

## **Incorporating TA-65 into Your Practice**

**Dr. Joseph M. Raffaele, M.D.**  
**Gowri Reddy Rocco, M.D.**



**Dr. Joseph M. Raffaele, M.D.**

Hello, this is Dr Joe Raffaele with another episode of the Telomere summit. Today, I am very pleased to welcome Dr Gowri Rocco to the summit. Welcome Dr. Rocco.

**Gowri Reddy Rocco, M.D.**

Good morning Dr Raffaele, thank you. Thanks for having me.

**Dr. Joseph M. Raffaele, M.D.**

Just to tell you a little bit about Dr. Rocco, she is double board certified in family medicine and anti-aging regenerative and functional medicine. She's been practicing medicine for over 20 years, and is founder and president of optimum wellness and longevity in Corona, California. She recently published her book, 'Growing younger', a guide for men and women to learn how to fight premature aging and restore their youth energy sex drive and sleep. She currently practices customized bio-identical hormone replacement therapy and regenerative medicine, and is known by her patients as a wellness warrior. Welcome Dr. Rocco. Yes, why don't you tell us a little bit about your journey to this type of medicine, Most of the doctors that I've interviewed and I myself have started out in more conventional medicine and gotten into this exciting field. And I always love to hear the, sort of the journey that you took to get here.

**Gowri Reddy Rocco, M.D.**

Sure. You know, I agree. I think most of us coming to medicine healing and wanting to transform people to be healthier. And when I was young, you know, we migrated, we immigrated from India. My father came to the United States and it, it was a big challenge to adjust, but what I loved is that the open-mindedness here to medications to heal, when I went to medical school, it was so different because our setting, it was more structured on disease,

disease maintenance, if you will, instead of like disease prevention. And I think I deterred from conventional medicine, I went into more preventative functional medicine because I realized that it took so much time to explain to patients why you can't just take a drug and sustain a disease and where you actually want to make lifestyle changes to reverse it, and actually graduate if you work from a drug. And so I realized that that wasn't the path that I wanted to stay on. So I pursued regenerative medicine and I had a personal story of my sister, who also, I didn't realize, but I got the prescription she was given, she, sadly at 19, she developed Schizoaffective disorder, which is a very severe along with bipolar, which is very severe.

And she had the best treatments with so many physicians, but they never addressed like the functional side of it in our body, like how we eat the nutraceuticals, or if she had any toxin exposure and it was all just prescriptions. And even though they helped her they didn't sustain quality of life, and so many side effects took effect. And it's very tragic because I feel like, I wanna be more wholesome when I treat my patients. I wanna look at every aspect of what's causing them to overeat or self-medicate. And I want it to be more sustainable independently of a drug. So, you know, of course we can all prescribe drugs there's nothing wrong with that, but we want to arm the body to have its fullest immune system engaged when we get exposed to such things as COVID or even just colds, pneumonia, you know, mental disease. So, so I love, love that I'm in this form of medicine and it makes me feel a lot more impactful in my patients' lives.

**Dr. Joseph M. Raffaele, M.D.**

Yeah, I mean, I do hear that it's usually, often anyhow, a situation where a loved one, a parent, a sibling, a spouse had a problem that wasn't exactly addressed by some of the traditional approaches to disease and that sort of spurred them on. I myself had two parents with Alzheimer's disease, so I was looking after five years of practicing internal medicine to see if there was something different that could slow down that process. And, and that's, you know, I hear that. So I, I hear your story.

**Gowri Reddy Rocco, M.D.**

Thank you

**Dr. Joseph M. Raffaele, M.D.**

You talked about getting into sort of the more functional and preventative aspects, tell us a little bit about how you approach a new patient and what types of patients do you treat most regularly, and what's your approach that makes it sort of different?

**Gowri Reddy Rocco, M.D.**

You know, I think, I see all different age groups and I, especially see men or women, children that have or adolescents that have been kind of imbalanced, by could have been a crisis or it could just be a hormonal imbalancing for instance a lot of young women now have issues with periods and PCOS right? We are seeing that so much of the nutrition affects how they're aging and going through puberty and also affects their immune systems so if they're doing you know self-medicated things like cannabis or vaping, stuff like that affects them more immediately because they're not aware of how it affects their hormones whether they're developing. And a lot of young men too like, I don't think they realize how these things affect their mental behavior or their hormones when they're under stress. You know, a lot of us, yes we do focus of andropause and menopause, but I feel like it starts so much earlier now because people don't sleep as well. People don't eat the right proper nutrition.

And I feel like there's no age like limitation anymore and we have to start as early as possible to educate everyone about nutrition, and how our cells regenerate. It's just not automatic anymore because we eat so much more processed foods and we put so many negative thoughts in our brain and don't remove them, and I just feel like, especially with the last couple of years, all the challenges that we've gone through with COVID and media being so negative everywhere, you know, we don't keep in perspective how amazing our bodies are. How incredible, resilient we can come back from pretty much anything if we just feed our body right. You know, with nutraceuticals and how we eat and how we sleep, exercise. So I kind of take like a whole range of patients. I really decide independently if someone's a good fit for me, because if they're not willing to change, which is probably the most important thing and want to be better, we probably wouldn't be a good match, if partnership.

