

Guillermou

Great research on the benefits of CO2. We need to increase CO2 to reduce lactate and promote mitochondrial function. The presence of lactic acid in our tissues is very significant because it is a cause of biological diseases. Its presence manifests itself in arthritis, heart disease, diabetes, neurological diseases and cancer. Lactate increases blood viscosity, mimics stress and causes inflammation. Lactate contributes to diabetes by inhibiting the ability to oxidize glucose. It promotes the migration of endothelial cells, with an increase in vascular permeability factor (VPF or vascular endothelial growth factor, VEGF) and can lead to the breakdown of the "blood-brain barrier".

If there is too much lactate, glycolytic ATP production slows down. The cell with defective respiration will die. The ability of lactic acid to displace carbon dioxide. in its effects on the blood coagulation system. Lactate contributes to intravascular coagulation and increases the tendency of red blood cells to clump together, forming a "blood sludge," and makes red blood cells more rigid, increasing blood viscosity and impairing circulation in small vessels. . Factors that reduce stress hormones increase carbon dioxide and help reduce circulating free fatty acids, lactate and ammonia, include vitamin B1 (to increase CO2 and reduce lactate), niacinamide (to reduce free fatty acids), fruit (to reduce cortisol, adrenaline and free fatty acids), salt (to reduce adrenaline), thyroid hormone (to increase CO2).

Vitamins D, K, B6 and biotin are also closely involved with carbon dioxide metabolism. Biotin deficiency can cause aerobic glycolysis with increased fat synthesis. Dietary protein should not provide excess tryptophan, due to tryptophan's role as a serotonin precursor that increases inflammation and glycolysis.

Posted On 04/23/2024

Guillermou

The brain has a high rate of metabolism and governs the metabolism of other tissues, including their consumption of oxygen and production of carbon dioxide or lactic acid. Within a particular species, the rate of oxygen consumption increases in proportion to brain size, rather than body weight. Among very different species, the role of the brain in metabolism is even more obvious, since the resting metabolic rate corresponds to the size of the brain. Strenuous exercise combined with fasting not only directly triggers lactate and ammonia production and endotoxin absorption. With the increase in lactate and nitric oxide, mitochondrial respiration is weakened, precipitating the secretion of adaptive stress hormones.

Prolonged stress also decreases carbon dioxide and increases lactate, while increasing fat utilization. Methionine restriction has many protective effects, including increasing average (42%) and maximum (44%) longevity. The age-accelerating effect of methionine could be related to the alteration of methylation balance, inappropriately suppressing cellular activity. In addition to its effect on methyl stores, methionine inhibits thyroid function and damages mitochondria. There are several specific signals produced by lactate that can promote growth.

and other characteristics of cancer, and it happens that aspirin antagonizes those: HIF, NF-kappaB, the kinase cascades, cyclin D1 and heme oxygenase. raypeat.com/.../lactate.shtml .-----
raypeat.com/.../tryptophan-serotonin-aging.shtml .---- raypeat.com/.../co2.shtml ,....
raypeat.com/.../protective-co2-aging.shtml .---- faseb.onlinelibrary.wiley.com/.../fj.202001920RR
(2021).--- febs.onlinelibrary.wiley.com/.../febs.16058 (2021).---
www.ncbi.nlm.nih.gov/.../PMC9207018 (2022).---
www.sciencedirect.com/science/article/abs/pii/S1535610823000090 (2023).--

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Just the gut speaking Gui, but there is a sense so much of the West's Good Life is high on frantic constant bombardment of stress from everything with a hurry, hurry to get things done. A drive in a car with all its stress whether on the way to the market or work. If one has a job the work itself with the corporate push for more, more, more productivity while they work to eliminate your very job. (The average small to mid-sized business are in the same Rat Race to chase more dollars, yet just like the worker those dollars keep losing purchasing power.

What many workers miss is, How Long Do I Have To Work to Buy That Whatever.) Even when not working, vegging out in front of the TV one is hit with an onslaught of frantic energy, images, revving up our Beings. If not that, then escape into whatever dampens, or drowns the hyperness, chaotic thoughts, feelings, discomfort. All these and more creating an imbalance between CO₂ and O₂ exchange inside ourselves. The constant mask wearing threw the CO₂ out of balance, so does the hyperventilating caused by all the trappings of the Civilized World.

No wonder then the relief many often find by getting away from it all when able to spend some time in calmer, quiet wilderness settings. On personal note, it seems when I at least believe my CO₂ and O₂ levels are in a balanced state, it seems I am barely breathing. When things are out of sort, then it seems like there is no way to get enough O₂. This causes a craving to get more air, just the opposite of what would actually help. The paper bag trick does wonders in fairly short order.

Posted On 04/23/2024

Guillermou

Just, your personal experience is a good indication to achieve a good balance of CO₂ and oxygen. Also blood lactate levels in subjects with DM2 were independently associated with an increased risk of MAFLD, which was not affected by taking of metformin and could be closely related to insulin resistance. Blood lactate levels could be used as a practical indicator to assess the risk of MAFLD in patients with T2DM. www.frontiersin.org/.../full (2023). This review provides a systematic overview of lactate homeostasis and its roles in physiological and pathological processes, as well as a comprehensive description of the effects of lactate in various diseases.

