Benefits of Amino Acids | Ep. 8 | Dr. Christopher Davis Transcript

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Podcast Introduction and Guest Welcome

Welcome to Healthy Point of View podcast where we explore the latest trends and topics in health and wellness. Whether you're looking for tips on nutrition, fitness, mental health, or anything in between, we've got you covered.

Join us as we chat with experts, share stories, and learn how to live a healthier and happier life. Welcome to a Healthy Point of View podcast. This is your host, Sam Tahata.

Today we are interviewing our chief medical officer. He is a wellness expert, triple board certified cardiologist, Dr. Christopher Davis. Dr Davis, how are you?

Doing well, doing well. Always good to be here and ready to talk, Sam. So good be to here. Oh, awesome, man. We're going to go deep today on some great things about optimizing one's health with amino acids.

With Liquivita, our product, or IV products, we just recently launched our new amino acid blend. So we're getting a lot of people, a lotta doctors and clients that are asking about, well, what are the benefits of amino acids?

Like, we always hear about people taking amino acid when they're working out, athletes taking it, people takin' it for other purposes. So today I wanna just kinda like dive deep and talk a little bit about the science.

Like what're the benefit that people get off of it? What can we treat with it. You know, just like understand this whole amino-acid thing. So let's just start with the basics.

I think we start the basic of what an amino acid is. To make it very simple, amino acids are the units that make up proteins.

What Amino Acids Are and Why They Matter

Or the unit that makes up peptides that didn't make proteins And I think that's the way most of us think about amino acids as being kind of the backbone of protein.

And we get most these amino acid in our diet. When we're eating proteins, those proteins are digested down into these amino acids. But one of things that is important, it's not just, amino assets are not what are used to make proteins.

They're also by themselves, the non-protein functions are things like They act as neurotransmitters. They help in hormone formation. For example, amino acids like tyrosine.

Tyrosin is an amino acid that's used to make thyroid hormone. It's use to makes neurotransmitter like dopamine. Other ones like tryptophan is used as a backbone of serotonin, which helps us feel good and helps sleep when it's converted to melatonin.

There are lots of functions of these amino acids that are not just kind of protein and muscle related, although that is kind what most people think about when they think of amino acid.

There's lots other functions. They're really involved in detoxification of all the environmental things that we're exposed to and toxins that were exposed.

So there's a really a very extensive role other than outside of the protein formation role from amino acids. Okay. So let me ask you this, Dr. Davis. Are amino acid an important part of metabolic pathways?

Oh, absolutely. Absolutely. Um, I think that when we think about, let's just think, about I'll go back to the whole detox pathway with it. I, think we do a lot in our, with Liquivita with glutathione.

Well, guess what? Glutathion is a tripeptide, right? It is made of three amino acids. cysteine, glutamic acid, and glycine. So that actually, when we talk about pathways, we know that glutathione is a very important molecule when it comes to cleaning out our system detox pathways as an antioxidant.

We talk it as Mother Nature's master antioxidate. And it binds other things like heavy metals, for example. Glutathionine is wonderful binder of mercury and people who have mercury toxicity.

So that's just one example of how amino acids are important in metabolic pathways. More importantly, let's talk about how our body turns food into energy.

Right. We eat whatever carbohydrates and fats and those are broken down in our bodies. And in order for those fatty acids to go into our mitochondria, which are the powerhouses of ourselves.

The power houses that actually make this molecule called ATP. If we don't have carnitine, right, another amino acid, then those fatty acids can't get inside of the mitochondrial to get converted to ATP, so guess what?

We don' have any energy. We're super tired because we are carnatine deficient. There is a So there's a pathway into the mitochondria that is carnitine dependent.

And so if we're carniting lacking, then guess what?

Amino Acids in Metabolism and Energy Production

That food doesn't get converted into energy like it should normally be done. Wow, wow. That's actually part of like metabolism. There's an injection that people talk about, the lipotropic shot, right?