**Dr. Joseph M. Raffaele, M.D.**

Yeah, it's interesting that you bring that up because I think there's more, more evidence in studies now talking about how in-utero programming and then childhood stresses can affect epigenetics that then lead to increased risk of disease in young and mid adulthood. And ultimately of course, later in life. So addressing those early on, I think it is really the ultimate preventative medicine. In fact, you know, telomere biology starts right there, telomeres start getting shorter at birth. And if there is stress, there's a series of studies that show that that can shorten telomeres more rapidly. So focusing on younger people and getting them started early with healthy, healthy behaviors, I think is definitely a great approach.

**Gowri Reddy Rocco, M.D.**

Thank you. Yeah. You know, I also see that in my practice now we have so much more infertility issues. I'm sure you see that too doc, like it's at such a young age and it has so much to do with stress and how our body sometimes protects one of them not getting pregnant when we're too stressed out, we don't eat well. And we're seeing that so much more now. And I feel like the best thing is to unlearn bad habits and reintroduce healthy habits, so that even if you successfully helped them to get pregnant, they have to maintain that. Like you said, like put positive stressors in, not negative stressors in, and they, you know, people aren't willing to realize that all those things affect like you said, how people gain weight later when in their thirties, or how they cope with you know, crises in their life. So yeah, telomere length like is immediate, like you don't have to start addressing it soon as possible when you meet people.

**Dr. Joseph M. Raffaele, M.D.**

So I guess, what type of evaluation do you do at baseline to sort of get an idea, you know, in terms of, you know, history, physical, other diagnostic tests and lab tests, and, and do you test telomeres regularly in your practice?

**Gowri Reddy Rocco, M.D.**

You know, I, I do a comprehensive serum test, and I look at cardiac and, and, you know, hormone evaluation, urine, but you know, I don't do telomere testing and I'm happy to implement it. I think I've seen that I do similar cardiac markers and get the particle sizes, like what protein, how the inflammatory levels when I see them high. And I see them dramatically decreasing within three to four months, I'm, very confident that I'm increasing that telomere length, but I also utilize TA-65, pretty widely in my patient population from the beginning so I implement it right away and I keep my patients on it, ongoing while they're my patients. And it's because I'm assuming, obviously they're coming to me and they're not sleeping and they're not exercising well or eating right so they're not producing proper thyroid regulation hormones, estrogen progesterone, you know adrenals, whatever it is I have to just, I feel like I start off right away because I'm assuming that, that, the telomeres are taking a hit.

**Dr. Joseph M. Raffaele, M.D.**

Yeah, well, they, they likely are. I think, you know, one of the things I love about telomere biology and, you know, all the associational studies with chronic diseases is that, every healthy behavior is associated with longer telomeres and all the ones that are not so healthy, smoking, obesity, lack of exercise, or, and of course, psychological and physical stress are associated with shorter telomeres. So it's probably a fairly, a fairly good bet. So what percentage of patients do you, is this sort of like a base and sort of a basic supplement that you think you can put patients on?

**Gowri Reddy Rocco, M.D.**

You know, not necessarily like my auto-immune disease patients, absolutely. Like with Hashimoto's, Lupus, when you see Fibromyalgia, history of Epstein-Barr mono, like when you see people healing slowly in the middle-age, for me, middle-age is fifties or sixties, but conventionally thirties or forties, even if you see people not properly healing I think it absolutely does not hurt to add TA-65 only because it's, it's got that telomeres, help produce healthier cells. But if someone has complications with sleep, I find, are, you know, like melancholic mental, kind of like a heaviness I feel like TA-65 in my practice at least, has helped them induce deeper sleep. When you balance your hormones, energies, healthy food and exercise, I feel like it's like the icing on the cake that helps people remain calmer if you will. And not be as depressed. now, you know, I use a higher dosing sometimes with each patient, as I'm sure most of our colleagues do. I think you have to break it, figure out like, you know, how severe someone's body is. If the older my clients are, the more open they are to taking more TA-65 because I've explained to them that, you know, telomeres, we've learned that they start off with such a high base and come down to lower and lower like five K. So a lot of my elderly patients in their eighties are appreciate the difference from energy near if you will not feeling as down from taking a higher dose of TA-65 as well.

**Dr. Joseph M. Raffaele, M.D.**

Yeah, I hear that anecdotally from other doctors I've spoken to and patients in my practice. So you, you feel like patients actually have a subjective improvement in, in how they feel when they started and what kind of doses are you using in the, in the older population?

**Gowri Reddy Rocco, M.D.**

You know, generally it depending on my patient, if they can afford it I'll tell them to use one B.I.D and,

**Dr. Joseph M. Raffaele, M.D.**

Are you talking about the capsules or the tablets? the 250 or the 500?

