Methylene Blue

0.5 - 1 mg (maybe up to 2 mg) /KG? / day - take in AM
yes it needs to be cycled: 5 days on, 2 days off

Methylene Blue is a mild MAO inhibitor, meaning it can interact with medications that affect serotonin levels, such as:

- SSRIs and SNRIs (used for depression and anxiety)
- MAOIs (older antidepressants)
- Stimulants and ADHD medications

Prolonged use could increase the risk of serotonin syndrome, a potentially life-threatening condition characterized by agitation, rapid heart rate, and confusion.

● You May Already Own the Most Powerful Cancer Tool: A Closer Look at the Anticancer Properties of Methylene Blue. Researchers are now testing the efficacy of methylene blue — a commonly used dye that enhances cellular energy production — in treating cancer. Proper dosing is important. Just 5 milligrams of pharmaceutical-grade methylene blue per day is enough to reduce cellular stress and support mitochondrial health. video by Dr. Joseph Mercola (10:29)

● Methylene Blue. Analysis by Dr. Joseph Mercola | January 08, 2025 It's not just another supplement; it's a powerful agent that can both 'accept and donate' electrons - and treat everything from mental health disorders to acute medical emergencies. Clinical trials have even reported a 16 mg daily dose provides an astounding 80% reversal of Alzheimer's symptoms. Research reveals methylene blue's anticancer properties, particularly in chemoresistant ovarian tumors, by selectively targeting cancer cell mitochondria while sparing healthy cells from damage.

● Methylene Blue Is Beneficial for Slowing Skeletal Aging and Treating Brain Disorders | Analysis by Dr. Joseph Mercola | October 21, 2024 (methylene-blue-bone-brain-health.pdf)

● podcast: https://podcasts.apple.com/us/podcast/health-benefits-of-methylene-blue-discussion-between/id1286870871?i=1000557825637

● Mercola On Methylene Blue: For Memory, Mood, Parkinson's & More Discussion Between Francisco Gonzalez-Lima, Ph.D. & Dr. Mercola April 17, 2022 (01:41:48) podcast. In this video, Dr. Mercola and Dr. Francisco Gonzalez-Lima cover why Big Pharma doesn't want us to know about Methylene Blue (1%) or how to use it. If you want to care for your family outside of the present medical paradigm, this would be something to pay attention to and have in your medicine toolkit.

● HEART ATTACK or STROKE Melatonin and methylene blue belong in every emergency medical kit.
• Melatonin has no known toxic threshold. In cases of an acute heart attack or stroke, melatonin helps limit the damage, while methylene blue augments cytochromes to allow the continued production of ATP even without the use of oxygen, which also helps minimize cell death and tissue damage.
• **Melatonin Dosage: 50 milligrams at time of heart attack or stroke.** The half life of melatonin in the blood is only about 40 minutes. Within cells, the half life varies according to the level of oxidative stress present. If oxidative stress is high, the melatonin is destroyed much faster. Take multiple doses spread out. Sublingual or intravenous melatonin would be ideal, oral melatonin

1st passes through and must be metabolized by your liver.
• Methylene Blue oral half-life is 4 to 6 hours. The typical oral dosage of methylene blue ranges from 50 to 300 mg per day.

Do not exceed 7 mg/kg to avoid side effects or toxicity
 10 lbs = 4.535924 kilograms x 7mg = 31.751468 mg
100 lbs = 45.35924 kilograms
125 lbs = 56.69905 kilograms
150 lbs = 68.03886 kilograms
175 lbs = 79.37866 kilograms x 7 = 555.65062 mg
200 lbs = 90.71847 kilograms

Dosing example:
- 100mg loading dose at 8 am…
- half-life #1: 50 mg left in your body at 2 pm (i.e., 6 hours later)
- half-life #2: 25 mg left in your body at 8 pm (i.e., another 6 hours later)
- half-life #3: 12.5 mg left in your body at 2 am
- half-life #4: 6.25 mg left in your body at 8 am

Contraindications
Mehylene Blue should not be used with other drugs, especially: SSRIs (like Prozac, Zoloft), SNRIs (like Effexor, Cymbalta) or MAO inhibitors (like Nardil, Parnate). These combos can cause serotonin syndrome, a potentially life-threatening condition.

Trevor reel on Methylene Blue: https://www.facebook.com/reel/1200150335568827 go copy the text included w/ this reel.

