



ADVANCED ANTIAGING
TECHNOLOGY SUMMIT

Natural Testosterone Optimization Hacks

Dr. Sanjeev Goel, M.D. interviewing
Lucas Aoun



Dr. Sanjeev Goel, M.D.

Hi everyone, I'm Dr. Sanjeev Goel, and I hope you're enjoying the Advanced Anti-Aging and Technology Summit. We've had some pretty great speakers so far, but today we're going to have a great speaker, Lucas Aoun. Lucas is Australia's leading bio-hacker. He's been experimenting for the past seven years on using nootropics and performance enhancing compounds. His mission in life is to discover something big that's going to impact millions of people globally, if not billions. He has some amazing content online, you should check out his YouTube channel, and his website, which is ergogenic.health. Enjoy today's discussion with him. How are you, Lucas?

Lucas Aoun

Doing well, Sanjeev. How are you, man?

Dr. Sanjeev Goel, M.D.

You're all the way, you're down under?

Lucas Aoun

Yeah, man. I'm based in Australia, so quite a long way away.

Dr. Sanjeev Goel, M.D.

Awesome. I'm so thankful that you were able to join us today. So maybe before we get in, you know, we're doing this this whole anti aging summit, and it seems like you're quite an expert in the use of various nootropics, and supplements, and hacks to kind of, you know, help us live our best life. And that's what this summit is all about. But maybe just tell us, how did you actually get into this whole field? I'm just so curious about that journey of yours.



Lucas Aoun

Yeah, well I've always been very fascinated with various interventions to sort of hack the brain, and manipulate certain neurotransmitters to sort of suit our needs. And so like my whole journey really started out playing professional soccer. I played, you know, for 11 years, and I was always experimenting with different compounds, like before matches and things that could help with like sort of getting into the flow state, helping with like my ability to read the play, and sort of fell in love with the whole idea of like experimentation. And then I dived into a lot of the research and, you know, figured that there were a lot of underground sort of niche compounds that deserved a lot more attention that weren't really being recognized. And so that's really what catapulted me into what I'm doing today, which is providing exceptional, high quality information and education around nootropics, and sort of biohacking. So, yeah.

Dr. Sanjeev Goel, M.D.

And then how did Ergogenic Health get started? Is that basically the brand of the work you're doing?

Lucas Aoun

Yeah. So Ergogenic Health just came about from, actually the word "ergogenic" just literally translates to and means, "any technique or substance that can improve either physiological or psychological performance." And so I really fell in love with that word, and I was like, ah, you know, I actually want to start my own brand, I want to start my own business. And that's where it all started, from my Instagram channel, which is [ergogenic_health](#), and that really took off. I'm delivering, you know, very well-researched content there so people can dive deep into that as well.

Dr. Sanjeev Goel, M.D.

Yeah, no, I was really like amazingly impressed by the detailed level of scientific detail that you go into when you look at some of these supplements, so it's definitely, our viewers are gonna really understand. So again for everyone, the Instagram handle is [ergogenic_health](#)? Sorry, I just want you to say that again.

Lucas Aoun

Yeah. So, E R G O, [ergogenic_health](#). So they can check that out. And also the YouTube channel, which I think you've seen, is Boost Your Biology. So, there's amazing free content there for people to dive into.



Dr. Sanjeev Goel, M.D.

Okay, awesome. So let's just get started with right away, what are some underground nootropics that people can use to improve their focus, motivation and focus?

Lucas Aoun

Yeah. So I think one that we can sort of discuss now would be a specific type of vitamin B1. Most people would be familiar with just regular thiamine HCL, which is like the standard vitamin B1. But there's actually a different type of B1 called TTFD, and this particular type of B1 has an incredible ability to actually cross the blood-brain barrier. And so once it gets into the brain, it can help to increase acetylcholine, it can actually bind to the dopamine receptors and activate the desire to work, the desire to do activity, to do physical activity. And it's been studied for years. In fact, the Japanese spent, you know, millions of dollars researching this particular type of B1. And it's incredibly important, because people don't realize that any time we ingest any form of carbohydrate, anytime we consume any sort of carbohydrate, it automatically increases the body's need for vitamin B1. So any time, and so that's like something that, you know, you hear people talking about the MTHFR, polymorphism, but I think really what we're going to start to see is a rapid rise in the inability to create the active form of vitamin B1 in the body. There's a particular enzyme that needs to convert thiamine HCL into its active form, and so TTFD is the active form.