**Gowri Reddy Rocco, M.D.**

I'm sorry, the capsules the capsules, they usually are 250 the ones that prescribe the 250 ones I'll give it one B.I.D. Now, obviously pregnant woman I don't use that just because I don't know the safety margins but generally I deal with young adolescents If I find that they have autoimmune disease, I, I immediately start one P.O per day the 250 milligrams with anyone that's about 15 over, or anyone that had COVID I use it aggressively. I use it two b.i.d.

**Dr. Joseph M. Raffaele, M.D.**

Oh, so 500 twice a day, a thousand I use a day. Yeah. I mean the b.i.d dosing strategy is, is I think a pretty good idea because of the, you know, the half-life of TA 65 in the blood by about eight hours is not around as much. So you get that more persistent stimulation of telomerase activation. Yeah, I think you might be the first doctor I've spoken to who uses it in adolescents. You see anything in terms of markers or clinical response from putting them on TA 65?

**Gowri Reddy Rocco, M.D.**

You know, I have to say like the work now, I'm seeing a lot more Hashimoto's in young women you know, and lupus flare-ups. It's really odd. And I don't know why, like the last three years I see that, you know, there's a lot more nutritional issues going on. I feel like people are not eating real foods. And I've seen obesity as an issue, I've seen a very amount of increase in PCOS women having fatigue, depression, weight gain, insulin resistance. And I feel like it doesn't hurt for me to give them a TA-65 because I'm increasing the strength of the good cells to regenerate and keep the base pairs long. I haven't seen any negative effect of taking it. Now, there's other things that I use with it obviously, like B-complex, vitamin D, omegas there's a, my protocol calls for eating plant-based proteins, cutting out dairy, cutting out sugars.

So it's a very detailed protocol that I do along with exercise because exercise induces probiotics and gut help to assist and immune system. So adding a TA-65 in an 18 year-old or over a 15 year old who is going through autoimmune disease like losing hair from Hashimoto's and not having regular period and other sort of issues, I've seen that it kind of helps my protocol kick into place, so these women, or these young ladies feel more confident with their weight loss and energy and sleep, not as depressed. I don't like to prescribe antidepressants necessarily right off the bat. I really, I'm open to it, but I feel like, this helps their, you know, their auto immune system if you will, increase production, of the healthy, like CD four CD eight, like increase their production of their own serotonin, epinephrine, . Now do I know the science behind, I really don't, I'm using it because I can use it to benefit my patients. I've seen it help, you know, 30 year olds, 40 year olds. So I'm hoping that it'll help the younger, you know, 17 18 year olds.

**Dr. Joseph M. Raffaele, M.D.**

So do you see some changes in...

**Gowri Reddy Rocco, M.D.**

And I see the benefit

**Dr. Joseph M. Raffaele, M.D.**

I know the markers that used, you mentioned that some of the lipid particle markers and some breakdown of, of, of the lipid profile, do you see some improvement in those when you're on a comprehensive program of course, but it would be interesting because there is a study going on right now, looking at recurrent MIs in people who've had first MI and seeing whether TA-65 for a year reduces the number of senescent T cells in their blood, which secrete all those inflammatory markers that can cause all the problems you're talking about and also may potentially reduce events. So you, do you see anything in your markers?

**Gowri Reddy Rocco, M.D.**

You know, I'm very aggressive with nutrition when I treat the Lego particles, a lot of my patients that have the, the LDL, the small particle high levels and the low HDL levels, I immediately discuss cutting out red meat and they cutting out dairy, cutting out sugar so, to me, I do use the TA-65 but I will have to say it's their behavior and their nutrition that's changed on top of the TA-65. So I have no way of knowing, like if that's cause I don't hold all parameters constant, I really make exercise a absolute in all my patients. Like all my patients have to exercise three to four times a week, probably an hour walking or whether they want to do weight training, Pilates, whatever it is. I'm very strict about exercise and nutrition.

So those things are like icing on the cake, like using nutraceuticals because anybody could buy nutraceuticals. Why does it impact my patients? I believe it's because they actually cut out inflammatory foods. They actually put in lots of plant-based foods in they exercise, you know, sleep is critical, seven to eight hours. Six is okay and some people, you know, really ask me to monitor that. So all these things to me make a bigger difference than just putting on nutraceuticals, but the nutraceuticals have a grand effect when you do everything else right. And I personally have seen that and I feel like my patients are so compliant because their health is so much more boring. They don't have to have so many events. Their immune system is improved even with, you know, chronic autoimmune disease, I find that a lot of my clients don't have episodes.

**Dr. Joseph M. Raffaele, M.D.**

No, I think that you're absolutely right about that. TA-65 is not inexpensive, how do, what kind of a sort of discussion do you have with the patients before, you know, when you introduce it to them and say, look, you know, I think it's worth, worth it to take that, just to help our listeners with what they're just, cause I know that in my practice, take some, some, some discussion to sort of, to tell the patients, well, you know, you're gonna spend \$200 a month on this, any pearls on that?