Methylene Blue Another Masterclass in The Series - Dr Trevor Bachmeyer
https://www.youtube.com/watch?v=ICbMnq3E-jo

All right, a lot of you guys have been asking me about methylene blue. So, I'm going to do a deep dive into methylene blue. I'll give you everything I've got.
Introduction to Methylene Blue
3:39 This stuff's awesome. But they're not all the same. And you don't have to pee blue to prove that it works. In fact, that's the excess. It's being converted in your system to the colorless version. So blue methylene. And so it's not that doesn't mean it's working. That's such a ridiculous Instabro influencer thing. I'll explain the biochemistry behind it so you actually understand. But I'm going to take everything that you probably thought you knew from following Instagram people. But everything you knew about cellular energy and mitochondrial function and even human performance in general. And I'm going to set it all on fire. Yeah. I'm going to set it on fire with 140y old synthetic dye that makes your neurons go nuclear in a good way. Because listen, unlike 99% of the supplement industry and the peptide industry and the world out there on social media that sells you glorified fairy dust with Instagram marketing and affiliate codes and shills and sellouts and doctors who've sold their soul to make a buck.
Yes, methylene blue needs to be cycled. So I even that I gave you a hypothetical kangaroo dose half to 1 milligram every day.
5:00 Biochemical Mechanisms of Methylene Blue
I'm going to walk you through the exact biochemical mechanisms of why methylene blue is I believe probably the single most underrated performance molecule on the planet. And this isn't theory. Like this is all peer-reviewed. It's mechanism understood, physiologically validated, science-based. So listen, here's what nobody's really talking about. Methylene blue, right? Phenothinium chloride. If you want to get all technical about it, this stuff 1876, man, let that sink in. Just let that land for a second. This thing's older than your

great grandmother's great grandmother. The first fully synthetic pharmaceutical compound ever created. So, Paul Erlick, the godfather of modern pharmarmacology, used it to stain cells. That's what he used it for. And here's where it gets really interesting because when he injected it into patients with malaria in 1891, that's a long time ago, they got better. They got better not because it killed the parasite directly, but because it fundamentally altered the cellular electron dynamics. So at a molecular level, methylene blue is a thazine dye that exists in just two states. An oxidized form, which is the blue one that we all see. I should have brought a bottle out here. And a reduced form which is what I was talking about earlier colorless lucome methylene blue and this is where the magic all happens because methylene blue doesn't just do one thing it's a cellular electron shuttle, a molecular taxi service right, that's operating at this nanoscopic level inside every single one of your 372 trillion cells it does all kinds of things about that if it's operating like that and it's transporting electrons What's it affecting? ATP. So, before I go into how this works, you need to understand the problems it solves. Mitochondria, little powerhouses running complex one through complex five of the ETC 2065. I know you
8:03
guys just heard that one. Complex 5. This is the assembly line. That takes the food that you eat and strips electrons from it and creates ATP, adenazine triphosphate, which is the only energy currency that every cell in your body accepts. No ATP, no life, period. There's no workaround to this. And I think that's where a lot of people are confused; they're going, "Well, but what if I do this instead? No ATP. But what if I do that? No ATP. Won't work. But what if I do this? No ATP. Won't work. Like, you have to always come back to the fundamentals. And here's the problem. Complex one and complex 3 are very leaky. It's like a garden hose that a squirrel chewed on. It's just full of a bunch of holes. So, electrons escape. They react with oxygen and create ROS's, reactive oxygen species, free radicals. They're cellular vandals that damage your mitochondrial membranes, your DNA, and your your proteins.

8:56 Remember cardio lipid SS31. There's all kinds of things I could get into where just it's getting holes punched into the membrane and SS31 comes in and helps that save that. That's another podcast. So 2012 a study in biochemica a biophysica acta showed that as we age, yes that's really what it's called. Complex one efficiency drops by 40%. 40 freaking %. So your cellular power plants are running at 60% capacity and you're wondering why you're tired at 2 in the afternoon. I did a full podcast on fatigue, but if you could take just one thing out of it, this is the ATP crisis. This is where methylene blue enters stage left like this biochemical hero for your life. Listen, this is where most people's brains shut off and this is where the power is. So you have to understand this. Methylene blue accepts electrons directly from NADH at complex 1 and then it delivers them straight to cytochrome C bypassing both complex 1 and complex 3 entirely. It doesn't get stuck in a traffic jam. So let me translate what that means. It creates a shortcut. It's like an express lane. It's like a cellular bypass surgery that roots around the damaged inefficient reactive oxygen species producing sections of your electron transport chain.

10:03 A 2017 study in neuropharmacology showed that methylene blue at low doses we're talking 1 milligram you guys taking 10, 20, 30 milligrams. I'll go over the difference between 1% methylene blue and 10% methylene blue and why that's a huge deal and why this dark blue these guys are all putting dyes in it and I even have a list if you want of all the peptide companies that are putting colored dye in along with it; yes I realize methylene blue is a dye however they're adding deep blue dye to make it look more blue.