Dr. Sanjeev Goel, M.D.

And what is that? So some people obviously may not have that enzyme, or not as fast acting as somebody else, I assume?

Lucas Aoun

Exactly. So some people have an impaired ability to convert that inactive form of vitamin B1 into its active form. And so the consequences of that are significant. Just like with the FTHFR polymorphism, you know, we know that now the inability to convert folic acid into folic impairs methylation. But the inability to convert thiamine HCL into its active form TPP, it will then lead to this downstream cascade effect of, it's like a false positive of vitamin B1 deficiency that millions of people are struggling with at the moment.

Dr. Sanjeev Goel, M.D.

Okay. Perfect. Yeah. And so tell us some other ones, what else would you? It sounds like motivation, focus, is all about dopamine I would think. Is that not correct? Is that not normally what we're trying to change?



Lucas Aoun

Absolutely. Yeah. So, like the dopamine side of things. One particular compound that's, I would say trending, and probably going to start to really, you know, hit the scene in the nootropic space, is 9-MBC, 9-methylbetacarboline. Did you check that one out?

Dr. Sanjeev Goel, M.D.

Yeah. I would love to hear more about that. I did see your video on that. And maybe before we even jump into all this, I know that you put the usual disclaimer that, you know, this is not medical advice, and that they should be consulting with their healthcare provider before they take anything, or try a new regimen, because these are meant for research use.

Lucas Aoun

Exactly. So with like something like 9-MBC, at the moment it seems to be gaining a lot of attention from people that have, I guess, somewhat abused their brain, with like Ritalin or Adderall, or these really strong, you know, pharmaceutical grade ADHD medications, which over time as you probably also know, they start to burn these dopamine receptors, and lead to downregulation over time. And that's where something like this 9-MBC fits in, is that it can help to restore and regenerate these lost and damaged dopamine neurons. And so we're seeing people say that they're able to reduce their dosage on Adderall or Ritalin by using 9-MBC. So it's actually helping to reduce tolerance and help to regenerate the brain. Which is phenomenal, because it's also very neuroprotective at the same time.

Dr. Sanjeev Goel, M.D.

That's an incredible thing. So how exactly does it work? How is it doing that to dopamine? Is it preventing its re-uptake? Is it an issue with transport? Do we know that?

Lucas Aoun

We do have preliminary data, it suggests that 9-MBC actually acts on, you've heard of obviously BDNF?

Dr. Sanjeev Goel, M.D.

Brain derived neurotrophic factor. Right.



Lucas Aoun

It stimulates BDNF, nerve growth factor, GDNF, which is glial derived nerve growth factor. It also stimulates other pathways. And actually that that GDNF one is actually a key target that ibogaine, the anti-addictive psychedelic, actually increases. So it seems to have some sort of like similar affinity towards the same sort of receptors there, which is pretty phenomenal.

Dr. Sanjeev Goel, M.D.

Wow. Okay. So ibogaine, yeah, I know there's a number of companies looking at how to, you know, bring up ibogaine to the market now for opioid addiction treatment as well. So very interesting. Did you think this could also be helpful for people who are having, you know, problem with cocaine addiction as well, because this works on dopamine pathways?

Lucas Aoun

Possibly. Possibly, yes. I mean, let's say they've damaged themselves, or they feel like they've lowered their baseline, then something like 9-MBC may help to bring them back up to where they were previously. But from like an anti-addictive component, there are other compounds that would probably be more appropriate to actually fit in there to reduce the cravings, and things like that. But definitely I think 9-MBC is very versatile. And although it's very early days and we don't have, there are no human studies on this compound, although all of the rat studies, they originally were looking for a molecule that could help with Parkinson's disease, and that's how they found 9-MBC.

Dr. Sanjeev Goel, M.D.

Hasn't there been some trials looking at Parkinson's in humans with this medication, or no, it's only been in rats with Parkinson's?

Lucas Aoun

Only in rat studies, unfortunately, 'cause I guess the actual molecule, or it's 9-methylbetacarboline, and the thing is like, I don't think, you know, who's going to invest the money to do these tests with such a compound that can't really be patented sort of thing?

Dr. Sanjeev Goel, M.D.

Oh, it can't okay. Right. Interesting. All right. What what's next on nootropic attention and focus, anything else that's out there out that one should have a look out for?



