's what we're going to do to get you there.

I'm right alongside you. That's a huge part of any success and win long term, I think, in lifestyle medicine and changes and You know what? That's GLP ones have a I look at them as like a really beneficial jump start and they probably have, some benefit in a formula for sustainability.

But I think I hope most people can eventually get to, a micro dose. And the behavior changes will have become the predominant force and, their achievements secondary to the GLP one. But, Yeah, it's, it'll be interesting how this plays out over time. It really will be, can this, we're in a state right now or in the last two decades, our life expectancy, the for the first time in the last two decades, our life expectancy has declined in the U S right.

So can we shift our paradigm around obesity? Can we shift our paradigm around life expectancy with assistance? It's to be determined, right? I think it'll be interesting to see what the crystal ball shows in 10 years. We I think most people just don't know. We're we're looking at a runway ahead of us and we'll know more soon, but I've seen it do some powerful things for getting people on the right track for certain.

And then in diabetes management, it definitely has helped people deter from the need for insulin which is really truthfully, if you have diabetes, a really big deal. Insulin. Once you start insulin, it's not impossible, but it's challenging to get out

[01:17:40] **Dr Mike T Nelson:** to go off

[01:17:41] **Christa Rymal:** very hard. Yeah. And it's hard to get people a medication that, they know is lifelong and has side effects that they really don't want.

When you need it. But obviously most of us, our goal is to help you avoid it. And GLP ones do a really good job with that. They really do. I'm a big advocate for them for that reason.

[01:18:00] **Dr Mike T Nelson:** Awesome. Well, thank you so much for everything and sharing all your knowledge here. Really appreciate it.

Where can people find more about you?

[01:18:07] **Christa Rymal:** Yeah, thank you for having me and thank you for asking Mike. So currently you can find me on our website at thepointretreats. com. You can also email me Christa, C H R I S T A at thepointretreats. com. We do have a podcast Rebell and Be Well. We're on a little bit of a pause with that at the moment, but as we're making some new plans for a bigger umbrella of care that will probably be coming back in the year ahead.

And yeah, love to have you join us for one of our future retreats and Mike, we got to get back to one and

[01:18:37] **Dr Mike T Nelson:** that'd be awesome. We love it there.

[01:18:39] **Christa Rymal:** Yeah, we've got a lot of good things ahead. So thank you for asking. And again, we're on Instagram and Facebook and all the social media pages too. So you can find us in those spaces also.

But

[01:18:49] **Dr Mike T Nelson:** What are you under Instagram? Is it the points retreat? Is that right?

[01:18:52] **Christa Rymal:** The point retreats? Yeah,

[01:18:54] **Dr Mike T Nelson:** the

[01:18:54] **Christa Rymal:** point retreats. Yeah. On Instagram and Facebook. So you can find us there and you'll see what our events are coming up and you'll be the first in the know about some of the changes we have coming up in the next three to six months to which are going to be exciting and hopefully.

Allow us to have a bigger reach also. So yeah, and thank you Mike for the great work that you do. You're not only a great human, but you do really impactful things. So thank

[01:19:16] **Dr Mike T Nelson:** you

[01:19:17] **Christa Rymal:** for all you continue to do. I learn from you all the time and with you and Jody, you're incredible people. And just, yeah.

Thanks for being in my circle of support and information and knowledge. And thanks for asking me out today.

[01:19:29] **Dr Mike T Nelson:** Yeah. Thank you so much. Really appreciate it.

[01:19:32] **Christa Rymal:** Yeah. All right. Until we get to dinner or concert enjoy your upcoming travels and I look forward to connecting with you and Jody this summer.

[01:19:40] **Dr Mike T Nelson:** Yeah. Sounds good. Thank you so much. Appreciate it. Take care. Bye bye.

[01:19:44] **Dr Mike T Nelson:** Thank you so much for listening to the podcast. We really appreciate it. A huge thanks to Christa for all of her time here. It's always wonderful to chat with her. Make sure to check out all of her links below.

If you are also interested in doing educational stuff for healthcare practitioners, she has a great program. We've been to the retreats, the points retreat center, actually, a couple of times now. It is a beautiful location. We've taught there. We did some of the fire and ice seminars and really just a wonderful location.

So I highly recommend you check out all of her stuff that she's got going on. If you're looking for a ketone beverage that doesn't taste like jet fuel at all, check out Tecton Life.

Use the code Dr. Mike. Save 20 percent at checkout full disclosure. I am a scientific advisor at Tecton and an ambassador. So I do have a vested interest in them. And then also check out the Flex Diet Cert is opening again on the June 17th, 2024. If you're looking for a complete system for nutrition and recovery, this could be you as an individual, as a fitness enthusiast, or as a trainer or coach.

We walk you through the concept of metabolic flexibility and flexible dieting, how this applies to learn all the details of the eight interventions, everything from protein, fats, carbs, sleep, micronutrition, and more. And then we've got 40 specific action items. So there are five action items per each one of the eight areas.

So at the end, you will know exactly what to do, where to start, how long to do it for. So you'll understand the big picture, metabolic flexibility and flexible dieting. You'll understand all the details or as best I could get into in one hour. What you need to know about protein, from essential amino acids, timing amounts, everything else for each of the eight interventions.

And then you'll know exactly what to do with each one of those in a complete system. We'll have a wait list. That'll be open. Also, put you on the newsletter. Go to flex. diet. com for all of that information. Thank you so much for listening to the podcast as always really appreciate it. If you could give us a little like, or hit the subscribe button, all those things help us with the old algorithm to get better distribution so we can get more guests and make sure to answer all your questions.

Thank you so much. Greatly appreciate it. Talk to all of you next week.

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.

[01:22:32] **Nancy:** This podcast is for informational purposes only. The podcast is not intended as a substitute for professional medical advice, diagnosis, or treatment. You should not use the information on the podcast for diagnosing or treating a health problem or disease or prescribing any medication or other treatment.

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