(11:00) So it increases oxygen consumption by 70% and ATP production by 60%. Depending on the tissue type, it's 30 to 60%. But 70%. You know what? You know what else increases oxygen consumption by 70%; Nothing. Literally nothing else you can swallow. This is a good thing, by the way, not a bad thing. But here's where it gets even better. When methylene blue delivers those electrons

to cytochrome C, it doesn't just increase ATP production. It decreases the reactive oxygen species production at the same time. An '08 study in free radical biology and medicine showed methylene blue reduces reactive oxygen species production by 50% while increasing adenazine triphosphate production by 40%. So it shuts off the damage and cranks up the power. You're getting more energy with less cellular damage. Here's what everybody gets wrong. They think methylene blue, more ATP, more energy. It's an energy supplement. Wrong. Wrong. Wrong. Methylene Blue is—listen, I'll give you a very short synopsis of what it does. It's an electron carrier, an antioxidant at low doses. I got to say this, a monomine oxidase inhibitor, nitric oxide modulator. It's an autophagy enhancer, cellular debris cleanup, mitochondrial biogenesis simulator, so it cranks out more power plants. A 2019 study in aging cell showed methylene blue delays cellular senence literal aging by improving mitochondrial function and reducing oxidative stress in human we're not using mice anymore baby human fibroblasts; it makes old cells act young again but it does it at the molecular
12:51
level wait I'll sound like a Shamwow commercial right but wait there's more listen I yeah I'm being dramatic because
12:57
this is dramatic methylene blue also acts as a selective inhibitor of what
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did I talk about monomine oxidase A and B to be honest. So you know what that means just to translate it slows down
13:08
the breakdown of serotonin, dopamine and norepinephrine for your brain. More neurotransmitters hanging around equals
better mood, better focus, better cognitive performance.

13:15
2016 study journal of psychopharmarmacology showed one single dose one single dose of methylene blue 1 milligram at 10% improved memory consolidation and retrieval in healthy humans by 10%.

You
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might think 10%'s not a big deal but start extrapolating that out and think how badass that would make your memory.
13:40
One dose one one we're not talking a week of this. That's why I'm saying this measurable cognitive improvement in
13:47
healthy people. Listen, I got to say this. Listen, this is the framework that explains virtually all chronic diseases.
Methylene Blue and Chronic Diseases
13:53
And I haven't talked about this enough. And you have to understand this. This is why I said, "Where's my Nobel Prize. Systemic, you have to understand why I'm
13:59
bringing this up." Remember the three biological failures. This is why, and it pertains to methylene blue. Systemic
14:04
inflammation, insulin resistance, and ATP shortage. Every single chronic disease, diabetes, heart disease,
14:10
Alzheimer's, autoimmune conditions, cancer involves at least two of these three. And it's usually all three. So,
14:16

here's the problem. because nothing out there is addressing these things. And when I point at what does it either gets
14:23
censored or shut down or ignored and you guys go back to take do doing stupid things to yourself. I'm trying to help you. Trying to help you. So listen,
14:29
here's how Methylene Blue addresses every single one of them. So you can put this in your opium pipe and you can
14:34
smoke it. You can figure out what to do with it. You can give me the finger and forget about it. It doesn't matter. But I'm doing this for you guys. So look at
14:39
the ATP shortage. So we covered this at the beginning. Understand me blue increases ATP production by about 60%.
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30 to 60% by optimizing the ETC the electron transport chain function. So
14:51
more ATP more cellular function less cellular stress all good things look at systemic inflammation which is the
14:58
primary problem here right 2015 inflammation research showed methylene blue suppresses NFCappa B activation
15:04
which is that master control for inflammatory gene expression. I talked about this with GHKCU as well yesterday.
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It also reduces IL6, IL1 beta, TNF alpha, the inflammatory cytoines that make you feel like human trash by
15:18
reducing mitochondrial reactive oxygen species. Methylene Blue cuts inflammation off, but it does it at the
15:24
source. It takes the legs right off. Not within immunosuppression with improved cellular efficiency. Now look at insulin
15:29
resistance, which is a big deal. Here's the smack with this one. Here's the rub. 2011 study in diabetes journal
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demonstrated methylene blue improves glucose uptake in skeletal muscles 40% and increases insulin sensitivity
15:41
throughmpk activation. You guys remember what else does that outside of metformin which is crap m C the same pathway that
15:49
is activated also exercise by the way but out of all of those only two of those three matter I'm not talking about
15:54
the methylene blue I'm talking about metformin matsi and exercise mozzy and exercise gangster metformin riddled with
16:01
side effects and causes all kinds of problems it is not a longevity drug only idiots call it that only imbeciles do
16:06
that and pharmaceutical reps trying to get you to buy their stuff listen with methylene blue causing these effects at a cellular
16:13
Yeah, this stuff geeks me out because I think it's fantastic. This is just like you have a single molecule. It has three

