The Power of Peptides: How to Boost Your Energy & Optimize Sexual Experience Transcript

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Introduction and Guest Background

Welcome to the bio optimized summit where we explore the next level of physical and mental health you can achieve through intentional and targeted optimization of your biology.

I'm dr AMY and today I'm very excited to bring this guest to you. She is a licensed naturopathic doctor. She has a practice both in Redondo Beach, Los Angeles and at the Metro M. D. Institute of Regenerative Medicine.

She is trained in regenerative medicine, detoxification protocols, hormone testing and treatment, bio identical hormone therapy, peptide therapy and ivy nutrient therapy. Which of course is why I wanted her to come and talk to us today because this is a lot of what I do as well.

And I'm so excited to share this information with you because it can really make a difference in optimizing your biology. She is a member of the International peptide Society and has completed peptide therapy certification training through the Academy American Academy of Anti aging A four M.

Of course. Thank you so much Dr Amber for joining us today. I'm very excited to pick your brain and talk about mitochondria energy peptides, N. A. D. I. V. Therapy all of that and how how people can optimize their biology through being very intentional, very targeted and what exactly they're addressing and trying to optimize. Absolutely.

And you and I have shared passions because you have this in your practice kind of the mitochondrial lens or a lot of conditions. So I'm sure we'll have a really rich conversation here.

Yes and what I have been seeing a lot more of our mitochondrial issues and I spent oh my goodness years close to a decade struggling with mitochondrial issues, never knowing that that's what it was. Until I actually was introduced to functional medicine. And then I started the training through funk medicine and I'm like, wait a second, this is me, This is all of the symptoms that I've been having. And I had a viral infection in college and ever since then it was, I would get these flare ups and these weird symptoms would happen and I could not control them. I could not stop them.

And I was always just very confused about even what to do about it. And so when I found out, wait a second, like the virus, that infection really affected my mitochondria, I've been able to optimize that and really accelerate getting back to the places in my health where I want to be, wow, that's a phenomenal story. And I don't, I think you really understand where your patients are coming from when you walked through it, when you've had, you know, some sort of mitochondrial dysfunction, the extreme fatigue, the viral infection, which we know, you know, that mitochondrial function. So even more, you know, power and understanding that you have working with patients from the angle.

What Mitochondria Do and Why They Matter

Absolutely, wow! Yeah. I think a lot of us are kind of fall in that category of having had our own personal health journey and that's very much what motivates us and helps us relate to our patients and help them have the hope that know things can get better because I have been there myself. Absolutely.

That's so much a part of my lens in working with women. So I specialize in women's health, do a lot of hormone testing. And then when I started learning about mitochondria and mitochondrial dysfunction and how, you know, our cortisol is made in the mitochondria.

So much of our hormone production happens, there are a lot of the fatigue that happens from A. V. Be and chronic

viral infections. You know, mitochondria is such peace. So it became this root cause kind of approach that I couldn't ignore because it was such an important piece for my woman with hormone imbalance that other practitioners, you know may not have heard about. And it's really, I think cutting edge and also root cause. So we're supporting what's happening on the cellular level for them. Exactly. So let's talk about mitochondria.

How would you describe what mitochondria are and what they do? Yeah. So, you know from sixth or eighth grade biology, we know that mitochondria are the powerhouse of the south.

So that one of those organelles that generate power and I live in L. A. So the analogy that I give to my patients all the time is if L. A. Isn't. And our power plant here in Los Angeles uh is the mitochondria.

What would happen if the very instant that power plant quits working. I couldn't power my phone. I can't charge my laptop. My wifi router goes dead. I can't run the dishwasher.

I mean all functions stop right and the city of L. A. Would shut down because we need power to run our lives. So the same thing happens in this cell. And you think about every cell has anywhere from three to you know up brain and muscle cells.

NerV nerV nervous tissue and muscle tissue has of course way more mitochondria than other tissue other cells. But um we need those mitochondria to be functioning 24 73 65. And when we start to get power outages happening in the cell, you know we're not able to protect damage and really, you know the D. N. A. In the middle country so we can talk more about that. But really mitochondria protects the cell powerhouse for the cell in it and it protects the cell from damage when it's working appropriately. And it's in all of the cells in the body.