It has the methanine, inositol, choline, and when they add the carnating to it, They call it the super metabolism weight loss because it's supposed to spike up your metabolism.

So, carnitine takes a huge play on getting your metabolism going, I would assume. Absolutely. A lot of times when we do things in our liquid, we'd also call resting metabolic testing.

And resting metabolic rate allows us to look at whether you're burning primarily fat or burning mainly carbohydrates at rest. You want to be burning, I mean, at least you want be learning primarily fatty acids, you know, burning fat when we're not in an activity or exercising.

And in order to do that, you have to have quarantine to take those fatty acids and get them inside the mitochondria. So absolutely, it's a very important part of the metabolic process.

If you're quarantine deficient, then you are not going to be able to carry out this called beta oxidation. Not many people understand what beta-oxidation is, but it is how we take fatty-acids into the myocondria and turn them into energy.

Interesting, interesting. So when I talk to a lot of medical providers in medical school, they don't go that deep into talking about amino acids. But when you really get into more of the functional medicine side of things, it's a big part of it, of getting your body to function.

And when we're talking peptides and stuff, their amino acid fragments, just so the listeners have an idea, and I don' want an exact number, but how many amino-acids are in a person's body?

So we have 20 amino acids. I mean, it's not really a difficult question. There's 20-amino acids, and it has broken down into three categories of amino acid.

There are amino acids that are called essential amino acid, which mean that the body does not make enough of that amino. So it's needed in the diet in order to really carry out all of the activities.

There is a non-essential amino, acid which means that your body makes enough for that. And then there's something called semi-conditional amino-acid, meaning that It's needed when you're at increased times of stress or increased time of activity.

You're an endurance athlete or a triathlete or you have some type of sickness or something like that. So at those times where the stress levels are higher, then you need more of those amino acids.

It is called conditionally essential. All right? So, it really is, when we talk about these amino acids, um, understanding, you know, which one of the ones are absolutely necessary that we get in the diet are really important.

So the essential amino acid. I always hear a lot of like the fitness people, because you're talking about all the different amino-acids, they're always like, oh, I gotta get my protein supplement that has the BCAAs.

What is BCAAs? So branched chain amino acids and branching amino acid are isoleucine, leucin, valine or branch chain. And they are thought to play a really pivotal role in muscle formation.

I would say though we need to be careful and this is some data that I just recently came upon myself is that over supplementation with BCAAs may cause some insulin resistant issues.

Okay, so insulin resistance. And so, you know, I am looking more into that data now. I think we do need to be careful because I fitness arena, people are supplementing lots with the BCAAs.

And there's quite a bit of data about people becoming more insulin resistant when you're oversupplementing with BCAs. Okay, and for the listeners, what is insulin resistance?

So insulin resistance is, we can call it pre-diabetes or metabolic syndrome. And unfortunately, probably 45 to 50% of our society these days have some degree of insulin resistant.

It simply means that your body is not able to utilize insulin like it should.

Types of Amino Acids and BCAAs

So, insulin should bind to the insulin receptor and then allow the glucose to be uptaken into the muscle cells. Um, to be utilized, um, when you're insulin resistant, it takes more and more of that insulin to bind to the insulin receptor to utilize glucose efficiently.

So those are people who end up having higher blood sugars because the blood sugar glucose can't be removed from the, from, the from blood from circulation, because of the Insulin resistance.

Uh, so, and there are lots of things that contribute to insulin resistance these days. I mean, Again, the foods that we eat, toxic exposure, vitamin D and B vitamin deficiencies, infections, things like that all contribute to insulin resistance.

And really we should all be working towards improving the insulin resistance, because it really is an epidemic these days. Wow. There is so much to amino acids.

What foods are like rich in amino acid? What kind of amino… To be honest with you, all foods have amino-acids. The breakdown of what type of amino acids are in each food are what's a little bit different.

