The SURPRISING Link Between Tyrosine and Mental Focus Transcript

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What Tyrosine Is and How Itu2019s Absorbed

Today we're going to break down a Today we're going to break down a question about the amino acid tyrrosine question about the amino acid tyrrosine and how it might relate to improved and how it might relate to improved mental focus.

mental focus. Hey, I'm Dr. A. So the first thing is Hey, I'm Dr. A. So the first thing is that tyrrosine is an amino acid. So an that tyrrosine is an amino acid. So an amino acid and you take it, you know, by amino acid and you take it, you know, by mouth and you're going to absorb it mouth and you're going to absorb it directly, meaning when it the pill directly, meaning when it the pill dissolves in your stomach, hopefully dissolves in your stomach, hopefully that's what it does. the amino acid goes that's what it does. the amino acid goes down to the small intestine and it's a down to the small intestine and it's a single amino acid and there's single amino acid and there's transporters that just take that and put transporters that just take that and put it right in your bloodstream. So it right in your bloodstream. So therapeutic use of single amino acids is therapeutic use of single amino acids is very popular because you can kind of see very popular because you can kind of see within days to a week or two how that within days to a week or two how that amino acid is going to make you feel if amino acid is going to make you feel if it's going to say make a difference in it's going to say make a difference in the way you feel because you're sort of the way you feel because you're sort of getting it right into your bloodstream.

getting it right into your bloodstream.

Tyrosineu2019s Role in Neurotransmitter Production

Now in regard to tyrrosine and the Now in regard to tyrrosine and the mental part of its job. So consider mental part of its job. So consider amino acids like tyrrosine for example.

amino acids like tyrrosine for example. The body can use them to make the The body can use them to make the skeleton of enzymes. They can use amino skeleton of enzymes. They can use amino acids to make you know peptides and acids to make you know peptides and peptides string together to make peptides string together to make proteins. All sorts of things can happen proteins. All sorts of things can happen with these amino acids. But when you get with these amino acids. But when you get to the brain tyrrosine is what's called to the brain tyrrosine is what's called a neurogenic or a biogenic amine.

a neurogenic or a biogenic amine. meaning it helps make a meaning it helps make a neurotransmitter. Now, we've done other neurotransmitter. Now, we've done other content on fennel alanine and it and content on fennel alanine and it and tyrrosine are in the same pathway. So, tyrrosine are in the same pathway. So, they kind of do similar things although they kind of do similar things although tyrrosine is a step closer to the tyrrosine is a step closer to the neurotransmitter formation than phenol neurotransmitter formation than phenol alanine. So, phenol alanine's up here alanine. So, phenol alanine's up here and then the next step is tyrrosine. So, and then the next step is tyrrosine.

Dopamine, Norepinephrine, and Mental Focus

So, if I take tyrrosine, I'm going to feed if I take tyrrosine, I'm going to feed into this neurotransmitter pathway. The into this neurotransmitter pathway. The important thing about this important thing about this neurotransmitter pathway is that it is neurotransmitter pathway is that it is going to then create in the central going to then create in the central nervous system catakolamines. So that nervous system catakolamines. So that would be dopamine, which most of us have would be dopamine, which most of us have heard of, and norepinephrine. Dopamine heard of, and norepinephrine. Dopamine and norepinephrine work together in the and norepinephrine work together in the excitatory circuits in your brain. Now, excitatory circuits in your brain. Now, you may have heard of people for mental you may have heard of people for mental focus being given stimulant drugs, for focus being given stimulant

drugs, for example, right? Well, many of the example, right? Well, many of the stimulant drugs also work with stimulant drugs also work with catakolamines in different ways than catakolamines in different ways than what we're talking about here. But the what we're talking about here. But the idea behind it is that you may have idea behind it is that you may have better focus if you have your body say better focus if you have your body say holds on to more dopamine and holds on to more dopamine and norepinephrine. Your focus may improve.

norepinephrine. Your focus may improve. That's what most of the drugs do. Not That's what most of the drugs do. Not all of them, but most of them help you all of them, but most of them help you hold on to more dopamine and hold on to more dopamine and norepinephrine. On the other hand, if norepinephrine.

Supply Side vs Stimulant Medications

On the other hand, if you take tyrrosine, you're sort of you take tyrrosine, you're sort of working on the supply side. And so working on the supply side. And so you're going to eventually make more you're going to eventually make more dopamine and norepinephrine and that may dopamine and norepinephrine and that may help with focus. We use tyrrosine a lot help with focus. We use tyrrosine a lot through the childhood ages for help with through the childhood ages for help with focus, adults who have needs for help focus, adults who have needs for help with focus. And there's a number of, you with focus. And there's a number of, you know, reasons people may want to do know, reasons people may want to do that. So sometimes a person maybe the that. So sometimes a person maybe the drug approach was too strong for them, drug approach was too strong for them, too much for them, but they noticed it too much for them, but they noticed it did work. it just they had to use such a did work. it just they had to use such a tiny dose of the drug and they still tiny dose of the drug and they still reacted kind of badly. Some of those reacted kind of badly. Some of those people who are catakolamine responsive people who are catakolamine responsive are very responsive to tyrrosine as a are very responsive to tyrrosine as a supplement to help sort of build up you supplement to help sort of build up you know the levels of the catakolamines.

know the levels of the catakolamines.