And so when we have a mitochondrial imbalance dysfunction. Anything that's compromising the ability of our mitochondria to make that energy for us, it's going to affect multiple systems, it's going to show up in different ways because it's not just located in one organ or one system. It's in your all of your body and every single cell it relies on that ability to have energy to do what it does.

Yeah. Absolutely. And you know a lot of times the first symptoms that will surface are in muscle, our nervous tissues of brain fog, fatigue, uh, and then just lethargic, no energy to workout, move, uh, you know, exercise, that kind of thing.

And the really, I would call early onset symptoms because a lot of people experience those, especially even people in their twenties and thirties, I see that where they're just kind of brain foggy can't really pay attention.

Focus is an issue. Um, you know, and then fatigue and, and those are not really, you know, they think I just didn't sleep enough or there's a lot of factors that play a role, but those are signs that mitochondria are subpar, they're not, they're not at full, full functioning power.

The brain and the nervous system utilize a lot of energy. And so yes, when you have any kind of mitochondrial dysfunction, that's often where it shows up first is in those tissues in those systems that require the most amount of energy. And so the brain fog would definitely be a sign that I had early on that I attributed to other things.

I'm stressed. I'm not sleeping well. I probably am not eating as well as I should. I'm not exercising. So then I would go out and exercise and it would get worse.

And that that confused me. I didn't understand that until I really understood, wait a second. This is an energy problem. If I go out and exercise thinking that, that will clear my mind.

It'll wake me up and I'm just using up more energy then I've made the situation worse for my poor brain and nervous system that's trying desperately to just get through the day. Absolutely. And I really you know some of the things that we come into contact with in our daily environment like you mentioned exercise you know just tax you um things that are actually mitochondrial toxic are.

Nsaids a lot of pharmaceutical drugs. So when somebody comes into the doctor's doctor office and already feeling fatigued and already feeling muscle weakness and lethargic and then we give them a critical drug when they're already limping.

We've kind of like you know shot them in the foot so they're limping even more. Alcohol is also mitochondrial toxic. You know we talk about alcohol damages the liver but what is it damaging in the liver? It's damaging the mitochondria.

So um yeah and then you know potential we don't know the full effects of five G. But that could have some massive mitochondrial effects. And dr jo mer cola has his new book out and he talks about that uh that piece of mitochondria and five G.

So there's so many things in our environment that we come into contact with and then you add a viral infection like E. T. V. On top of that and you really end up with um suffering mitochondria. So it's like what can we do to add in to support that fundamental um you know energizing and powering the cell to do all of its functions and protect itself from damage. Because that's how we age is when ourselves cannot protect themselves from oxidative damage and there's a lot of damage in our environment in our world. I mean that's just the life that we live in.

And so even if you haven't had a big compromise, your mitochondria, you're having constant small compromises to your mitochondria just by living in your house, walking out your door, going through life. It's all around us and ourselves.

You know, if you think about what's happening on the cell, it's this kind of metabolic burning all day long, we're creating cellular waste. So we need to get rid of that as well.

Um And you know if mitochondria aren't protected from those those damage, so we have all those amazing uh antioxidants like CO. Q. 10 and P. Q. Q. And glutathione that protect that mitochondria, the DNA gets damaged.

You know that's when things get progress on the cell level breakdown on the tissue level, breakdown on the organ level. And then we start to get symptoms that turn into a diagnosis like Alzheimer's Parkinson's anxiety, depression, chronic fatigue syndrome, fibromyalgia, those kind of things.

Signs of Mitochondrial Dysfunction and Testing

So so yeah it's really bringing it back to what's what's happening on a cell level for that patient. Yeah and one of the struggles that I had at that time was recognizing that I was not feeling well.

Things weren't getting better despite everything I knew to do at the time. And so of course I went into my you know primary care doctor and we ran labs and most everything was normal. There wasn't anything clearly that they could say oh this is causing your fatigue, this is causing the brain fog, this is causing whatever it was. Most of my labs were normal.