16:18
fundamental disease mechanisms and it addresses all three simultaneously. And people go, I don't know if I want to
16:23
take it. It tastes weird. Look, your brain, it's 2% of your body weight, but consumes, what do I always say? 20% of
16:29
your oxygen and 25% of your glucose. It's the most metabolically demanding organ that you have. Wait until I get to
16:36
your retina. By the way, you guys are going to be blown away at what I tell you. your eyes, your diabetes, glaucoma.
16:42
You're gonna go nuts when you hear what I tell you about methylene blue. I should write it down here. I have a You guys are looking going I have a post-it
16:48
right here, but it's from my wife says, "I love you, babe." And I always keep it here. Why? But I need to keep post-its
16:54
here because when I get things going in my head while I'm doing these podcasts, like I have no notes in front of me. This is right. But I want you to
16:59
understand this. So your brain is starving. Just stop there. Starving, right? Neurological conditions,
17:05
Parkinson's, depression. Yes, they've proven it. Alzheimer's, dementia, brain fog. They all share one common feature,
17:11
mitochondrial dysfunction in your neurons. 2014 study, Journal of Alzheimer's disease, showed methylene
Methylene Blue for Brain Health
17:17
blue reduces the tow protein aggregation, right? Towel protein, towel tangles, the tangles that these are the
17:22
things that define Alzheimer's 50%. 50.
17:28
All you have to do is take these drops. 50 human clinical trials in 2016 showed stabilization of cognitive decline in
17:35
moderate, not mild, moderate Alzheimer's and dementia patients taking. Now, this is a significant amount. 138 milligs a
17:43
day. Now, you don't run out and start taking that much. You don't have Alzheimer's or dementia and don't go, I want to prevent it. That's stupid.
17:49
Don't. This is why I have to be very clear about this because a lot of you guys hear this and go, "Oh my god, I need that, too." And you start smashing.
17:54
I have a couple of guys in my in my blackard group and they're taking like 15 different things. I'm like, "Wa, the cross talk is unbelievable. Don't do
18:01
that. Fix your biology first and then start stacking things after that." But listen, here's the mechanism. Methylene
18:06
blue crosses the blood brain barrier. Like we're talking minutes like I took it 20 minutes ago or now 30 minutes ago.
18:13

Am I 20 minutes? 30 minutes ago and it's already in me and in my brain. But once there, concentrates in neurons, X blood
18:20
concentration, 2012 study in neuroscience showed it, and go straight to work optimizing mitochondrial
18:25
function right there on the spot. Just bang, bang. More ATP in your neurons, better neurotransmitter synthesis, better synaptic signaling, better memory
18:33
formation, better neurop protection. 2010 study neurobiology of aging showed
18:38
methylene blue increases brain glucose utilization 30% and improves memory
18:44
retention in aged animals. They're not doing this on humans yet. And improves memory retention to levels comparable to
18:51
young people. Think about what I just said. Let it land. You're essentially giving your brain this premium fuel and
18:56
a turbocharger slapped on it at the same time. So look at I was talking about energy and this is why this stuff works
19:02
when so methylene blue works when caffeine right here in this cup if you're looking at my mug which I'm going to drink some of when caffeine fails got
19:08
a bad drink on that one. So caffeine blocks adenazine receptors, right?
19:13
Doesn't give you energy. It masks the signal that tells you're tired. It's like putting t I got nothing against
19:18
caffeine, but I need you to understand besides before somebody goes, "I thought you said caffeine was good." This is a comparison, people. This isn't dogging
19:25
on it. It's comparing two different things and understanding which one is better. It's not saying they could both be great. Which one's more great? Just
19:31
so you don't misinterpret what I'm saying. I got to be so crazy. You guys are so fragile. It's like putting tape
19:37
over your car's check engine light. Methylene blue. It doesn't produce energy. It actually produces more ATP.
19:44
It fixes the energy problem, the crisis at the source. Slide up in my chair
19:49
here. I have to move this mic. I'm going to get a backachche sitting here. 2012 study disease models and mechanisms
Methylene Blue for Muscle Performance
19:55
showed methylene blue improves muscle performance and reduces fatigue in CFS
20:00
people with chronic fatigue syndrome 40 to 60%. But how many doctors are doing that?
20:06
They don't. You know what they give for chronic fatigue and fibromyalgia? They give methatate. Are you out of your mind? That's a chemotherapeutic drug.
20:12
They also give it for rheumatoid arthritis. They go, it's off label. Helps the flare-ups. It also kills you. So look at here's why methylene blue

20:19
works. Because muscles are packed with mitochondria. So when you capitalize on
20:24
the ETC function, the electron transport chain function, muscle cells produce more ATP per oxygen molecule consumed.
20:32
Remember what I told you? Consumes oxy increases oxygen consumption by how much? 70%. Nothing else on earth does
20:37
that that you can take orally. You get more work output for the same energy input. So you get a higher return. If
20:44
your return on investment was 70x versus X, which one are you going to take? This
The Power of Methylene Blue
20:51
is efficiency at a cellular level. Like complete optimization. So here's
20:56
something wild. Methylene blue has been used to treat something called met hemoglobinia since 1933. It's a
21:02
condition where your hemoglobin can't carry oxygen properly, right? But here's how it works. Because methylene blue
21:09
reduces met hemoglobin back to the functional hemoglobin. It literally restores the oxygen carrying capacity at
21:16
the molecular level. This stuff should blow your mind. If you hear this and go, it doesn't make any sense to me. Just be happy about it and stand up and jump
Methylene Blue in Medical Treatments
21:23
around and then sit back down and listen to this. 2020 study published during COVID, by the way, showed methylene blue
21:28
reduces inflammatory markers and improves oxygenation in patients with severe respiratory disease, severe
21:34
respiratory distress. And yet, how many of your doctors were dumping methylene blue in you? None of them. None of them.
21:40
They were giving you Remesae. They were denying ivormectin. They were putting people on ventilators and watching them
21:45
die. Don't even get me started on this. I lost a lung because of all that. And I lost a lung because of a bunch of toxins
Personal Struggles and Methylene Blue
21:50
and mold in my house because some jackass contractor builder named Lucian Tujac Jr. who owns Dominion Asset
21:58
Development, by the way, here in Texas, look him up, lied and didn't repair the brand new multi-million dollar house
22:04
that we built and gave him money for that needed a half a million dollars worth of work. day we turned the key and
22:10
he made promises for 2 years and then turned around and instead of solving the problem after I rolled out of the hospital in a wheelchair and being a