**Gowri Reddy Rocco, M.D.**

You know, I had you guys, Sebastian had sent me this huge poster explaining how telomeres, it's a diagram of the chromosomes and the telomeres. I have a picture of a young, a baby and an elderly man. So I have like two or three of those in my office. So I explain to people like, visually, it's very powerful because you wanna people have a hard time imagining you're going to transform or feel better when they come, because they're usually at their worst when they come see me, because it is a cash pay offers, right? So people come because they're really desperate for help. So I explain to them, this is, you know, where you are right now. You're not regenerating your good healthy cells. We don't, by the time we age, we have more joint pain. We have more, you know, brain cognitive issues and memory issues with sleep. So this isn't gonna cure it, but perhaps this will improve our condition. And I tell them that it won't hurt you not, it won't hurt you to take it, because you know, it might, it's not an immediate fact that you're going to have an aha feeling when you wake up.

But just like you put a penny away every day in your savings for retirement, you can put a TA 65 away and just help regenerate some, banks some of your brain cells, your hearts, your blood cells and regenerate. And it might not be enough, but it certainly is way better than doing nothing. Right? So it is a cumulative effect and you have to have faith in your, your own, that you're worth it and I tell my patients, you're absolutely worth your health because what else do you have? So just reminding them that this isn't about, like, it's not a wand that just going to help, if you can measure, and immediately figure out if these things have changed. But I can tell that my patients have renewed faith in their own healing. If they know there's something there to help them, even when they do their own positive changes and you know, it's almost like a treat for them to take.

**Dr. Joseph M. Raffaele, M.D.**

Yeah. I mean, I, I think, you know, that sounds like a really good approach. I, you know, putting a penny in the bank, I often say that, you know, building up your biological 401k for, you know, more health in the future and that's actually molecularly being built up by lengthening of the telomeres and they, there's sometimes glob onto that as well. And then how about any particular anecdotal improvements? I know some of my patients, other doctors, their patients have talked about vision improving, particularly presbyopia.

**Gowri Reddy Rocco, M.D.**

Oh yeah, Okay. So, you know, I don't have to direct effect of each chemical effect because I studied like myself, which is hormones more. So I guess I love reading about this. I listened to, I



listen to the webinars, but as far as like what I've seen in my patients I just met, the vision, even in myself. I feel like night vision definitely has improved. Even my vision has improved. I used to be near sighted and now I thought I was getting farsighted, but even that I don't really need those glasses. I find that, but I didn't take them probably like for about three four years now. And I find that like women have told me that, you know, the hair base-deep, there's not as much graying if you will, as quickly. It's like not as white, it's more like a darker brown or the graying effect is not as prevalent if they start it early enough. You know? And I don't want to use that for women cause I can't prove it, but I feel like it, if that benefits hair color as well just that at the high dose that I give probably two a day, you know? And then the two b.i.d, I feel like that helps people getting through acute depression or challenges it helps them sleep a lot deeper.

And I guess with research we'll realize that maybe it has a lot more effect than I'm seeing or I can appreciate with my patients if it's true or not, But I do read that when you, that Plasmapheresis like we've seen that in, there was a study that I read about when you put an old mouse with a young mouse and you do the Plasmapheresis, you see that the younger mouse has more telomeres and stem cells so when you give it the older mouse, you see the older mouse generate a lot more younger properties of regenerative cells and heal quicker and look and feel better. So, you know, if we could give the power of telomeres to a midwife, you know, 67 year old person and have them feel more mental energy, physical, you know, strength, that's great. I want to provide it for my patients. Right? So why not?

**Dr. Joseph M. Raffaele, M.D.**

Yeah, gray hair I just recently saw a paper, well its actually sort of a presentation on the new kind of understanding of graying hair. We used to think that, you know, the melanin cells stopped producing the pigment so that the hair is, that does happen. But the, the stem cells that replace the melanocytes, they thought were gone, but in fact, they're sort of more in a quiescent state where they're just sort of sitting there and, you know, I've seen it in my patients as well, talking about a reduction in graying hair. And it may be just as in the study that we recently published showing a reduction in senescent T cells that perhaps these quiescent stem cells that are producing the melanocytes are getting turned on again or reset by linking of their telomeres. So there, there, I mean, I think there, there may be some biology behind that. There also, I think there's also that PD-L1 inhibitor that's used in cancer therapy. One of the side effects was people getting less gray hair, reversal of graying of hair. So we, we kinda know that that can take place and telomeres are very upstream from all that. So if you can reset the telomeres, maybe that is what's going on, and maybe it's was going on with the vision as well. You know, the retinal epithelial cells getting more telomere length. Do you have athletes in your practice?

**Gowri Reddy Rocco, M.D.**

I do, I do.

**Dr. Joseph M. Raffaele, M.D.**

You see anything in them?

**Gowri Reddy Rocco, M.D.**

I do use it, I mean I think, go ahead I'm sorry, I'm sorry.