I had low vitamin D. Lo uh ferret in my iron was fine but my favorite one was low and then I had some high autoimmune markers but nothing that was very definitive for anything and that's all like that was the only sign in my labs of anything that was wrong. And so I knew that there was something there with the vitamin D. And the fair 10.

Because even after I started taking the recommended supplementation, those did not get better. So that's when I was like okay there's something else that's going on that my body can't even absorb the nutrients that it needs.

And once I understood the mitochondrial factor I'm like well of course my mitochondria aren't getting the nutrients that I need because of all these other factors inflammation and stuff that are happening in my body. So what are how would a person know that they have a mitochondrial dysfunction? Should they go get labs testing?

What what do you do, what do you recommend? Yeah. So the testing for mitochondrial, there are some tests that you can run uh just to get an idea. Sometimes they'll do like an old panel, we can look at glutathione levels which

gives us kind of a marker of oxidation oxidative stress.

But for the most part up until recently it's been really hard to to find very specific markers for mitochondria on a lab test. Our conventional cbc CMp aren't going to really give you anything to you.

Uh And what tends to happen is a similar experience to you is where there's you get your lab report back and of course you're feeling fatigue and brain fog and all these things.

And the and the doctor is not thinking through a mitochondrial lens like you and I do. And so the labs come back mostly normal and they send you home and say we think you're you're fine, we're gonna put you on a multivitamin.

And uh yeah, so I think that's a very common experience uh and and the way that uh medicine progressing is that we're really understanding how many conditions are related to this mitochondrial dysfunction. Even um autism has such a big linked to mitochondrial dysfunction, chronic fatigue syndrome.

And a lot of women who have fibromyalgia or chronic fatigue pain. Yeah. And then of course you think about all the neurocognitive decline that's happening very related to to mitochondria and what's happening there in the brain and the nervous tissue.

So yeah, it's we have treatments for it. We have testing, that's better than uh maybe what had what we had 10 or 15 years ago. But I'm curious what you use in your practice. Do you test for mitochondria or do you kind of treat Uh three Mitochondria knowing that their symptoms?

Because you could you could look at their symptoms and also say there's probably a mitochondrial issue if they have a viral action and fatigue and a lot of uh symptoms going on.

And that's a really good point, is that a lot of this is based on symptoms for me. And so when I'm getting the story that sounds mitochondrial and we can kind of lean into that and ask more pointed questions about when does the fatigue hit?

When do you have these symptoms? What makes it worse? Does it improve after rest? How many days of rest? How how long do you you know, experience these episodes?

And so I can tell so much now from a person's story and the detail that they are able to provide. Some of them come in. Not having that detail yet, because they haven't even thought about those things.

And so sometimes the first step is we'll pay attention, let's track this and then we're gonna be able to get a lot of information just from the information that you have of your ex experience your body, what it's doing, what it's responding to?

What are the triggers? Are these mitochondrial type of triggers or are we looking at something different whether toxins or G. I. Stuff or food sensitivities.

Whatever those triggers are with the testing I tend to focus more on nutrients and intracellular levels of those nutrients. And so those are the tests very similar to the oat that I'm using for finding out if a person cells have what they need to be given uh for the mitochondria to be using up and then a lot of it is starting very targeted supplementation for their mitochondria to see if that makes any difference. To see if we have an improvement.

Because if I'm seeing that the mitochondria don't have the amount of nutrients that they need. I can tell right there that there's a mitochondrial imbalance or dysfunction. And what I love about being able to work with the mitochondria is that it is going to improve everything because it's in every cell in the body is going to improve everything when we optimize the health of the mitochondria.

So depending on their symptoms, on their story and then on their labs will determine how much of a focus I feel that we need to make on the mitochondria for some people that's the highest priority when we're starting out and

for some people that's not the highest priority. But I'm also telling them, look by optimizing your mitochondria? You can improve your health in so many ways and in all ways. And so I I never leave the mitochondria out of the picture even if it's not the main priority for their main reason for their symptoms or conditions or what they're coming in for. So let's talk about N.