22:16
lung almost dying because the insulation was filled with black mold everywhere
22:21
which leaking under my hardwood floors, foundation, leaking roof, rattlesnakes in the house. Yes, fell on my son. You
22:28
guys know the story. He slapped a $900,000 judgment on us instead. Still chasing us 5 years. So understand what
22:35
if there would have been a way and a doctor would have said to me to come full circle when I was laying in that hospital bed texting Brandy going I'm
22:41
not going to make the morning we need to get you on methylene blue but he didn't. That's what I'm talking about. You guys need to take charge. I've learned so
Taking Charge of Your Health
22:47
much. I told you when I came out of the hospital rock bottom lost everything
22:52
lawsuit. Lost the house. No money. No physical fitness. You guys watch me with that oxy machine. Don't don't take what
22:58
I'm telling you lightly. I realized God said you have stuff to do. You have a mission and you need to help give
23:03
mankind the answers, as many of them as you can. I don't do this for sales or
23:09
pumping up my company or crapping on somebody else because I don't like what they said and I disagree with their
23:16
analysis. I don't care. I come out here whether you like it or not because I give a crap about you because I care
23:24
about you. And I'm sorry, but if you're too ignorant to accept that and understand that and you're too busy
23:29
chattering in your own head going, "He went against what I said and it's making my products sell less." Maybe your
23:35
products are crap cuz you're a liar. You ever think of that? Maybe you just do the right thing, but so many people struggle to do the right thing, don't
23:42
they? Just to be very transparent, I'm out here doing the right thing to help you because I love you whether you get it or not. Listen, bypass the C19 thing.
Methylene Blue and Cellular Function
23:48
The mechanism goes deeper. Ethylene Blue modulates something called This stuff gets me mad cuz nobody cares about
23:55
mankind here on Earth right now. I believe as much as me. I just I don't get it. I'm not chasing anybody down.
24:02
I'm not trying to crap on somebody's life and clipping their video. I I haven't stolen a video ever. I haven't
24:08
clipped somebody else's video and tried to go look at come buy my stuff, but I'm going to lean on all this guy's knowledge. And when I when I do use
24:14

somebody else's information, like my whole nicotine video I did, who did I give credit for? Who did I give credit to? Who? Who? Oh, yeah. Dr. Brian
24:21
Artist. Why? Because I got my information from him. Of course, I'm going to give him credit. What What kind
24:26
of a shill are you where you go out and you steal somebody else's stuff to market your own stuff thinking that's
24:32
right? I don't know. I guess I got ethics and morals. And people that go out there and trash my videos and try and discredit me and use my stuff, I'm
24:38
sorry, you got no ethics or morals cuz I've never done that once. Ever. I've also never gone into anybody's comments and trashed. I've never done a reaction
24:44
video and trashed anyone. I just don't do that. I am too busy winning because I give a crap about mankind. So, this is
24:51
the stuff that ticks me off and I get sidetracked and somebody gets in the comments and goes, "Yeah, but I wish you would just stay on subject. Don't listen
24:57
to me. It's okay. You can go listen to someone else. Go listen to a fuchsia-haired chemist. I don't know. Go listen to some skinny bald guy." I don't
25:03
know. Go listen to somebody else. It's okay. I don't need you here. I'm doing this for you, not for me. So, what what was I saying? I was like, "Methane blue,
25:09
it modulates nitric oxide signaling, right? Too much nitric oxide in sepsis or severe inflammation causes something
25:16
called vascular collapse. You need to understand these things. This is why it's so good. Methylene blue inhibits
25:22
guanolate cycl. So it prevents excessive vasoddilation and maintains tissue
25:28
oxygenation. It's like having a a smart thermostat for your vascular system.
25:33
Listen, your endocrine system, look at this. Let's just go line by line through systems. Your endocrine system runs on
25:38
ATP. Period. Remember what I said? ATP. Here, I'll help you. What runs on your body? What runs on ATP in your body? You
25:44
ready? Every single cell. There you go. Now you know the answer. See, I tell if they go, "Not this cell specifically." Yes, that one, too. Look at thyroid
25:50
hormone production. Requires ATP, steroid hormone synthesis. ATP. How about What about insulin secretion? Yep,
25:56
you guessed it. TP. 2013, thyroid research showed methylene blue protects
26:02
thyroid cells from oxidative damage and maintains thyroid hormone synthesis
26:07
under metabolic stress. What are they giving you? Nope. T4, T3, armor, synthroidid, levothyroxine, it doesn't
26:14

