



Wellness Minute

Health Information You Can Use On Your Path To Wellness

**SURPRISING
HEADACHE
RELIEF...**

**INCREASE
Your CO₂**



What To Know About CO₂

“Low levels of CO₂ reflect ineffective mitochondrial function and energy production.”

For some strange reason, I have always had a fascination with CO₂. I know I'm a little weird. It started when one of my mentors, Dr. Walter Schmidt, was teaching a class in Chicago and shared how CO₂, which we exhale, has some valuable metabolic roles. He shared how low levels reflect ineffective mitochondrial function and energy production. Mitochondria, as you know, are the energy factories in our cells. He shared how CO₂ is essential for several metabolic functions, one of which is to make carbonic anhydrase. Carbonic anhydrase is essential for HCL in the stomach, pancreatic enzymes, kidney and lung function. Carbonic anhydrase combines water and carbon dioxide in the presence of zinc to form carbonic acid. Carbonic

acid dissociates into hydrogen ions and bicarbonate ions necessary for cerebrospinal fluid synthesis.

But my fascination was enhanced when Dr. Arkadi Prokopov shared that CO₂ is a natural vasodialator, and when you increase it, it relaxes blood vessels, and in many cases, it can relief headaches. He casually mentioned his experience with whooping cough, rhinitis, and how increasing CO₂ can have an antihistamine effect. He made a comment that really intrigued me, “So really, every condition you can think of, both physiological and mental, can be remediated, and in many cases, cured by increasing endogenous CO₂ production, decreasing its degradation, which is what the carbonic

anhydrase inhibitors do, and/or taking extra CO₂ exogenously. And of course, the most important thing, breathe through your nose, not through your mouth, and not too often.”

One of the strategies he has implemented to increase CO₂ is called Intermittent Hypoxic Training. He shared that combining Intermittent Hypoxic Training and nutritional components he has successfully treated more than 200 Lyme patients.

Let's come back to the class Dr. Schmidt taught because it can give us some insight on how you and your wellness clinician can increase the amount of CO₂ that your body makes naturally. After our lunch break, one of the doctors came back

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with what she called an ocular migraine. She apparently ate some food with MSG. She couldn't look at me without getting dizzy because I was wearing a striped shirt. It was really kind of eerie. The doctor was clearly in serious pain. Dr. Schmitt was demonstrating how we can temporarily increase CO2 titers in patients by having them rebreathe their own air in a paper bag. Like this. Make a mask. Now, hold it tight against the face, and breathe in and out for 6-8 breaths.

When I asked Dr. Schmitt if he could help this doctor, he said, "let's start by having her rebreathe and increase her CO2 levels. If that helps, we can have her taste nutrients that manufacture CO2 naturally. The citric acid cycle in every single cell makes CO2 when given the right nutrients. To my surprise, after rebreathing into a bag eight full breathes, her headache was significantly better. She could look at me easily without becoming dizzy and smiled. She later chewed the nutrients for the citric acid cycle, and within 45 minutes, was pain free. It was very dramatic to say the least.

How can we apply this to your condition? Re-breathing your exhaled breath will temporarily increase your CO2 levels. Our bodies will manufacture CO2 naturally when our citric acid cycle works properly, and we reduce the things that deplete our CO2 storage. Stress, short burst of chest breathing, and over-breathing, among other things, will reduce CO2 storage. Your

wellness clinician can help you find ways to enhance CO2 production and ways to maintain the CO2 your body makes.

One of the supplements that frequently tests positive to support the creation of CO2 via the citric acid cycle is Bio3BG, a B-vitamin formulation containing the phosphorylated forms of thiamin (B1), riboflavin (B2), and vitamin B6, with a higher amount of thiamin, as compared to riboflavin and niacin, for increased thiamin needs.

The predominant form of thiamine in the body is thiamine pyrophosphate also known as cocarboxylase. Biotics Research combines 3 parts cocarboxylase and 1 part of each of the other B Vitamins. Each tablet contains 1.5 mg of the biologically active form of B1, cocarboxylase. So, it's a low dose, but since B1 is water soluble, you can do a trial by using Bio-3B-G up to 2 tablets per waking hour for 10 days then reduce to 2-3 tablets, three times a day.

I know I've covered a lot of ground in this segment, but my goal is to introduce you to an important subject that is easy to overlook. Remember, when CO2 is low, there is probably a deficiency in your energy factories called mitochondria. And, we can't repair cellular or tissue damage when our energy reserves are low. So have a conversation with your wellness clinician about CO2 and how it affects you.