A. D. And peptides and I. V. Therapy because these are my biggest guns for helping people with their mitochondrial dysfunction. Absolutely yeah. So I love using N. I. D. In my practice.

And I've I think I've tried every form that's out there at this point in time. So you can get N. A. D. I. V. S which you know are more expensive definitely more time consuming and get that stomach flipping feeling when you're getting when you're dripping it too fast. So I've gotten an A.

D. I. V. S. I've given N. A. D. A. V. S. I've done the intra nasal form that's combined with our G. Three and method nobleman and I love that stuff that works phenomenal for focus and brain function. Very specific crosses the blood brain barrier gets to the brain and A. D. So for a lot of those neurocognitive decline conditions the brain fog that's pretty severe. That the intra nasal form is the one that I go for a lot of times for chronic pain. Um So there's there's a sublingual form you can use N. R. So you can use supplements that are precursors to N. A. D. The form that I've actually been using with patients more frequently now. Is the patch.

Yeah it sounds like you have been to I use a lot of patches for myself and my patients. Yes so I love that option because you're getting a pretty generous dose. The patch that I use has 800 mg.

Transdermal absorption and if you just applied so you took the N. I. D. Solution you just slathered it on the skin nothing would happen right because it doesn't absorb well into the skin.

But they've created a technology that can help uh my Aunt Apheresis absorption into the skin that's very effective. So I found that to be a phenomenal option.

The price point is right. You get a really good amount for a lot of people they'll have compromised absorption and G. I. They're not assimilating nutrients. So even giving some of those precursors I don't know how effective they are. But if we go transdermal or ivy or injection can be a little bit more effective. Have you experimented with sub Q.

N. I. D. Injections? Because I've been doing this on myself. Yeah so very similar to you. I have used every form of N. A. D. That's out there. I've done a lot of N. A. D. I. V. S. Both on myself and my patients and depending on the rate you know depends on how well you can tolerate it and how fast you can get through those but it's yeah it's it's a bit more inconvenient than the other forms just because you have to go in. You have to get an I.

V. You have to sit there while the I. V. Drips. So I have been using a lot of the sub Q. And the patches the patches that I use are both 800 mg and then a 400 mg patch. So I for different people I will use a different amount for people who have had like me viral infections, lyme disease, Potts disease, anything where their system is a bit more fragile. I will use the lower dose of the patch the 400 mg. And it's an eight hour patch that I use and that seems to be a better place to start for them with the N.

A. D. I have seen uh you know negative reactions at first if I use too much in A. D.

NAD Therapy for Energy and Recovery

Especially with mitochondrial dysfunction and almost overwhelms their system and so knowing knowing how sensitive their system is if I'm starting them and then usually their body can get used to the N.

A. D. And I can use a higher amount later on both in the ivy or the patches and do well I have some people who use the patches during the day and I have some people who sleep with the patches. So it's it's been across the board but it's been fun to play around with that. And the different patches that that I use.

So I use a 400 mg. Four hour and eight hour patches and an 800 mg four hour and 12 hour patches. And so there's

just a lot of variety there that people can play around with because it's it's different whether you're getting 400 mg, Canadian four hours or 800 mg of N. A. D. In four hours.

You feel you feel the difference and depending on what it is that they're wanting to accomplish with the N. A. D. You know determines what we decide is the best patch for them. And then yes the sub Q.

Injections been doing those as well and again for many patients who don't want to go in to get an I. V. And want a very effective delivery system. The patch is great but the sub Q. I have found is a better delivery more powerful but it can even give some of those side effects that people experience with the ivy.

If we give them a deal that's that maybe is too much for their system at that time. So tight trading that dose of the sub Q. To know what is what is the dose again kind of what they're looking for? They're looking for helping to manage a mitochondrial dysfunction because their system is so sensitive right now Or are they a high performer already there in the bio hacking field.

They already are 99% optimized and they're looking for that 1%. It's a very it's a very different approach depending on what their baseline is when we're starting with the N. A. D. Sure. Yeah. And it is amazing that you know you look at certain treatments uh L. D. N. Being one of them or or N.