So, you know, and this is a tough subject, I was looking at some literature on trying to determine, you know, when we, let's take, for example, a plant-based diet or vegan diet versus people who eat more or eat meat.

And is there a different type of protein structure or amino acid structure that you get from those? And there is some compelling evidence that there are amino acids that, yes, the vegan diets may have a lot of the amino-acids, oh, have all of proteins, but the concentrations of each specific amino acids are different.

So that's a harder question because I'm not sure exactly kind of what amino acid are in, you know, specific foods. I do remember there's very complex graph in one of the references that I was looking at and trying to understand, I try to look at what is more in the plants versus in the meat, and it was very difficult to tell, but it certainly is written about certain amino acids are you likely to be more deficient in when you're eating, for example, carnitine.

You don't get a lot of carnotine in your vegan diet. Okay. Right, right. Now, however, having said that, you and I were talking a little bit earlier, there's another way to get carnutine, this is something that was fairly new to me as well.

The amino acid lysine can be methylated, meaning can add a methyl group to lysine and it gets converted into carnitine. So that was totally news to me.

This whole process of what we hear about a lot these days is methylation, the importance of B vitamins. That same process that a lotta people are talking about is also very important in converting an amino acid lysin into another important amino-acid carnatine that's then responsible for taking these fatty acids, like we talked about, into this mitochondria and turn it into energy.

Energy. Everybody needs energy, yep, your whole body needs it, that's what it's made out of. So, you know, talking about the foods, I remember when the whole big like quinoa thing just started going crazy.

It's the healthy carb, it's a healthy thing. And I started reading about it, so why is this thing so healthy? I like it.

Food Sources, Absorption, and IV Amino Acid Blends

My mother would create quinoa salads with little raisins in it and stuff. So I start looking into it… and I sort of reading that, like, okay, well, this quinhoa, is actually made out of a bunch of these different amino acids that convert or break down to a protein or something.

It is interesting how a lot of foods do have these amino acid. You know, obviously, you could get amino acids by mouth by taking some supplementation.

You could take it, get it in by the food sources that you're eating. But some people have absorption issues, gut issues. And one of the things is getting your amino acid either intramuscular, subcutaneous, or intravenously.

And one of the things that we have in our liquid lift and also performance hydration IV drips is the amino acid blend. So I want to talk a little bit about the breakdown of that, the benefits of some of these different amino acids that are in there, so people can kind of understand, you know, why do we put it in the performance-hydration?

Why is it on the liquid-lift? Like, how is this helping people with their endurance, with the recovery process, all of this stuff? So yeah, this blend that we came up with is a combination of glutamine, arginine, lysine which we spoke about, and proline.

Let me just start with, we'll start glutamine. Glutamine is extremely important when it comes to, and it's most abundant in muscle, but glutamate is very important in muscles formation.

And we know that when comes overall health and longevity, the longer that we can maintain muscle mass, The longer we live and from a vitality standpoint, all of the studies have shown if we maintain muscles mass and the longevity improves.

as we start to lose muscle mass, a condition called sarcopenia. And that's when we started to kind of, I mean, lots of things from a chronic illness perspective.

start to happen and we started to go downhill as we start become more sarcopenic or lose muscle mass. So glutamine is really important. Glutamine's really is important as well in the gut.

When it comes to normal gut function, GI tract function glutamines really are important from that perspective. Arginine probably as a cardiologist one of my favorite amino acids because it has a primary role of production of nitric oxide.

So arginine is converted to nitrate oxide, which we know is a very important molecule when it comes to vascular health, right? When it becomes to dilating the vessels, the arteries.

When comes it to preventing the artery from being, should I say, very sticky and those things called platelets come in and forming blood clots in your arteries, so Nitric oxide, and not only that, these days we're just finding out, I mean, the many, many different roles of nitric dioxide.