**Dr. Joseph M. Raffaele, M.D.**

No I'm just wondering do you see anything with them? Cause I have some masters athletes that, that see that kind of stuff and they've had certain times for their say, 10k in their 50s or 60s and they keep very detailed records and they get to, they start taking TA-65. We started to see those, those numbers, the times decrease. Do you see anything like that?

**Gowri Reddy Rocco, M.D.**

You know, I feel that I don't, I don't have them monitor how they do with it, I add it on just to their protocol. I have a lot of bike riders and people who do, you know, several of them do the iron man, but a lot of competitive bikers. And I feel like, but I use NAD as well. I use other things like for me, I'll say do the testosterone. So I feel like all of it combined together has a very positive effect. I do have my patients when they're in a competitive state to take on any kind of sport, to double up their TA-65, you know, but it's just because I encourage them to have a deeper sleep and it keeps regenerative properties for after they, so they can have better recovery as well. I don't, I don't have the monitor how much they take. If they take two, they take three prior or after their race. I just have them, I do check their inflammatory levels to make sure they don't have too much inflammation in their muscles or just post-op or post race or whatever. But, I don't, I guess I should pay closer attention to that because I'm not looking at their performance as I'm looking at their long-term, you know, inflammation or cardiac benefits. But that's a good thing I'll start looking at.

**Dr. Joseph M. Raffaele, M.D.**

Yeah. I mean, I don't even tell these guys and women to do it that's just part of their, their training records. They bring them in their Excel spreadsheets and they go, 'look at this' so I'm very happy to see that. And they're very pleased when times are coming down and they're beating their old classmates in races they've been running for years. They're, they're kind of happy about that. So do you, I mean, I, as vis-a-vis the, the Ironman, I mean, that kind of training

has got to be stressing stem cells and regenerative capacity. I mean, there's a pretty good body of evidence showing that too light, just walking, and too intense, you know high intensity training and without a reasonable recovery period, shortens telomeres, or certainly doesn't lengthen them or keep them from getting shorter more rapidly, but, moderate exercise, so an Ironman training just the training itself, nevermind the Ironman itself, I would think that they should definitely benefit from some telomerase activation and, and, you know, I wonder whether at some point TA-65 is going to be a banned substance in the Olympics We'll see.

**Gowri Reddy Rocco, M.D.**

Yeah, I hope not. You know, that's why I agree with you Like, I try to encourage my patients to do moderate, like nothing aggressive to that. We've seen so much research about like, you know, even after people work out, like it's so important to have your down days and just recovery is so important. And I agree, like it's good to push yourself, but I don't want my patients to feel like, you know, it's healthy to be if you're going to be a marathon runner, you're right you have to take actual TA-65 because you're just breaking down your cells to a greater degree and you're not giving it time to recover. So you're right. Like, I'd think much, I'm sure some of my runners take a lot more TA-65 on their own because they probably think about that. And I always encourage people to balance and do it, for the right reasons and not add more stress if you will, to make it a negative event in your body instead of a positive.

**Dr. Joseph M. Raffaele, M.D.**

You mentioned that you use NAD, how do you, you use NAD precursors; how do you do that? Do you do IV NAD?

**Gowri Reddy Rocco, M.D.**

You know, I, I use a brand that they get from Bidwell, and then I also, did a lot of research you know, I've gotten to, I've read doctor Dr David Sinclair's book and I've got to an event with him where he was the speaker. So I try to, you know, keep on top of everything. Cause I do, you know, I consider him a mentor, and I read so much of his material. I use a lot of, insulin resistant, kind of nutraceuticals if you will. Like Metformin, like N E D and that's with people that have a high risk of it, or that just look like to me are fighting really hard to keep their, hemoglobin MEC or insulin, fasting insulin levels low. So I do use that for that reason, more for helping regenerate mitochondria than just for, to give, I do it customized for quite a few of my patients. And women, I feel like, you know, when you take a little bit of NAD supplement in the precursor, and you also take a resveratrol and you take the TA-65 at least b.i.d you'll notice so much more energy, you know, effortlessly without having to drink some of those terrible drinks that are like

full of toxins. And you drink more fluids that are healthy, like green tea or water, and you don't feel like you're craving so much energy. You know sometimes we crave energy and we self-medicate with unhealthy things and unhealthy thoughts. So it just makes it something you don't have to worry about.

**Dr. Joseph M. Raffaele, M.D.**

Yeah, but is there a, it sounds like you use oral NAD mostly. Is there a particular form nicotinamide riboside or nicotinamide mononucleotide?

**Gowri Reddy Rocco, M.D.**

I can say, I use scientific, I have to look it up, but you know what? I have it, I'll get it while we're talking, you know, I love them, I've been using them, I'm sorry [Joe] What's it called? [Gowri] I've been using them, can you say that again?

**Dr. Joseph M. Raffaele, M.D.**

The scientific it's a, it's a, it's a brand of, is it NR or NMN.

**Gowri Reddy Rocco, M.D.**

No, it's NAD sublingual spray and it's, you know what, it'll come to me when I'm thinking so hard. I have so many different supplements that I prescribe, but I'm going to look what, oh, I want to say it's quick it's Quicksilver scientific.