Lucas Aoun

Yeah. I mean, we've got a range of other compounds, one which I think deserves a lot more attention. Actually it's a natural botanical called cistanche. Cistanche extract. That's well-known in traditional Chinese medicine. And it's considered to be kidney yang tonic. So it fortifies the kidneys, but as you know, the kidneys contain the adrenal glands, like the adrenal glands sit just above the kidneys. So when the traditional Chinese medicine says, "This herb will help to rejuvenate the kidneys." What they really mean is that they're actually helping with that adrenal, the adrenal function. And we know that the brain and adrenal glands are linked, because we got the HPA axis, which you know, your audience will know everything about. So cistanche unique because it actually targets both the brain and the adrenal glands to help with boosting that motivation, that focus. And it acts as a very mild sort of MAO inhibitor as well, which is, that's common, that pathway is, that enzyme that degrades dopamine. So by inhibiting the breakdown of dopamine, where we're having more dopamine in the synaptic cleft sort of thing.

Dr. Sanjeev Goel, M.D.

Wow. Okay. So this herb, as I said, where's this available? Like how can one, I've never heard of it before. It just didn't seem like it's very, well-known.

Lucas Aoun

It is quite well known in the States. I have a reliable vendor, like obviously, through my site, through my website, people can see that there. Just search Cistanche. It's spelled C I S T A N C H E. Cistanche extract. But the thing is with cistanche, it actually shares similar constituents to something like, have you heard of ekenosha?

Dr. Sanjeev Goel, M.D.

For sure. Immune boosting.

Lucas Aoun

Yeah. I mean, yeah. Well the, one of the most well known, you know immune modulating botanicals. But cistanche actually shares similar constituents. Cistanche contains ekenisha inside, which is similar to what's found in ekenosha. So you're giving that immune, there's immune modulating effects as well.



Dr. Sanjeev Goel, M.D.

Oh, wow. Okay. Let's talk a little bit about, oh dopamine. Anything more you'd suggest from what we've talked about?

Lucas Aoun

From the dopamine side of things, another useful herb that we can implement is something called coleus forskohlii, or forskolin.

Dr. Sanjeev Goel, M.D.

I saw that. Tell us about that.

Lucas Aoun

Yeah, that one there is unique, because it can actually upregulate those dopamine D2 receptors. And so that's beneficial, again, for people that have had downregulation from, you know, excessive stimulant use. But the other benefit there is that not only does forskolin increase those D2 receptors, but it also upregulates the enzyme, tyrosine hydroxylase, which is the enzyme that we, so, the pathway in the cascade is, we eat protein, we eat steak or chicken, or whatever, they contain amino acids, and one of which is tyrosine, or phenylalanine. But then tyrosine has to go down a sequence of steps to eventually make dopamine. Forskolin comes in and actually upregulates that tyrosine-hydroxylase enzyme to actually increase the synthesis of dopamine. So that's another, you know, useful effect that forskolin has, is increasing total sort of dopamine production as well.

Dr. Sanjeev Goel, M.D.

Okay. Sounds good. What are some marine based drugs that can improve cognitive function? Tell me about that.

Lucas Aoun

Yeah. I really, I get excited when we look at these whole marine drugs, 'cause there's a lot of things, you know, not only out there in the forest and the jungle, but like, let's go underwater and see what's out there! 'Cause like there are some crazy cool seaweeds out there. And you know, most people would be familiar with the standard ones, like wakame, and the basic seaweeds. But there's a particular type of seaweed that, it's a brown seaweed, it's called ecklonia cava. And this particular seaweed has had over \$30 million of research spent just investigating its therapeutic



effects. And really this seaweed, honestly, has the most impressive, you know, therapeutic profile. It mimics the effects of L-theanine, so it actually increases alpha waves in the brain. It can reduce neuro-inflammation. It's a potent antioxidant. It can improve acetylcholine release in the brain. And generally speaking, it's like a calming, relaxing sort of seaweed, so it actually works well before bed. And you know, when I experimented with it and gave it to my dad and to my family and friends, they all noted that like, taking ecklonia cava before bed makes them wake up feeling like they can't even go back to sleep. That's how like restful that sleep is.

Dr. Sanjeev Goel, M.D.

Oh, wow. That's very interesting. So what did you call it again? So our listeners can just get, how do you spell that?