A. D. And and we talk about it like it's the kitchen sink that it helps but it really is such a root cause treatment that it can help your athlete and it can help somebody with brain function and it can help your chronic fatigue patient and it can help your woman who has cortisol dis regulation.

Which is what I see a lot of. And I think oh my goodness, the cortisol is made in the mitochondria. So if we don't address the mitochondria, we're missing a whole big puzzle piece as part of this situation.

So it's it really can support anyone. Even somebody who's in generally good health like you know you or I who is a practitioner, we can still benefit from N.

A. D. I feel like it's protective. We're protecting ourselves from oxidative stress from aging faster. We're protecting our brain tissue. Are nervous tissue.

So it really is having an I. D. On board as a strategy is just a phenomenal addition to a treatment plan. Yeah and I'm glad that you mentioned that because N.

A. D. Is very much used in the anti aging field just as much as you know the functional medicine and mitochondrial field and the studies have shown. The N. A. D. Is effective at working at repairing the D.

N. A. Better and so making fewer mistakes when we repair and are duplicating our D. N. A. And that will help slow down the aging process is going to help us protect ourselves against the radiation against everything and very similar you know to the mitochondria where the N. A.

D. Is helping every cell in our body do what it does but just doing it better with more efficiency. And so yeah I have nurses who wear the patches on long ships.

I have pilots who use the N. A. D. To help mitigate the effects of the radiation that they experience while flying so much. So there's just such a wide variety.

But like you say, N. A. D. Is useful for anyone for everyone, no matter what their baseline is, where they're starting out with their health, it will help take their health to that next level.

And even with mental health I use N. A. D. A lot for those who are struggling with ptsd with emotional grief, whatever it is. The N. A. D. Really helps again.

Just help the body come back to a place of balance and health faster than if we're not using it. Absolutely. Yeah.

And you look at the the model of depression that uh works with cortisol level. So you know, high cortisol secretion over time, chronic stress leading to kind of a down regulation of some of those neurotransmitters leading to depression.

And so you think about the cortisol model on how important mitochondria is in that process too. It would help if you think, yeah from that it has not been my experience where it helps and it helps accelerate the process to getting back to a place of good health. Absolutely. The other thing that I wanted to mention too that nobody has been really talking about at this point in time is the importance of mitochondria and antiviral protection. So that is one of the main functions too.

I mean it protects against oxidative stress. It protects the D. N. A. But there is a role in antiviral protection. So when I put on an I. D. Patch I think you know I'm supporting my mitochondria in this time when you know everybody's scared about getting a viral infection uh that you're giving yourself that extra boost too.

So we know it does protect uh that way has some effects on the antiviral response and and overlapping with immune response. So so I love that element too.

But yeah mitochondria just they're so critical and I. D. Is one of the more novel and amazing treatments that we can use. We can talk about some other treatments to for uh for mitochondria as well. Yeah let's talk about peptides.

Yeah so there are several peptides that are really specific to mitochondria. I think the one that is pretty well known is called moxie and moxie is a peptide that essentially can help with insulin resistance by shuttle and glucose into the cell.

Which we know, you know what an epidemic that is right now with insulin resistance in America. And even worldwide it can help with um protect bone health and osteoporosis. It can also help with heart health.

We know that uh moxie is one of these peptides that we find in people who live a long time. So they did some studies in japanese individuals and they found that they had higher levels of this peptide Nazi in their cells in the mitochondria.

And so By giving it and we can talk about what peptides do. So peptides are signaling molecules. They essentially send a signal to the cell to increase or to support a function that our body already does.

So we already make Nazi as we age. It can decrease. Same with like peptides like BPC 157. I've talked a lot about that in the past and how our body, our God already makes that right. It already makes that peptide however it can down regulate as we age. And BpC really protects the mucosal lining.

But matt C is similar so we can give a peptide increase our natural production and really support mitochondrial burning energy producing power by doing that.

Um it does actually increase inter cellular N. A. D. Giving Nazi will and it can help improve fat metabolism because we know that the fatty acids from the fat tissue is shuttled into the mitochondria by l carnitine, That amazing molecule uh to be burned as energy. So matsui can help support that process does really support longevity as we found it higher in uh you know, japanese populations, they have that peptide that's increased.