And so having enough arginine that can convert to nitrous oxide is really important. Lysine, we spoke about, probably one of the most pivotal roles for lysine like we just talked about was conversion to carnitine which then improves overall fatty acid metabolism being converted into energy ATP.

Also, lysine is very important in skin health. So the combination of lysin, proline, hydroxyproline and vitamin C, those are the four agents that are really important and collagen formation in our skin, so it keeps us looking younger and wrinkle and the wrinkles are less as we age.

Nobody wants wrinkles, nobody wants wrinkles. That lysing actually plays a role there too. I think the other thing that we've known about lysines and really good data on lyses and other viruses, like the herpes virus, Lysine can actually really be useful in treating herpesvirus infections, things like shingles and other herpies viruses, herpe type 1 or 2 as well.

And then lastly, proline, I kind of mentioned, the predominant role of prolene aswell is in the skin and overall skin health. Okay. Wow. What a mix. So someone who's an athlete doing triathlons or maybe a professional athlete, when they're thinking about taking amino acids, what's going to be the biggest benefit for an individual who is trying to recover and put on remass or endurance, whatever it is?

So I think out of all of those I mentioned about the arginine and argenine being converted to nitric oxide. When we talk about overall performance and recovery time and that's where the nitrous oxide is just a very important molecule there.

So certainly the Arginin there and then the glutamine with respect to muscle formation and maintaining muscle mass. Those would be the two when it comes to the athletes and the performance.

I think that what's important and what we do here at Liquid Vita, too, is not just about, I mean, evaluating these things and measuring where we are with respect to each individual is very important, meaning that we really do an assessment of the amino acids.

We do assessment all the other micronutrients like the B vitamins and antioxidants. we can be a little more dialed in to what each person needs if they have specific deficiencies.

Key Amino Acids for Muscle, Gut, Heart, and Skin

So I think that's important for all of the listeners to kind of know about as well. And that is more of that personalized approach. Now for someone who lives like an active lifestyle like that, like what kind frequency should they be feeding their bodies these amino acids?

Yeah, I really, that depends on, you said something a bit earlier and I want to kinda piggyback off of it. It really depends First of all, when we're taking in the essential amino acids in our food, it depends on the quality of the food that we are eating, right?

So a grass-fed and finished fillet versus, you know, a non-grass- fed and finish fillets, there's a whole different, macro, I mean, from a vitamin content, From the amino acid content is going to be a different ball game of what we getting.

So the qualities of food is really important. The second thing that's really that person's digestive system. If they have digestive enzyme issues, that protein could be the best protein in the world.

But if they're lacking digestive enzymes and hydrochloric acid and things like that, then they are not going to digest that proteins into a form, into those amino acids that get absorbed very well.

And then the third thing is as that food comes down through that digestive tract, If the digestive system, the small intestine, has issues with dysbiosis or overgrowth of specific bacteria or other, you know, yeast, absorption, again, is it going to be impacted there?

So there's some other things to think about. Knowing each individual's, personal makeup. will help you understand, you know, I mean, if I know I have all those issues that I just talked about, there's no way I'm going to eat my way to enough of those amino acids.

So getting them more frequently is going probably something that i recommend. Just understanding where each person is and their underlying potential medical issues helps to kind of really drive whether it's once a month, once week, you know, it really depends on those other issues.

Very interesting, very interesting. You know I read a few articles before about L-Arginine also benefiting like fertility. And there was a protocol actually by Dr.

Guy De Silva, where he was doing like eight grams of L Arginines intravenously. So I'm curious, I actually gonna do a little research myself to see if there's actual strong data on it.

I don't know if you know about any of that. Yeah, but I would bet you that's mediated through it, we just talked about it I bet it's just mediating the nitric oxide.

Because nitrous oxide has so many beneficial effects. That's a molecule that we can look at from the immune system to the detox system. It's involved everywhere.

We think about primarily with the cardiovascular system and vascular health, but it has so many other roles. So I would bet dollars for donuts, when we find there, that's a nitric oxide mediated process to improve fertility.