Lucas Aoun

It's called ecklonia cava. So ecklonia cava, So, E C K L O I, E C K L O N I A and then C A V A. So ecklonia cava.

Dr. Sanjeev Goel, M.D.

Ecklonia cava. Perfect. Okay. Sounds good. Anything else on the marine based supplements that you think about?

Lucas Aoun

I mean, the other obvious ones are like spirulina. I mean that's, I feel like spirulina, you know, gained its popularity about probably 10 years ago. I looked at it and thought, it's cool, but it's just too mainstream. But then I've recently sort of back to it, I'm like, "Hang on a sec." There's some pretty impressive studies on like body composition. And you know, like it's one of the highest protein, most protein-rich food on the planet. In fact, NASA used it as part of their space missions, and things like that, you know, to feed their astronauts, 'cause it was so protein dense. So that's another benefit.

Dr. Sanjeev Goel, M.D.

And what do you think about blue-green algae? Is that the same thing as spirulina, or that's different?



Lucas Aoun

That's the, yeah. The spirulina is considered a type of blue-green algae. I think there are different types of spirulina, like spirulina platensis and maximus and like that. But yeah, I guess spirulina is diverse in its effects. It's something that like, I feel like almost anyone can include in their regime, 'cause it's not going to have any deleterious effects anywhere else. It's sort of, you know, it's going to be beneficial for multiple organ systems. So yeah, it's a cool one.

Dr. Sanjeev Goel, M.D.

Okay. What is synthetic adaptogen? What does that, what is synthetic adaptogen?

Lucas Aoun

Okay, well, I mean let's first of all look at the word adaptogen, which is, you know, any herb or compound that can build one's stress resilience. So, help one combat physical and mental stress. Now the classic adaptogens that we both would know about, Rhodiola, ginseng, korean ginseng, ashwagandha. Like, all of these are phenomenal, they have some impressive research, I'm a fan of all of them. But there's a particular, well back in the early 1990s, there were Russians that wanted to create, "What can we design that's going to have an adaptogenic like effect synthetically?" They looked at establishing, you know, different compounds, and they found one that had some phenomenal effects! And that one there is called a bromantane.

Dr. Sanjeev Goel, M.D.

Bromantane, yes, I've heard of that.

Lucas Aoun

Yeah. Bromantane is considered to be a synthetic adaptogen because it regulates so many body systems at once. It sort of modulates the immune system. It's actually considered to be a potent drug against neurasthenia, which is like just general weakness of the mind, weak memory, just convalescence sort of state, like where you're struggling to just do. And in fact, technically it's actually an antidepressant, and anxiolytic, so it reduces anxiety, and reduces depression as well. So it's stimulating, but it's not exhausting. So the problem is with things like Ritalin, Adderall, yes, we definitely agree that they're stimulating, and they're energizing, but at what cost? They're going to be causing depletion like the following day. Whereas something like bromantane does not exert any addictive qualities, nor is it habit forming, and nor does it have any withdrawal or tolerance. So it's ticking all the boxes that we want, because we want to use something that's



going to, you know, build up our energy reserves over time, and not lead to a downregulation or withdrawal once we cease use.

Dr. Sanjeev Goel, M.D.

Perfect. Perfect. Makes sense. And then metformin versus DHB berberine. If you could just tell us, what's the difference? We all know metformin has been used in anti-aging medication, and we've heard of berberine, so you can just tell us what's the difference, and which is better?

Lucas Aoun

Yeah. I mean, metformin, I'm a huge fan of still, but I like to keep my eyes open to what else is out there. I personally use metformin like maybe once or twice a week, the days I don't train or whatever. But this, and most of your audience would probably know about berberine, but there's a better form of berberine called dihydroberberine, DHB. Dihydroberberine outperforms regular berberine, because regular berberine has such a poor bioavailability, so you need such high doses to actually exert a beneficial effect on it. Cholesterol markers, blood sugar, things like that. But dihydroberberine, it has a much more superior bioavailability, five times more absorbed than regular berberine, which means we can drop the dosage down to about a 100 to 200 milligrams a day, and not get all of the GI side effects that people get from berberine. 'Cause it's very harsh on the stomach! It can be very, it's an alkaloid, so it's very strong. So yeah, I think berberine's definitely one people should, you know, keep a look out for. I did a YouTube video on it, talking about it. It's --

Dr. Sanjeev Goel, M.D.