So there's a lot of uses. But one of the most powerful is really supporting uh you know, glucose uptake and preventing insulin resistance. I think that is just amazing function of that peptide and we know that it also supports mitochondria. So, yes, and that is one of the times that I am currently on right now. So it is in my refrigerator and I'm I'm doing the moxie right now. I started that about three weeks ago.

So what what is if you're open to sharing being noticed any changes? It's the decrease in inflammation that I feel. And I havent struggled with insulin resistance in my life. So I'm not using it for those specific purposes but knowing its benefits with the mitochondria.

I that's what kind of pushed me over the edge in terms of. Okay, like I think this is the next piece for me because I've been on BPC 1 57. I've also been on the milano tan too. So maybe we can talk about those two more.

But the moxie was kind of always there and I'm like, all right. I think it's I think it's time for that. And yeah, what I've noticed is a general sense of decreased inflammation, water retention that I'm having in my body, wow that's phenomenal.

I haven't tried the but I've used the B. P. C. And the tan. That's that's the next one on my list. It's so much fun being a practitioner because you just I want to try. Exactly. Well then let's talk about the BpC 1 57.

Peptides for Mitochondria, Gut Health, and Repair

Have you used the capsules or the injectable or both? I haven't used the injectable. I've recommended the injectable quite often for uh post surgery. I have a lot of active athletic mountain biking, you know, breaking a wrist or something every other month.

So I'll use it for a post surgery protocol post uh you know accident where they fracture something. Uh Yeah it's a tissue tissue repair peptide. Very good for those types of injuries where ligaments, bones etcetera. Exactly yeah.

And I like to use it with TB four. Listen, Beta four so the thymus and peptide that our body makes but decreases as we age. So that's like my repair and recovery protocol.

But I so I've used the capsules more and B. P. C. Can make some of the other peptides more effective. So it does have a synergistic effect with C. J. C. I.

P. Morel in for those growth hormone analog peptides. But BpC really I found it extremely helpful in patients with acid reflux where they're having um they're on a P.

P. I. For that Or somebody with I. B. S. I. B. D. It can really protect the mucosa lining all the way through the G. I. Tract. And for leaky gut. My goodness.

That's what I you know I wanted to see if it helps with leaky gut because I ran a stool test and you know found Sandelin and so um elevated. So yeah so it does help with leaky gut.

It helps just really heal up those those intestinal uh you know tight junctions as well. Exactly the whole mucosal lining from the stomach all the way through the colon.

The oral B. P. C. Is very effective for that. I've had a recent patient who had even come in with some mucosal damage from alcohol use to the point where they were almost calling it a gastric ulcer.

And they had of course started him on the P. P. I. For that and he was a month into it and hadn't really felt much difference and knowing the damage that P. P. I. S. Can do to our cells and our mitochondria I'm like well I I can understand that but if you're not experiencing relief let's try this Bpc 1 57 and C. And so what I do is the 30 day treatment and it cleared all up for him. So yeah from from the acid stuff in the stomach to the I. B. S. And the leaky gut.

I have also found BpC 1 57 to be very effective for just a major reset and healing peptide for the gut. Absolutely. You know I posted a video on Youtube quite a while back about BPC 1 57 just what does it do? And I had all of these comments of people saying it helped me with this. I noticed massive changes here and I didn't expect that at all. But it really that was just proof you know that it does really work. It does support the mucosal lining.

Um So yeah PPC love that one. So let's talk about Milana Tan too, let's do it. I love that. One of all the peptides that I've tried. Um I think that that still might be the one that I've experienced the most changes with. Um not only with the tan and my skin color because it dramatically changed that over a short amount of time but also just really helping with I could feel that it was working on my because I would feel my metabolism revving up and at first when

I took it it made me want to be in movement more, being able to sit and just sit for long periods of time was no longer something that my body could do. Like it needed to be in movement and it felt good, it felt like a healthy place to be uh kind of shifting even more out of the fatigue that I wasn't even aware of because it's at such a low level now, but it's like it it lifted that even more and really also helped my gut inflammation and cool that down. And I also was using it for my brain because I've had several injuries and concussions to my brain.