**Dr. Joseph M. Raffaele, M.D.**

Oh alright, okay.

**Gowri Reddy Rocco, M.D.**

And I think they had, they had come out with an NAD spray for a very long time now. And I just I've appreciated it in my patients. And then, you know what, they, depending on the state that we live in, like NAD subQ, is, I prescribe that too, but you have to be very cautious because now since January, especially in the state of California, I mean, California, there's been a limitations. So I'm trying to like follow all these guidelines now, like, you know, even more strictly. So in, in state of California, we did prescribe subQ NAD, which I do that too.

**Dr. Joseph M. Raffaele, M.D.**

Yeah. I mean, I certainly think that raising NAD levels as they certainly decline with age, is complimentary for sure with telomerase activation with something like TA-65 or trying to keep

your telomerase molecular pathways where they interact sort of synergistically. So I do, I do a fair amount of that in my practice. I'm just trying to figure out, if you don't have a good test, which one is working better? Is it, is it NR? Is it NMN? David Sinclair talks about NMN. I mean, they both, NMN there's a little bit more of a precursor, but does NR get into the cells better? So it's kind of a scenario where it's a little, it's a little tricky right now.

**Gowri Reddy Rocco, M.D.**

You know, I guess I haven't found the best supplement for that. And so I just went right to the NAD cause I've seen, you know, some of the products work on my patients and I couldn't figure out, I don't want to overload them either to be honest with you, like how much can I get that? Right? You know, another thing was that I was really into peptides. I was using peptides quite a bit as well before, and now I cannot, which is very challenging in California because Thymosin alpha was one that I really loved. And because we were limited, and now we can't even prescribe it, you know, unless we get from Canada. So I don't want to go there. So I use TA-65, but lot more than in some of my patients that benefit from thymosin, off of thymosin alpha, sorry

**Dr. Joseph M. Raffaele, M.D.**

Yeah, yeah, thymosin alpha one is really a interesting molecule and for, you know, rejuvenating your immune system, I haven't had that much experience so I'm curious about what kinds of results you see from that when, you use it a little bit more liberally.

**Gowri Reddy Rocco, M.D.**

You know, I just use a really low dose, but I mean I used it for three weeks in patients, and that would be it. And I tell them to take, do a every day, five days, two days off. And it made a significant improvement in people who actually took it for sinus issues. You know, like they had a season where they would just get pneumonia or bronchitis and maybe get it, So it's really beneficial, I feel like it was a little bit that made a big impact in patients. I didn't use it in any patients who had a history of cancer or any kind of like, you know, malignancy history in the family or themselves so I used it generally for improving wherever we needed thymus or T-cells wherever we needed for any kind of acute fight that patients might've needed. And I generally, I really did use it pre-COVID in patients a lot. And I, I think it helped them, with the COVID you know, recovery as well.

**Dr. Joseph M. Raffaele, M.D.**

So do you use any other peptides in your practice? BPC 157 or?

**Gowri Reddy Rocco, M.D.**

Yep, I do. But you know, I can't, I don't know what state you're in doctor Raffael, but this state is really super strict and I,

**Dr. Joseph M. Raffaele, M.D.**

Yeah, New York is pretty much like California

**Gowri Reddy Rocco, M.D.**

Yeah, It's really sad. I have to use everything topical. I did like subQ a whole lot better. And I was using quite a few peptides and now they got rid of, there was when I used for, it's been like a year and a half now, they, they, I can't prescribe it, but it was for a brain fog and it was incredible. I felt like it helped my Alzheimer's and Parkinson's patients so much. And now to give TA-65, is incredibly expensive for those patients, you know, along with their treatments of CoQ10, vitamin D and fish oils, they'll take it but I feel like, I don't know, what's, it's really painful because we have to follow guidelines, like what I can prescribe in my state. But I was using quite a large profile of, I should say, the ones that I could use in my state. Now, if I wanted to get in my state, now I have to go through Arizona or Nevada and have my patient, bring it to me to teach them how to use it, but I don't, I don't do it anymore.

**Dr. Joseph M. Raffaele, M.D.**

Do you do any of the, I know you do a lot of hormone optimization, do you do any of the, the growth hormone stimulants, GRPs, or, or tesamorelin, or...

**Gowri Reddy Rocco, M.D.**

I was doing ipamorelin cjc but I can't use those anymore. So I was using those prior to then, you know, when I could get it, now for, I don't usually use growth hormone in the state. It's also very challenging, if I do, I use it very acutely And then with, you know, I do of the plant-based bioidentical hormones. That's probably my biggest, my most common thing I think for patients. Yeah.