What's the dosage? What dosage should people take of berberine?

Lucas Aoun

For general maintenance of blood sugar and insulin sensitivity, I'd say between 50 to 100 milligrams a day, preferably like 30 minutes before their highest carbohydrate meal. So I mean, my highest carb meal is usually in the evening. I prefer to carb backload. So like, I'll have DHB with, or just before high-carb meal.

Dr. Sanjeev Goel, M.D.

Okay. Wow. Have you checked this stuff to see the impact on your insulin sensitivity? I'm just curious.



Lucas Aoun

Yeah so, I mean I got myself one of those CGM, continuous glucose monitoring devices, that was fricking awesome! A lot of fun. Like you learn so much! Did you ever play around with those?

Dr. Sanjeev Goel, M.D.

I've only used something recently called Libreview, which is, it's like a sticker. One of the pharma companies for diabetes, they have a little sticker. But I haven't used any other ones. I think people are using a Dexcom or something like that. But which one have you used?

Lucas Aoun

I was using their Freestyle, yeah, Freestyle Libre, the --

Dr. Sanjeev Goel, M.D.

Yeah, same one.

Lucas Aoun

Yellow, yellow box?

Dr. Sanjeev Goel, M.D.

They're pretty good. I mean, maybe the numbers aren't as accurate as blood, but it definitely is very insightful about what happens in middle of the night. Because if you do it late, then basically you don't see the sugar drop till at least like 3:00 AM. It was very shocking to me.

Lucas Aoun

It's crazy, man! Like I learned, like with some of the like starch, starch was so bad for me. Like potato starch, eating potatoes would spike my sugars like crazy.

Dr. Sanjeev Goel, M.D.

Yeah. It's pretty amazing. It's very interesting. So how can one bulletproof their liver? And I think this is especially interesting, because I have so many clients who have just, you know, mild liver enzymes elevated, some fatty liver. What do you recommend for that?



Lucas Aoun

Yeah. One of my favorite compounds here would be something yeah called tudca.

Dr. Sanjeev Goel, M.D.

Yeah, tudca.

Lucas Aoun

Yeah, I really liked tudca. You know, it's a water-soluble bile acid. It can, you know, significantly help to reduce those like, ast, alt, liver markers. You know, it's got regenerative properties on the hepato side, so liver cells. And it's versatile, because like it's a bile acid, and so whilst it's improving liver function, it's also going to be helping to break down fats, which a lot of people struggle with. And the actual powder itself, like have you ever opened the capsule to see the taste?

Dr. Sanjeev Goel, M.D.

No, I haven't!

Lucas Aoun

It's like it's the most bitter thing ever! You know, usually you know something's good if it's bitter, because like it's the type of thing that we lack in the Western diet. We lack those bitter foods, and those bitter foods are what stimulates digestion, liver function, or the bladder function. So, yeah.

Dr. Sanjeev Goel, M.D.

Does that come from a plant? Like where's it come from? Like what is it exactly?

Lucas Aoun

I mean that it's, yeah, it doesn't come from any plants or herbs. I think they actually extract it from ox bile.

Dr. Sanjeev Goel, M.D.

Hm. Interesting. Yeah. Okay. Sounds good. So how can one reverse caffeine tolerance? Let's jump right to that.



Lucas Aoun

This is a big question. You know, people, and I'm sure those listening in, I'm excited to talk about this, 'cause I know it's going to be applicable to everyone. Being looking into the pharmacokinetics of caffeine, I've been looking into the neuroscience behind caffeine, how it works, the different receptors it binds to, and I was looking at specifically how we can agonize, or to agonize the adenosine receptors, which is the opposite to what caffeine does. Caffeine is an antagonist, so it binds to and blocks these adenosine receptors. But what happens if we agonized the adenosine receptors overnight, to then down-regulate them, so that when we use caffeine, the caffeine feels stronger? And so that, that's possible. And I just did a YouTube video talking about this. It's basically, we can use something called CBG, right?

Dr. Sanjeev Goel, M.D.

It's just cannabinoids, right?

Lucas Aoun

Yeah, so cannabigerol. So you know, CBD is awesome, people are using CBD, but I think CBG is going to, it can be used in this context to reduce caffeine tolerance.

Dr. Sanjeev Goel, M.D.

But basically it's re-allowing the adenosine receptor to be more sensitive?