That's interesting, interesting. Magic question, what's your favorite amino acid, personally? I will say, okay, so here's one thing I didn't say. It's probably arginine, but the combination of glutamine, argenine.

and carnitine. That combination, otherwise known as Gak, would be one of my favorites. Or the combination of glutamine, arginine, ornithine and lysine would.

And the reason is, and I've used these combinations myself. Is it the GAK live that people talk about? Yeah. Yeah, yeah. They are great at naturally boosting growth hormone.

And I didn't say that before. So as we think about anti-aging strategies and maintaining body composition where you want it to be, the amino acids, particularly the injectable, or we can get them in the IVs, but the injectable amino acid are fantastic ways of really increasing growth, growth hormones naturally using these amino assets and really from an anti-aging longevity standpoint, really beneficial.

So, you know, earlier you said that there's about 20 amino acids, different amino acid. And then you look at the peptides and their amino-acid fragments, right?

Where you looked at like growth hormone and it's 181 or 91 amino acidic fragments. I don't know how many, how

much GH is, I think it's like 191 or 81, one of those two.

But regardless, what's the difference between amino acid fragment versus actual amino acids? So I thing what you're asking is the different between peptides and then these, so a group of amino aces, and I thin the number is, basically it moves up.

So up to 50, between 40 and 50 aminoacids is considered a peptide. After we go over that, they're considered proteins. And all of the enzymes in our body, for example, I don't know, insulin, it is an enzyme, but it's actually made up of amino acids.

So all these proteins, we got many, many enzymes that are proteins in their body that our amino acid structures. If you remember, think about, how many of you guys remember your high school biology class?

Um, amino acids. That was your favorite class. Maybe you want to become a doc. If you had to think, we talked about DNA and we're all made from DNA. And I remember these diagrams where DNA is then converted to RNA, right?

Athletic Performance, Recovery, and Personalized Testing

Messenger RNA. I know this is getting too scientific, but I remembered these pictures where the DNA was split in half. Okay. Then the messenger RNA comes along, But then that messenger, RNA goes to these other places in your cells, the ribosomes.

and they're turned, they are red, and are turned into amino acids. If you guys remember, there's three, these three we call, I don't want to get too fancy, too much science here, but these are three codons that code for amino acid.

So these, as the DNA is translated, it's these 3 codon that turn into aminos acids and the code of these is 20 amino-acids. That's awesome, man. See, this is why I love Dr.

Davis. It's like, you're bringing it to us, the science is there. I don't even know how you remember this stuff, but it's fantastic. Like, I'm always learning.

Learning, learning, that's why love having you on the podcast. So awesome. So L-Arginine is his favorite amino acid. If I were to ask myself that question, the one that I think is pretty cool is HMB.

You know, it's always been like hard to get. It's good for like lean mass and whatnot, which you know a little bit about H and B. But that's not a true amino-acid though, is it?

I mean, that HMB is actually a metabolite. I'm not sure which amino acids it breaks down to. main amino acids. That's hydroxymethylbutyrate. I just know they sell it in the amino acid aisle at the vitamin store.

Yes, that's not one of the 20 amino-acids, no. But it does, I mean, from a muscle mass, and I actually have tried that as well, it was pretty impressive.

Yeah, yeah. So cool. All right, so we got the liquid lift, the performance hydration with all the different amino acids. Is there anything else that you feel that people need to know about amino acid?

The importance of the amino assets, especially when they're treating the patients? Any potential negative side effects of taking amino-acids? I mean, there are certain amino aces that if the levels get too high, I think one of things that comes up sometimes, a few of them, Glutamine and glutamic acid, for example, if people are taking too much glutamine, glutamin and glutamic can get converted to each other.