**Dr. Joseph M. Raffaele, M.D.**

Yeah,

**Gowri Reddy Rocco, M.D.**

You know I,

**Dr. Joseph M. Raffaele, M.D.**

Go ahead

**Gowri Reddy Rocco, M.D.**

It's very unique depending on how old the patient is or what they're able to handle, because quite a few of my patients are, are also women that had ablations or early ovarian failure, you know, where they're going through menopause you know much sooner they thought they were. And so I, you know, if they've had a hysterectomy, makes it a challenge what you give them and how much is enough. But, I think like, I think now that we've talked, before a year and a half ago, I was looking into testing telomeres just to see, like how much I can improve my patients but then I said, you know what instead of spending money on it, I'm just going to have my patients spend money on the product if there's a benefit. But do you find that clinicians are using the testing? Is it making an improvement? Do we see much of an improvement that is needed to show the patient or? Because a lot of patients just really trust the clinician they really trust us like, okay, 'what do you think would help me', you know? Is it for us, is it for them that we test it for? Because I find that if you're using it, you're going to increase your telomere length.

**Dr. Joseph M. Raffaele, M.D.**

Yeah, I mean,

**Gowri Reddy Rocco, M.D.**

Is it just for dosing?

**Dr. Joseph M. Raffaele, M.D.**

It's, in my practice, and other practices of doctors I've spoken to, I do baseline telomere length measurements, and then I do follow up telomere length measures. But I certainly hear what you're talking about, they're not really expensive, but they're not inexpensive about 300, \$400, depending on what lab you're using for the telomere testing. And telomeres have a coefficient of variation of, you know, maybe two to three percent. but that, you know, is like two to three years of, of telomere length attrition. So you have to do serial measurements to really get an idea about what's happening with it. Now, that being said, we did publish a few years ago, a randomized controlled trial showing a TA-65 at most of the doses, showed us significant increase in comparison to placebo in telomere length. So you can say, you know, with confidence that if you're doing it without testing, you likely are improving telomere length. The only issue is that telomere is, sorry, TA-65 is the bioavailability quite variable. So some people



might see absorption, I mean, the company did a studies looking at the pharmacokinetics and you might see a, an increase in telomerase activity with a low dose. Whereas another person might need a much higher dose. And again, has no significant serum level that would then translate into a cellular level of turning on telomerase. So the way I explain to my patients is that it's worth doing the testing so, you know, whether you need the higher dose, the middle dose or the lower dose. Because it is expensive enough that, you know, if you're taking a thousand units a day, that's a lot more expensive and will pay for more than enough telomere length tests if the 250 is going to work for you. So I try to do it that way, but it's, you know, it does take a couple, six months to a year sometimes to get enough telomere measures to get the idea about the trend.

So I often have them check, you know, you mentioned the CD four to CD eight ratio, check that ratio to see whether or not we're seeing an improvement on that, because when you reduce senescent T cells which TA-65 does do, the ones that are defined by lack of the CD 28 molecule that can happen in the first three months of therapy. And if I don't see a signal where they're reducing that number or improving that ratio, then, then I, I take the dose up. So, I would say that probably the majority of, of docs I talked to are using it more, the way you're using it, just because of telomere testing is expensive. But you know, if you're on for a long term, it's kind of like, it may be worth it from a financial standpoint to the patient to, to get the measurements.

**Gowri Reddy Rocco, M.D.**

Do you find that like, do you recommend, cause I use it, I don't keep them on, or dose necessarily all the time. I do it generally for wherever it keep flare up, if they have any kind of like stressors going on, because I know it's short acting, but at the same time, if it benefits one of my patients to take that over, you know, taking a sleeping aid, which I don't want to prescribe, right? So I feel like I use it acutely for three months, you know, six months. And then I have them go down and they feel better able to, you know, improve their other dimensions in healthcare, like eating right or exercising better. So I kind of gage it depending on, what's going on in their acute life, but I definitely would have to say, yes, you're right. That I should start testing people to make sure that I don't have to keep them on a higher b.i.d dosing or with, with when I start young people, I usually do just do once a day, you know, but, but I would love to see, I saw your latest that you just put out last week about autoimmune disease and how telomeres prevent like the breakdown of T4 cells and increases the body's own innate fighting capacity for auto-immune diseases. And I think it was specifically the CMV patients. Is that right? Or...

**Dr. Joseph M. Raffaele, M.D.**

Yep. Well, I mean, it works in both, but CMV patients are more stressed because they are chronically trying, your immune system is chronically trying to keep it at bay from coming out. And so if you have, if you're CMV sero-positive, then you typically have a larger connection of senescent T cells. And those are the ones that respond most robustly because they have a higher number to decrease. But we did also see an improvement in senescent T cells and actually an increase in naive T cells in people who were, weren't even CMV positive. That's probably through more direct mechanism on bone marrow stem cell increasing lymphocyte production, and then ultimately T cell production. So, but I mean, I think you're, And onto something, where under the acute situation giving a higher dose, because there, there are stem cells and there are white blood cells are being stressed more. I mean, there was, as I mentioned in that talk that Abraham Aviv hypothesized that some of the people that are really responding very badly to COVID-19, are those that don't have the telomere reserve to keep up with the proliferation of the T-cells to fight off the infection and if we could shore up their telomerase in that short, short term, that might be helpful now, you know, that's just theoretical.