Lucas Aoun

Yeah. Well, once caffeine is in the brain, it will, the reinforcing and stimulating effects of caffeine will be stronger, because we've down-regulated the adenosine receptors

Dr. Sanjeev Goel, M.D.

Oh, down-regulated the adenosine receptors. Because isn't it adenosine is what makes, builds up that what makes us sleepy?

Lucas Aoun

Exactly. Yeah. And in fact, that's one of the reasons why people can take, and I've experimented with, I've taken adenosine before, like to see what happens. It gives you amazing sleep, that's



another little sleep hack. But yeah, adenosine seen can be compounded, and that's what makes you fatigued before bed.

Dr. Sanjeev Goel, M.D.

Oh, that's interesting. I've never, yeah, I don't know why people don't do that more often. That seems like a very simple sleep hack. How is it hard to get adenosine? Why do people not do that?

Lucas Aoun

I actually don't even know! Like, I don't understand why more people don't do it. I know there's a few compounding pharmacies that make it, but it's actually getting it in tablet form or capsule form, it's not very well-spoken about. I probably should have spoken about that with Ben Greenfield on his podcast.

Dr. Sanjeev Goel, M.D.

That sounds good. So tell me what's the best, what are best caffeine alternatives? What do you recommend? What are other things that one can take?

Lucas Aoun

I mean, caffeine, as we know, builds that tolerance. But really there's a different molecule, it's similar to caffeine in its structure, but it just has an extra methyl group, and that extra methyl group, it's called teacrine. So, T E A C R I N E, so teacrine. Now teacrine, in my opinion, is better than caffeine because it has a very long half-life, like much longer than caffeine, like 20 hour half-life. And in the studies, it had no signs of tolerance or withdrawal. So even after eight weeks of intake, on the eighth week, they were still getting the energizing effects of teacrine, versus caffeine builds tolerance after say, like three to four days or so.

Dr. Sanjeev Goel, M.D.

So how does one get teacrine? What's it look like? It comes in a powder? Or how does one get that?

Lucas Aoun

So again, I'm affiliated with a company, they can check that out on my site. You can get it in capsule form or --



Dr. Sanjeev Goel, M.D.

You have to repeat that, because you cut off a second. Sorry go ahead, say it again.

Lucas Aoun

With the teacrine, I do sell it on my website. Full disclaimer, I'm affiliated. It can be any of the capsule or powder form.

Dr. Sanjeev Goel, M.D.

Right.

Lucas Aoun

But yeah, between 100 to 200 milligrams is more than enough. You know, and have it first thing in the morning.

Dr. Sanjeev Goel, M.D.

So can you make it into like a coffee drink? I mean, that's what makes people love to coffee cut, kind of have a drink and all that. Can they do that with teacrine?

Lucas Aoun

You can, but then you'd have to use a 40% type, because it's so bitter. Again, it's super, super bitter! Yeah. Yeah.

Dr. Sanjeev Goel, M.D.

Right. Okay. Makes sense. And then tell us a little bit about fat loss, 'cause that is a major thing that obviously people are concerned about. How can they reduce fat? What molecules or peptides that you recommend?

Lucas Aoun

Yeah. There's one molecule that's very new, but its researched. I think it's going to be huge in 20, probably next year, or late this year, it's called 5-Amino 1MQ. It's a small molecule. It's not even a peptide, it's like a small molecule that actually, you should see the rat studies, like it literally, I



know, again, this is new, and it's not well studied, it's not studied in humans, but the initial in vivo and rat studies and things like that show that it reduces lipogenesis, it has lipolytic effects, it improves insulin sensitivity, lowers cholesterol, and it also increases satellite cells in the muscle, which are like these STEM cells that help with muscle growth as well. So 5-Amino 1MQ is definitely one to keep a look out for.

Dr. Sanjeev Goel, M.D.

Wow yeah, I think I've heard that before. That's again, off your site? Is this a hard to get type of peptide? I haven't seen this from many, many places.

Lucas Aoun

Right now there's only two vendors in the world making it. I've tried both. And the first one that I used, I wasn't particularly happy with. I didn't notice anything. Like I literally didn't notice, didn't see any changes to my body composition. But then I connected with Ryan Smith from Tailormade Compounding.

Dr. Sanjeev Goel, M.D.

Right, right. I know him well.

Lucas Aoun

Yeah. We've had multiple awesome chats. And so he connected me with a vendor to, you know, source 5-Amino 1MQ. So I'm now I've put that company on my website so people can, you know, find that on my site.