matter. No. Look at sex hormones. Lady cells in men, ovarian cells in women have very high mitochondrial density.
Methylene Blue and Hormonal Health
26:22
They eat ATP like it's a snack all day long. And they do it to convert
26:28
cholesterol into testosterone, estrogen, progesterone. When you optimize mitochondrial function with methylene
26:35
blue, you optimize the cellular machinery that produces these hormones.
26:40
2018 reproductive biology showed methylene blue improves sperm motility and viability by enhancing mitochondrial
26:47
function in spermatzoa. Your hormones are only as good as your mitochondria. Period. Full stop. Your life is only as
26:54
good as your mitochondria. Full stop. Remember what I said. Let's I was going to talk about the eyes. So look at your
Methylene Blue and Eye Health
26:59
retina. The retina this is nuts cuz you guys are going to hear this and go come on. Your retina has the highest metabolic rate of any tissue in your
27:06
body. Higher than your brain, higher than your heart. It's essentially this thin sheet of neurons and photo
27:12
receptors running at max capacity. 20 diabetic retinopathy and glaucom both
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involve mitochondria dysfunction and oxidative damage to retinal ganglion cells. Now listen, this is important.
27:25
2017 British Journal of Opthalmology showed methylene blue protects retinal ganglion cells from death in glaucoma by
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improving mitochondrial function and reducing reactive oxygen species. But you need to hear what I'm about to say.
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2015 study plus one showed methylene blue reduces retinal damage and diabet
27:44
and diabetes 60% through the same mechanism. Optimized ATP production reduced oxidative stress. But listen to
27:50
why this is so important. You're literally saving cells that can't regenerate ever. Once a retinal cell
27:56
dies, they are gone forever. People, methylene blue keeps them alive and functional. Why would you not take this stuff? I don't know if I should take it
28:02
or not. Then don't look at cancer, right? Look at cancer. Otto Warberg won the Nobel Prize 1931 for discovering
Methylene Blue and Cancer
28:09
that cancer cells preferentially use glycolysis instead of oxidative phosphorilation. Even when there's
28:15

oxygen around, when there's the presence of oxygen, they don't care. They're like, "Nope, I'm going to do this instead." It's because their mitochondria are dysfunctional. I talked
28:22
about this so many times. But here's the controversial part. 2019 Frontiers in
28:27
Oncology showed methylene blue selectively kills cancer cells while sparing healthy cells by normalizing
28:34
mitochondrial function. Cancer cells can't survive when you force them to use
28:39
oxidative phosphorilation. Their damaged mitochondria can't keep up. They can't make the switch. Multiple studies 2020
28:46
biochemical pharmarmacology 2018 cancer letters show methylene blue increases apoptosis and cancer cells while
28:53
protecting healthy cells from chemotherapeutic induced mitochondrial damage. Listen, I'm not saying methylene
28:59
blue cures cancer. The mechanism is there. It's documented and it's why
29:04
people should be lining up for this. Listen, here's where people screw up. I think more is better. They take methylene blue every day indefinitely.
Proper Usage of Methylene Blue
29:11
Wrong. Don't do that. Don't do that. Chronic high doses methylene blue can become prooxidant instead of an antioxidant. Right off the bat that's a
29:17
bad thing if you don't know that. 2014 toxicology and applied pharmarmacology showed continuous highdose methylene
29:23
blue reduces glut glutathione primary antioxidant from your liver and increases oxidative stress. All bad
29:29
things. Look at this. 90 to 100 days mitochondrial. It would be even better. It's the only time I'll say this. 7 days
29:36
on 7 days off. Just cycle back and forth on that hypothetically for your kangaroo. Here's why. Because
29:41
mitochondrial adaptation requires rometic stress. It's beneficial stress
29:47
followed by recovery. You need to give yourselves time to upregulate the antioxidant systems. Think of it like
29:54
like training. You don't do squats every single day. You do squats a couple of
29:59
times a week. Why? Because you give your legs a break. You lift. You recover. You adapt. You repeat. You can train every day. You just don't train the same
30:05
muscle every single day. That's the same thing. Don't do that. Now, there's an issue here that I talked about this yesterday and I think I'm going to start
30:10
doing this as people that shouldn't take it because everybody goes I'm going to take it and then they have something like hemocromattosis when I was talking
30:16