And so I know that I have the prime micro glia and I know that I need to maintain a anti inflammatory state in my brain and milano Tan acts on the brain.

And so I really noticed a big difference with the milano tan too. And that's something that I am still taking today. Yeah, I love that to uh I'm so, what I noticed when I started taking it is uh of course the tan skin, but it does have um what they call like politics.

So it can help, you know, with fat metabolism. It's a mildly politic. And I noticed the appetite, like less appetite and more movement, which is why you can help with body composition. It really does uh call it the tropical vacation peptide because it makes you tan it, you know, you eat less. I was hungry.

You want to move. It's like you're on vacation, It can increase libido and who, who doesn't need that right now and we're all stuck at home and can't travel to Fiji. So I've noticed tremendous effects and it has immune effects. I noticed that as well.

I just felt better on it because of the and it's it's not dramatic. Like I think thymosin alpha has, you know, more and more involved immune activation or, or immune rebalancing, but the the amount that Milan itan uh I noticed the change, like I I did feel less inflamed.

I felt like my my face when I would wake up in the morning just felt like I was more youthful, more fresh face. It yeah, it was an amazing peptide it was.

And when I first learned about it, it was under the category of pro sexual peptide and I was like, well that's not that's not what I'm going for. Right? Sure. I've got some patients who yes, that's what they want. And and so we started them on that.

But I was looking at all these other uh areas in which it it interacts and the immune component is a really important one for me knowing that I've had high autoimmune markers, knowing that I've, you know, had these hits to my head.

The immune component is very important to me. And so I I ordered it and started it for those for those reasons and was thinking that these other side effects. Right?

Like I would have considered like the tan skin and the pro sexual, I think that the description that they had for that was um a statistical improvement and sexual, uh what was it? Something like um a sexual experience. And I was like, I don't know what that means, but I'm assuming that I probably won't, you know that that will be a minor side effect probably won't even notice that. And no like every single thing that that it said that the milano tan too will help with. I noticed a huge difference within three days.

Like I noticed my skin start tanning, the orgasms were definitely more intense and then I felt this inflammation shifting in my body. So it's been it's been overall yeah a peptide that has a lot of different effects but it's been a very positive one for my health.

Yeah. And I think for for most people they would notice the benefits. I definitely felt all of the effects to libido, skin, anti inflammatory, the light politic, the change in appetite.

I noticed all of those. Yeah. So it's It's a great one. Let's see what else can we talk about? Well there was I did want to bring us back around to what supplements you use for supporting mitochondrial function.

So n. a. d. and peptides or something that maybe not everybody is familiar with yet. Now they certainly are. But there are other things and many people talk about supplements and what supplements can I take to support my mitochondria? That's a frequent question that I get.

So I would love to pick your brain. What do you use for targeting the mitochondria with supplements and diet. Yes. So I have a mitochondria have a couple of mitochondrial supports I have, there's one that just came out that's by narrow hacker.

Yes, the best mitochondrial blend that I've found. I've actually been taking that it's a capsules a day dose which is a lot but I have noticed better energy. And they have a phenomenal blend designs for health. Has the mitochondrial blend, that's really great, beautiful uh blend. So but a lot of the nutrients in there are CO Q 10 which is an amazing, you know antioxidant. It can it really helps in the electron transport chain so it helps to carry electrons which we need for the mitochondria to work.

That's what's happening there. Um So it can protect against reactive oxygen species. It really just nourishes that mitochondria. So I love CO Q 10. Usually we give these in a blend so we don't have to give somebody a bunch of individual nutrients.

So that's why mitochondrial blend is really beautiful. What else? Alpha like poke acid? I love to use acetyl l carnitine. We already talked about is that amazing molecule that will shuttle shuttle the fatty acids in the mitochondria to be burned for energy. So it can help with um you know, fat metabolism in that sense.