Dr. Sanjeev Goel, M.D.

Awesome, that's so great. Okay. And so tell me about what is the, I know we've talked about adenosine, but what is your best hack for sleep?

Lucas Aoun

Well I mean, seeing as I'm talking to a bunch of bio hackers, everyone hopefully knows wearing a pair of blue blockers is beneficial. I love wearing blue blockers. If you haven't already tested this out, I think mouth taping. Have you ever?

Dr. Sanjeev Goel, M.D.

No, I haven't! Tell me about that!



Lucas Aoun

Yeah. I know it sounds bizarre, wacky, but yeah. Unfortunately there are many people who breathe through their mouth whilst they sleep. And the consequences of that is that they're actually activating the sympathetic nervous system. Whereas when we breathe through our nose, we're actually stimulating the parasympathetic nervous system. So you know, I started this as a self experiment. I read about the benefits of a mouth taping, and then I started taping my mouth before bed, and I was like, "Damn!" Like I'm waking up feeling a lot better. I didn't realize this, but I was actually a mouth breather. So I was breathing through my mouth, and a lot of people are, but they don't realize it. So for those wanting to try it, literally just get some tape, tape your mouth, and see how you feel when you wake up.

Dr. Sanjeev Goel, M.D.

So tell me, you mentioned blue blockers. Which blue blockers do you do recommend? I don't think all are the same. And you know, Dave Aspace, is one of the guests on our summit as well, he has a company called True Dark. And he was talking about, you know, the different types of blue blockers. And then he's put a lot of research behind True Dark. But I'd love to hear your thoughts about that.

Lucas Aoun

Yeah. I mean I'm affiliated with actually a guy from Melbourne, He's a fellow biohacker. He's got his own company. They're called Barkley Eyewear. I support him. He's got different lenses. So he's got like three different clip-ons, so they have like, you know, during the day, just after dinner.

Dr. Sanjeev Goel, M.D.

Yeah.

Lucas Aoun

So, three-in-one. You put different filters. So you know, I like to use the most, like the darkest, the darkest filter. So like you can't, the thing is once you go driving out, if you go into the car wearing these, every traffic light's red.

Dr. Sanjeev Goel, M.D.

Don't get into accidents, I guess. Don't do that. That sounds great. So just curious, what do you see



as interesting, what does the next year look like? Like in biohacking, and the world that you're in, where do you see it's going? Like so much change is happening, I mean I think that knowledge expanding exponentially, you know, you're providing all this knowledge up free. Where do you think it's going?

Lucas Aoun

You know what, I'm really excited to see more research around psychobiotics. Like, specific type of probiotics that can dramatically affect cognition. Like that really excites me. I'm just, I've got my pub med notifications turned on, and anytime psychobiotics is mentioned as a key word, like I get notified. I literally read every morning, man. I wake up, and I'm like, "Let's go on PubMed, what's released?"

Dr. Sanjeev Goel, M.D.

Nice! I just turned on my Google alerts too for some of the things, but that's a great idea. So there's a whole, I didn't even realize there's a whole thing called psychobiotics. Very interesting. We do know that obviously, yeah, the microbiome's nature effect on our mood and our brain, but I didn't realize that there's a whole bunch of supplements that can make that type of impact.

Lucas Aoun

Well, that really excites me. And in fact, I'm really keen to see even if there's like a particular type of probiotic strain that can actually increase melatonin. Like that would be fricking awesome.

Dr. Sanjeev Goel, M.D.

Wow. That's interesting. And what else for you? Is there anything else apart from light study areas? What else is interesting, going to happen for you in the next 12 months? Like what does that look like for you?

Lucas Aoun

I mean, to be honest like, just continue growing my YouTube channel, and you know, help to promote my courses. I've got a nootropics course which I've launched. It was on Ben Greenfield's podcast. I've got a sleep course, and I've also got a testosterone, a natural testosterone optimization course. So really, just continue to provide just cutting edge content, man. Like I just want to be, I want to be Australia's best. That's just, that's my goal!



Dr. Sanjeev Goel, M.D.

Yeah, Australia will be very proud. You're doing some great work. I really appreciate your time today. It's excellent. Thank you so much for this.

Lucas Aoun

Well, thanks. Thanks for having me, Sanjeev. It's been awesome, so yeah.