about copper and I'm like no or Wilson's right don't no thing you need to do is take be taking copper so methylene blue
30:23
is not for everybody either SSRI MAI users methylene blue is a weak mao inhibitor you combine that with an SSRI
30:29
and you risk something called serotonin syndrome which by the way is potentially fatal let's not do it how about G6PD
30:35
deficiency it's a genetic condition that affects It's red blood cells. Methylene blue triggers hemolytic anemia in these
30:41
people about 70% of the time. Not worth the risk. And how do you find out? Go to your doctor, get some labs, find out. If you're pregnant, if you're
30:47
breastfeeding, no. Absolutely not. This stuff isn't candy. This is pharmaceuticalra
30:53
molecular compound with real effects. It's not a vitamin, you guys. You got to respect that. And I think that's the
30:59
problem is, listen, I'm not dogging on you guys, but a lot of you Insta bros stealing my stuff, trying to get people
31:05
to buy from your little whatever Shopify store to sell peptides, you guys have no
31:11
business doing it because you guys are telling everybody to buy stuff. But you're getting you're using my videos to sell your product when you have no
31:17
business doing it. You know what? Honestly, shame on you, man. If you understood it, you wouldn't do that. You're handing people guns that don't
31:23
know how to use a gun, I guess, is the way I would do it. Listen, there's so many things I could go over right now.
31:28
If you're going to buy methylene blue, look for USP grade pharmaceutical methylene blue. If it doesn't say USB grade, I don't know. You're probably
31:34
gambling my opinion. I saw something the other day and I might even do a post on it today about the blue pee, right? They
Addressing Misconceptions About Methylene Blue
31:39
were talking about these little sugar cubes. They looked like little square gummy bears and they had sugar all over the outside and they were like, "This is
31:45
the methylene blue I take. It's the best one. You got to pee. You got to you got to your your pee should be blue." What?
31:51
Listen, first of all, let me talk about the blue pee. People who see blue pee and they either say it's not working.
31:56
I'm peeing it all out. I'm freaking out. Wrong. Okay. 20 2011 pharmacocinetic study in clinical pharmacocinetics
32:02
showed this. Methylene blue has about a 50 to 70% oral bioavailability. Reaches
32:08

peak plasma concentration in about 1 to 2 hours. The blue you pee out. You ready for this? It's excess. Body doesn't need
32:13
it. That's your kidneys doing their job. You understand physiology? That's your kidneys doing their job. It's filtering out what your body doesn't need right
32:20
now, right this moment. But here's the key. Methylene blue accumulates in tissues with high mitochondrial density.
32:27
Brain, heart, liver, muscles. It sticks around where it's needed, not where it's not. Blue pee means you took enough. It
32:34
does not mean that it's working or it's real or that it didn't work and you're peeing it all out. It's that's not how
32:40
it works. So, listen, while I'm on this subject, let me address that, too, because this is the elephant in the
32:46
frigin bathroom that I've seen all over social media. And some of you guys are using it as marketing. You're going,
32:51
"Oh, if the pee isn't blue, then it's fake." That doesn't even make sense. If my pee isn't blue, the methylene blue is
32:56
fake. Wrong, baby. That doesn't make any sense whatsoever. Less than none. Here's
33:01
your sign. Stupidity. Here's the physiology. Whether or not your urine turns blue depends on four factors that
33:08
has nothing to do with authenticity. Let's go through. Let's go line by line. The first one, hydration. Your kidneys
33:16
concentrate or dilute urine based on your hydration level. 2013, Kidney International showed urine concentration
33:23
can vary 10fold based on water intake alone. If you're well hydrated, you're producing more dilute urine. The blue
33:29
gets diluted below visible threshold. Your urine osmolerity, which is the concentration, it doesn't matter. It's
33:35
got a range. At the high end, the blue is obvious. At the low end, it's invisible. Same dose, same absorption,
33:42
different water intake, different color. Look at another factor, dosage. low therapeutic dose, you might just not
33:49
excrete enough oxidized methylene blue to create a visible color change. Especially if you're go up to the first
33:55
thing I just talked about, hydrated. Okay, the methylene blue is working inside your cells. If you remember what
34:01
I talked about at the very beginning, I'm already four 40 minutes in. I said I was going to do 20-minute podcast and I just once you pull a string on my chest
34:07

and you let me go like I you let me off the chain and I go, baby. But the methylene blue works inside the cell and
34:14
it's getting reduced to what did I say? lucomemethylene blue it's colorless it's shuttling electrons it's making ATP but
34:20
the amount that remains oxidized the blue one right called methylene azul gets filtered by your kidneys it might
34:27
be below the visual detection threshold that you've got baby that's it 2009 study British Journal of clinical pharmarmacology showed urinary excretion
34:34
of methylene blue varies from five to 40% that's a huge number you guys 40% of
34:40
oral dose depending on the redux status and the tissue uptake so here's the translation most of it gets it's used or
34:46
stored, not peed out. Look at the third thing, metabolic redux state. Here's the biochemistry that's going to blow
34:52
people's minds, and I'm sure somebody's going to take and clip and go, "Well, it's not really it. My little cubes are magic." Your little cubes are probably
34:58
lies is what they are. Or you have something filled with a real blue dye to make the blue dye look darker blue.
35:04
That's literally what's going on in the social media world. I It's disgusting to me. Inside your cells, methylene blue
35:10
gets reduced to lucomethylene blue, which is colorless. This is how it
35:15
specifically works. This is the electron accepting mechanism that we've been talking about for the last 35 minutes.
35:21
2010 study, journal of biology and chemistry showed under conditions of high metabolic demand, exercise, stress,
35:29
illness, all of it, more methylene blue gets reduced and retained in tissues rather than excreted in its oxidized
35:35
blue form. You know what that means? If you're metabolically compromised, if you need it most, you might pee. You might
35:42
just pee less blue people because your tissues they're holding on to it. No blue pee might mean it's just working
35:49
better not worse. And look at individual enzyme variability. Your NADPH dependent
35:54
reductases. The enzymes that reduce methylene blue to luc right methylene
36:00
blue lucomethylene blue have genetic polymorphisms that they vary between a
36:05
ton of everybody. 2015 pharmaccogenetics and genomics showed enzyatic reduction
36:11
rates vary five-fold between people based on genetic variance. Whatever the hell is going on in your physiology,
36:17