And one of the things we have to be, and then it can also get covered to glutamate. Gluta mate is a very, it's a excitatory neurotransmitter. And so what I've found, and this is actually true in clinical practice, there are people who have a lot of anxiety, anxiety issues, And it turns out that their glutamate levels are really, really high.

Oh, wow. And some of that may be related to the breakdown of glutamine to GABA. GABAs are kind of calm me down, chill out, inhibitory neurotransmitter, glutamic being a stimulatory neurottransmitters.

There is an enzyme that's responsible for breaking glutamy down to Gaba, which is called glutammic acid decarboxylase. And if you have a genetic variant in that breakdown gene, what happens is glutamic or glutamate levels build up.

And glutamine also can make glutamate levels build up. So you can really, I mean, and this has happened in practice, particularly a guy who was this athlete, he was taking tons and tons of glutamin.

He was having all these issues with anxiety and bipolar. And I had him take a picture. I never forget to take picture of all of his supplements. and he had all this supplements and like 10 supplements had like glutame, five grams of glutamine, 10 grams.

Wow. Glutamin and I was like, wow, this is probably a glutamic issue, right? Mr. glutami, Mr glutamis. Just walking around with so much glutamy. And when you checked his glutamate levels, off the charts.

Off the chart, right? And so just telling him to pull away some of this glutamine so that it wasn't being converted to glutamic. And another thing you can do with that particularly if that kind of situation happens is you upregulate that glutammic acid decarboxylase gene or that enzyme by just giving people magnesium and vitamin B6.

So we can push the enzyme to work a little better to convert glutamy Nice, that's pretty cool. What you're talking about, Dr. Davis, I know that you don't like to just supplement to supplement, right?

We like supplement based off of what the personal need is for that individual.

Potential Side Effects, Testing, and Closing Remarks

So for the people that are listening, for doctors that listening and trying to figure out more about the amino acids and for their patients, what are some of the tests that do to look at Potential deficiencies or maybe where the patient has too much of a certain level that could be affecting them.

Absolutely There's a couple different companies that have good good micronutrient tests Vibrant Labs has a good micronutrient test, but I really have gone from Vybrant to using Genova.

The Genoa Nutrival test is kind of my favorite test right now. It allows us to look at vitamins, minerals, amino acids, antioxidants. So we're fatty acids.

And so for me, that's my, you know, we talk all the time about looking under the hood. That's my go-to now because I really get a good grasp of what's going on from a micronutrient standpoint from that test, from gut health looking at dysbiosis markers, a neurotransmitter standpoint, mitochondrial function standpoint.

From a toxin standpoint that one test allows me to look at all of those issues. And I'm able to kind of come up with a strategy to address those things.

So it's like really putting a lot of pieces together with one task. I love that. Awesome, so that's it right here, man, for the amino acids. Dr. Davis, I appreciate you sharing all of your knowledgeable information to all the listeners.

Where can people find you? They can find me on the Liquor Vita website, and they can me with my Liquore Vida practice and my practice in Sarasota, Florida as well, Reveal Vitalik.

So you guys can fine me. We're gonna be doing some really exciting things. I'm really excited about what we're doing. From a health and wellness perspective, we are truly trying to bring true health to clients from a different approach.

Right. It's super important that you know as a traditional physician I think we've missed the mark with how we evaluate our clients or patients. Now that look under the hood is how we truly prevent disease as opposed to being reactive with respect to what we've typically done.

And I know we got a lot of great things in the works and a lotta the people are gonna start hearing more about environmental toxins and we're gonna take it to a certain level that no one has really taken it before.

where people are really gonna understand what's getting them sick. So people need to stay tuned, make sure to follow Dr. Davis, listen, tune in. There's a lot of stuff we speak on stage, both him and I, we're gonna be speaking at a few conferences coming up.

Dr Davis I appreciate you being on the podcast. And thanks for tuning in. Make sure to subscribe, like, comment, leave all your messages, do all the fun stuff, share it.

And thank you for turning in to Healthy Point of View podcast.