How to Start Tyrosine Safely (Dosing Approach)

Now from a safety point of view there's Now from a safety point of view there's a couple things to mention in regard to a couple things to mention in regard to tyrrosine because it does go down and tyrrosine because it does go down and make catakolamines especially dopamine make catakolamines especially dopamine norepinephrine in your brain. The first norepinephrine in your brain. The first safety thing to keep in mind is we safety thing to keep in mind is we always have people start with low doses always have people start with low doses and then build up because what if you and then build up because what if you took sort of real high dose all at once took sort of real high dose all at once and then you got too much dopamine and and then you got too much dopamine and norepinephrine. Well, you might not norepinephrine. Well, you might not sleep well. You might feel jittery or sleep well. You might feel jittery or shaky. You may have other behavioral shaky. You may have other behavioral things going on. So, it's just better to things going on. So, it's just better to kind of do a test dose and kind of work kind of do a test dose and kind of work up and see. Now, in adults, a test dose up and see. Now, in adults, a test dose could be 250 to 500 milligrams or maybe could be 250 to 500 milligrams or maybe a little bit more. In children, believe a little bit more. In children, believe it or not, it's about the same it or not, it's about the same depending. And this is not medical depending. And this is not medical advice. It's just generally what people advice. It's just generally what people will be using. And if somebody is say will be using.

Important Safety Cautions with Medications

And if somebody is say catakolamine responsive in a mood catakolamine responsive in a mood elevation way or a focus way, then they elevation way or a focus way, then they may in the beginning use a lot more may in the beginning use a lot more tyrrosine to get that effect and then tyrrosine to get that effect and then over time they taper their dose down over time they taper their dose down because they don't need it once the sort because they don't need it once the sort of body has built up their levels of of body has built up their levels of tyrrosine and supplying the tyrrosine and supplying the catakolamines. The second safety issue catakolamines. The second

safety issue to keep in mind is you want to be very to keep in mind is you want to be very careful if you are on any medication careful if you are on any medication that causes your body to hold on to that causes your body to hold on to catakolamine neurotransmitters. So this catakolamine neurotransmitters. So this would be a lot of the stimulant would be a lot of the stimulant medications. This would be a lot of the medications. This would be a lot of the catacolamine like anti-dopressant type catacolamine like anti-dopressant type drugs, things like that. So why would drugs, things like that. So why would that be a caution? So it's not that this that be a caution? So it's not that this is always a safety issue, but it's a is always a safety issue, but it's a caution. And if you think about it, the caution. And if you think about it, the drugs normally are working on the actual drugs normally are working on the actual sequestering or holding on to sequestering or holding on to catakolamines in your brain. So they're catakolamines in your brain. So they're sort of on the use end of the picture.

sort of on the use end of the picture. Tyrrosine is on the supply side of the Tyrrosine is on the supply side of the picture. So what you could see is if I'm picture. So what you could see is if I'm on a drug that stops catakolamines from on a drug that stops catakolamines from leaving my brain quickly, I'm going to leaving my brain quickly, I'm going to feel better from that drug if I'm feel better from that drug if I'm sensitive to it. But then if all of a sensitive to it. But then if all of a sudden I start to take tyrrosine and I'm sudden I start to take tyrrosine and I'm making lots more catakolamines, I could making lots more catakolamines, I could overdose. I could have too much. And overdose. I could have too much.

Signs of Too Much Catecholamine Activity

And what does too much catakolamine feel what does too much catakolamine feel like? Well, if you go far far far to one like? Well, if you go far far far to one end of the spectrum, there's disorder end of the spectrum, there's disorder called neurolleptic malignant syndrome, called neurolleptic malignant syndrome, which normally happens when you give two which normally happens when you give two or three catakolamine drugs at the same or three catakolamine drugs at the same time or someone overdoses on them. So time or someone overdoses on them. So that's not likely to happen. But you can that's not likely to happen. But you can feel very jittery, very overcaffeinated.

feel very jittery, very overcaffeinated. you cannot sleep or you can have other you cannot sleep or you can have other behavioral things from excess behavioral things from excess catakolamines. So again, it's not that catakolamines.

Why Tyrosine Is Generally Well Tolerated

So again, it's not that you can't have say tyrrosine when you're you can't have say tyrrosine when you're on what stimulant drug, but that is a on what stimulant drug, but that is a time to be very cautious with the dosing time to be very cautious with the dosing and work with a health care provider and work with a health care provider that understands both the drug and the that understands both the drug and the amino acid that's being used. Other than amino acid that's being used. Other than that and just watching for the sort of that and just watching for the sort of overdose side effects, which I will say overdose side effects, which I will say it's a lot like being overcaffeinated, it's a lot like being overcaffeinated, tyrrosine is generally very safe because tyrrosine is generally very safe because your body uses tyrrosine almost every your body uses tyrrosine almost every day from the amino acid pool in the body day from the amino acid pool in the body and it's very wellliked in other parts and it's very wellliked in other parts of the body that aren't the brain and of the body that aren't the brain and the brain also. I'm Dr. A. Want to thank the brain also. I'm Dr. A. Want to thank everybody who's subscribed. If you everybody who's subscribed. If you haven't subscribed, please subscribe, haven't subscribed, please subscribe, like, share, do all the things, comment, like, share, do all the things, comment, and we love it that you've joined the and we love it that you've joined the community, and we'll keep bringing you community, and we'll keep bringing you this content. We're going to put some this content. We're going to put some other things up here that you can click other things up here that you can click on to take a look at, or just visit the on to take a look at, or just visit the main YouTube channel, and I'll see you main YouTube channel, and I'll see you