baby? Fast metabolizers, for example, convert more to colorless lucomemethylene blue. Slow metabolizers
36:22
excrete the more oxidized the blue form. So what? Same product, same authenticity, different genetics,
36:29
different peel. Yeah, go figure, huh? Listen, the bottom line is this. Blue P is not it's not QC. It's not quality
36:35
control. It's not a test. It's a very crude influencerbased indicator of excretion patterns that's shown that's
36:41
it's influenced by hydration and dose and metabolism and genetics. You want to know if your methylene blue is real or
36:47
not? Check your supplier. Check your supp. I'll go even further. You want to know what, like I said, I don't care if you buy it from me or not. What I say is
36:53
that if you and by the way, the one I carry is 10%. The one on everywhere
36:58
else, just look at it. Don't take my word for it, is 1%. That is a massive like orders of
37:05
magnitude difference. That means let's say at 1% you would need 100 drops and
37:10
at 10% you only need three drops and it has nothing to do with the color. So just keep that in mind. I don't care
37:16
where you buy it. I'm just saying stop buying it because you think it has to make your pee blue because that's the most ridiculous thing in the world. Get
37:22
it from a somebody with a certificate of analysis showing USP grade that has
37:28
spectrophototric verification. And I'll even give you what it is, okay? Just so you know what it's supposed to be. 68 nanometer
37:34
absorption wavelength and batch testing. Just all of that, just so you know. No push on my company, but that's what we
37:41
do. It's not by checking your toilet bowl like you're reading faking tea leaves, you guys. Your mitochondria
37:47
don't care what color your pee is. They care about electron transport optimization. And that you can measure
37:54
with energy levels, cognitive function, performance, not bathroom selfies and a
38:00
picture of your toilet going. It wasn't real. Listen, let me button this up. Come for full circle. Methylene blue
Conclusion and Final Thoughts
38:06
140y old synthetic dye. Okay. Increases ATP production 60 30 to 60%. It reduces
38:13
oxidative stress 50%. Improves cognitive function. One dose. So remember what I said, one dose durably in one dose.
38:21
Addresses all three causes of chronic disease. Systemic inflammation, insulin
38:26

resistance, and ATP shortage. Protects neurons, muscles, organs, mitochondrial level. Improves insulin sensitivity
38:32
massively. Protects retinal cells. Remember, they don't come back. Anti-cancer. Costs about,
38:39
I don't know, 50, 100 bucks for a month. Why isn't everybody talking about this
38:44
then other than trying to sell it? I'm not trying to sell it right now. I'm just talking about it. Here's why.
38:49
There's no patent. It's old. It's tired. It's dated. It's boring. Supplement industry can't mark it up 10,000% and
38:56
sell it with influencers and shills. So, the peptide companies do it. But how
39:02
about this? Now, you know the biochemistry and you understand the mechanisms and you now have the physiological framework to know exactly
39:07
what the hell it does. It's not biohacking. This is optimization theater. This is fundamental
39:12
mitochondrial medicine backed by over a hundred years of research and hundreds
39:18
and thousands of peer-reviewed studies. Listen, your cells, it's I'll make it very binary. We could wrap this entire
39:24
podcast up into one statement. Your cells are either producing enough ATP to function optimally or they're not.
39:30
That's it. You guys are complicating things and complexity kills everything. My buddy Bedro Skullian says, "You know what? Leadership is always a problem.
39:36
Leadership is always the answer. Complexity kills everything. It's just a fact. Everything else, your energy, your mood, your cognition, your hormones,
39:41
your longevity flows from that one simple fact. Either you're producing enough ATP or you're not. Methylene blue
39:47
is that one molecule that tips the scales in your favor. And now, so I think the more operative question is
39:54
what the hell are you going to do with it? Right? What are you going to do about it? What are you going to do with all this information? Go do something awesome with it and actually max out
40:01
your life so you don't have to worry about being on managed decline medication for the next 40, 50, 60
40:07
years. Like I said, I'm out here to help you, man. That's it. Hope you got something out of that. I got to go.

Sources

Methylene Blue Mastercass – Dr. Trevor Bachmeyer

Research:
http://renaissance.stonybrookmedicine.edu/sites/default/files/2016Jan_BC_MBreview_0.pdf