It hasn't been any studies looking at that, but, you know, you're sort of doing the same thing with patients that are under stress. You know, I, I do use some growth hormone in my practice and, you know, the way it works is to turn on your muscle stem cell satellite cells. But each time you do that, you know, their telomeres are getting a little shorter. So I think it's very complimentary to give something, to maintain that telomere length so that they can continue to replace damaged muscle cells. And of course, testosterone works on the muscle cells to make them larger or hypertrophy. So it's kind of a, I think that it all works together pretty nicely and sort of, I think telomerase activation and telomere linking is a nice addition that we've had in the last 10 years to our armamentarium, and to our approach of hormone optimization. It sounds like you're doing that same thing in your practice.

**Gowri Reddy Rocco, M.D.**

Yes. Yeah, I would love to see the of lyme disease because a lot of my patients with chronic fatigue and I gave it to her blind, I do that acute flare-up, you know, higher dosing, I find that it benefits them you know I don't know if it's just because, you know, they also cut out sugars and they cut out wine and alcohol, you know? So it'd be great to see, yeah, the research that you guys have coming out on that too.

**Dr. Joseph M. Raffaele, M.D.**

Right. So you have a very successful practice up here in Corona, California, help, maybe tell us a little bit about how you grew that practice and, you know, got as successful as you are.

**Gowri Reddy Rocco, M.D.**

You know, thank you. Yes. We know we have a very wonderful practice out here. We're originally from the east coast and when we came out here 15, 14 years ago and our practice here is designed to actually, when we first came here, there wasn't anybody and Riverside Corona area isn't as popular as the Orange county area. So, but I came here because I saw there's so much underserved community for wellness. And it's more in that high-end areas. So when I came here, I did it because I really just wanted to do what I love and I didn't, I wanted to do it my way, and I really was passionate about it. And when we started, when I started, it was like one patient at a time and it's all been word of mouth. And I feel very blessed and very grateful to all my patients. They just send more and more people. And I, I think because I love, like it's like a puzzle for me to figure somebody out and try to help them give the most options, the best options that I can provide, whether it's like with, you know, a prescription along with a ton of other things. But my goal really is like looking at someone and seeing, and helping them transform, like to be better in 40 or 50 years, not just like two or three years.

So, because I think like that, I think they they're like, you know, they feel really comfortable with me. They trust, and we have a good trusting relationship and it, it's just a very, I feel very blessed that, I get to do something that I love. And it's a lot of fun when our patients are so grateful, they feel better, and their health, isn't such a fear, you know, it's not such a fear to age. And that's why to be honest, I wrote my book is I wanted to share my knowledge with everybody. Like whoever wanted to read about it and I want it to be very basic and simple. So they realize that it's not so intimidating to discuss longevity and to talk about like stem cells regenerating properties. Like how can I do it on my own? And I feel like, the more we include people in no matter what their weight, no matter what their race, or their economic status, the more we can grow the us into a wellness community instead of, you know, such as sickness, negative fear, aging community. So I have a very exciting outlook on it just because I'm from India too so I feel like, the more you change people, the more you contribute to society and, and the more you help, you know, the better you feel. So I don't know, everyday has been a blessing and I'm happy

**Dr. Joseph M. Raffaele, M.D.**

Yeah, no, that's a fantastic approach. It really is, I sort of did the same thing and you initially just are sitting there waiting for the phones to ring, but, the marketing is, you make patients feel

better and they tell their friends and that's how it works. So this been great to have you on Dr. Rocco to, help on the telomere summit and to hear your experiences is there anything you'd like to leave our listeners with to as a sort of final words of words of wisdom or anything you want to tell them?

**Gowri Reddy Rocco, M.D.**

Well, I always say with each, you know, may you have all the days of your lives, you know, Scott, and I just feel like that's what we have to do for our patients to help them like, live, be alive. And I was so excited about TA-65 when I started it. And I'm like, oh my gosh, I hope my patients afford it. I hope they can take it, because I feel like it's so exciting that we can empower someone from the inside out to grow their telomeres and keep them long. Because when you studied at med school, it seemed so depressing. Like, oh my gosh, like what, what are we going to do? And, you know, giving them a Lipitor, giving them Crestor isn't gonna lengthen it? So it's kind of exciting. And it's so cool because, we can provide so many positive ways that are there, even with patients that had cancer and, you know, you can give them something like this there's ways that they can still have quality of life. And if they did their part, like, you know, to take the TA-65, it just felt like it gives us more hope. And it's great to know that longevity is like, so, it's not a hundred anymore. It could be 130, 150, you know, we'll see obviously with quality of life.

**Dr. Joseph M. Raffaele, M.D.**

Yeah. Yeah, I know. Well, I agree with you. I mean, I think the approach medicine's going to be switching toward, maintaining the health span rather than treating disease and hopefully compressing all of that until the last year of life or so. Well, thank you very much a Gowri for being on the show. And I look forward to seeing you perhaps at one of the meetings and meeting you in person.

**Gowri Reddy Rocco, M.D.**

Thank you so much. Thank you. It's been a pleasure. Thank you.