Whereas very ritual which we all love to think about is that nutrient that we get from red wine but you have to drink like 500 bottles or 500 glasses of red wine in order to get the therapeutic amount. So we typically don't recommend that approach.

We recommend getting the extract in a supplement form. So you're not getting the alcohol which is also mitochondrial toxic. Uh and then I love Bluetooth ion for my patients or N.

A. C. I usually don't give both. N. A. C. Is the precursor to Bluetooth ion. So an essential Sistine is what that stands for. And that's just the amino acid. That's kind of the great limiting step to make glutathione.

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But glutathione for my woman, I run the dutch test a lot and it actually measures their glutathione. And glutathione protects the D. N. A. From from damage.

And it really on that report spells it out for women they can see it in black and white if they're low and glutathione. What's happening? How it can you know potentially increase the risk of estrogen related cancers if they don't have glutathione. And then I always add in you know glutathione also protects your mitochondria from damage. It's amazing for skin health.

It protects the liver. You know thinking about mitochondria. So I love N. A. C. Or glutathione, vitamin E. Is another amazing nutrients that we can get. We can get through foods as well.

Um But a lot of times they'll put it in the mitochondrial blend resists oxidative stress. Just really nourishes the cell and the signaling that happens in the cell.

And then P. Q. Q. Which is a commonly added nutrient and it's actually it's found in kiwi fruit which is kind of a kind of interesting some of these you can find in foods but there won't be in a high enough concentration necessarily to have a drastic effect. So that's why we like to supplement them.

And then ginkgo below can help anything. That's an antioxidant capacity. So berries, preventive sign aidan's and berries. Thinking about blueberries, blackberries, raspberries and then melatonin is another thing that can be really protective because it does have those anti inflammatory and um antioxidant capacity.

So thinking about susceptibility to viral infections. One of the reasons why we think elderly people are more susceptible. They have lower melatonin levels as they age. And so melatonin can also protect uh mitochondria. So that's that's kind of the ones that I emphasize the most. There's a lot more that we could talk about.

Um but those are kind of the main ones. Yeah that's a great list and the only one that I would say for me has made a difference. That wasn't on that list would be again a shout out to Dave Asprey and bulletproof and his four boasts the four boasts has been really helpful for me especially when I pay pair it with my workouts whether before or after for me it really makes a difference helping my mitochondria just repair and get back to a state of health after having stressed it with some intense exercise.

I love bulletproof and Dave Asprey and that's a phenomenal product. So you know I give it a try if you haven't, I notice a big difference in the recovery more, not necessarily in the performance but in the recovery, okay, recover faster, right. The other thing I have like a protocol, the mitochondria reboot protocol and one of the things that I do recommend in there too, that's a lifestyle hack is red light therapy.

Yeah, So I have a red light box that's sitting right behind me that I'll turn on when I'm working. But it really, it also has been shown to help the mitochondria to produce a T. P more efficiently and more effectively.

So that's an easy one to do. That's no supplements or you know, it's really just turn it on and it helps with skin and everything. So that's another added Yes. Good. Well thank you, thank you for all the tips. Thank you for all the information.

It's been really fun talking to you about mitochondria and what people can do what you do in terms of optimizing your mitochondria because it makes such a huge difference when they're optimized versus when they're not optimized, agree.

Yeah, it's such a distinguishing piece for patients to come to a practitioner like you or like myself and uh you know, start to feel better because we're treating that fundamental piece, which is, you know how their body is producing energy or how you know, when they come to see us, they're not effectively producing energy and everything in our body and everything in our life requires energy.

So when we're talking about root cause like the mitochondria are really the root powerhouse of everything in our life for uh you know, brain function and an athletic capacity, which is such a robust part of life.

We want people to be active, we want them to put their full heart and their brain into their work and to their their relationship. So it's yeah, it's paramount. So yeah, this has been this has been a pleasure.

Thank you for sharing all of your knowledge to it's been fun. Yeah. Thank you so much dr Amber and thank you for joining us today. I know that you've gotten a lot of value out of today's talk and please look into your mitochondria and we've given you lots of ideas on ways that you can optimize that today.

I'm dr amy. And together let's find that next level of health and aliveness.