Glycolysis is very vigorous in proliferating cells, ensuring higher intracellular and extracellular lactate concentrations than those found in resting cells. Lactate accumulation in the tissue microenvironment is characteristic of inflammatory diseases and cancer. Overwhelming evidence suggests the emergence of the Warburg effect in many non-tumor cells and in a wide range of non-cancerous diseases, such as pulmonary hypertension, pulmonary fibrosis, heart failure, atherosclerosis, and polycystic kidney disease. Compelling evidence indicates how aerobic glycolysis produces lactate under stressful conditions, such as trauma, infection, myocardial infarction, and heart failure. A large number of studies have recognized that lactate is a possible mediator of the loss of p53 signaling, which promotes the proliferation of tumor cells. www.nature.com/.../s41392-022-01151-3 (2022)

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Interesting the effects of certain levels of Lactate presented here. As you say, too much, and glycolytic ATP production slows, and cells may even die, and it seems excess levels in plasma may cause circulation problems. However, within the brain, Lactate plays an important role in sustaining proper energy levels, as a signaling agent, and also for preservation of neurons, as shortages of Lactate may contribute to stroke and may strongly contribute to hypoxia-induced neurodegeneration.

www.sciencedirect.com/science/article/abs/pii/S0306452221006023 Neurons with both lactate and glucose available seem to perform at a higher energy level than with just glucose available: Lactate "is an efficient energy substrate for neurons and may be used preferentially by neurons to maintain synaptic transmission, particularly during periods of intense activity."

journals.sagepub.com/doi/10.1097/01.WCB.0000063991.19746.11#:~:text=La..).

Further, while generally only glucose is taken in from circulation by the brain, with the exception of ketone intake where there is a shortage of glucose in circulation, it happens that in a fetus, and also in infancy, Lactate can be taken in from circulation and passed directly from glial cells to neurons for use as an energy source.

"Lactate's role is especially critical for the brain during the postnatal period as the brain is continuing to develop." www.mdpi.com/1422-0067/24/17/13398#:~:text=In%20vitro%20studies%20have..

Therefore, it seems that while Lactate may be taken as a negative energy substrate in some tissues, within the brain, especially during development, it is in demand and without a sufficient supply, the brain cannot undergo proper, timely development.

Posted On 04/23/2024

cedricpermaculture

Hi everybody, there are so many valuable informations today so I add only that very important urea also depends on CO2. We can deliver CO2 transdermally to many parts of the body-for example amputated, crushed, diabetic foot, to fight pulpitis/dental caries to prevent root canal treatment by lowering lactate/regenerating vit.K. We can support eye health by feeding ocular tissue by transocular way with CO2. Clot (clotting factors dep. on vit.K/CO2) lowers endotoxin activity.

www.ncbi.nlm.nih.gov/.../PMC3839915 " It is suggested that capture of LPS released from gram-negative bacteria entrapped by the blood clot operates to protect against the disease that might be caused by its systemic dispersal." Protective stress reaction is based also on osteoclastin/VK/CO2.

www.ncbi.nlm.nih.gov/.../PMC9020278 " Osteocalcin and the physiology of danger" Fetal live is bathed in high CO2 and stem cells. One week after delivery heart can't regenerate perhaps because foramen ovale is already closed and blood can't travel to left heart. So increasing CO2 could allow to survive stem cells after pulmonary/high oxygen stressful pass. Prof. E. Danopoulos treated many cancers with urea without side effects. Urea is important for skin, neurons. health-science-spirit.com/Healing_the_Body/Urine-and-Urea-Therapy.html Carbogen/CO2 inhalation can support trigeminal neuragia treatment. Trigeminal neurlagia is high histamine/could be Herpes/shingles of the pons

Posted On 04/26/2024

jamNjim

The medical system, the EPA, FDA, and politics have demonized everything that's essential to sustaining life. This is all part of the depopulation agenda.

Posted On 04/23/2024

juststeve

Hard not to come to this conclusion. One thing piled on top of a very long list of oh that is just rain running down your leg, nothing to see here, move on.

Posted On 04/23/2024

MariaTG

@juststeve: "The rich and the powerful piss on us and the media tell us it's raining!"

Posted On 04/23/2024

rjn777

And with the covid scandemic people were told they must isolate, stay indoors and out of the fresh air, don't socialize. All of the things people must do to stay physically and mentally healthy.

Posted On 04/23/2024

juststeve

MariaTG, no need to worry, the very same are happy to sell us umbrellas with holes in them...rjn777, one big yes, if it is known to be healthy, don't do it, and above all, fear thy neighbor - isolate. Only go out for necessities, the places deemed essential. The Big Chains, liquor stores, mostly in and outs. The Hair Salon shut down, not essential. The dog groomers next door, open. Churches, schools, mostly any place where people may possibly chat, compare notes, shut it down, better to quiet down the rabble.

Posted On 04/24/2024

LongTallTexan

the whole climate alarm program is perhaps the biggest scam ever put upon mankind - for the reality of CO2 & the atmosphere check out - Climate the Movie

Posted On 04/23/2024

Greebo

Yes! BUT, even more basic to your health, is the scientific FACT that CO2 is absolutely REQUIRED for all of present life on earth! All life now basically depends on photosynthesis to garner energy from the sun to create and power our physical bodies. Plants use sunlight to fuel their growth and to produce food for all other life to grow their own bodies and fuel their activities. PHOTOSYNTHESIS DEPENDS UPON CO2.

Without CO2, there will be NO PHOTOSYNTHESIS and no life as we know it on earth! Did you not learn this in GRADE SCHOOL science class? $6\text{CO}_2 + 6\text{H}_2\text{O} + \text{light} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$ (the \rightarrow means results in, or produces) is the formula for photosynthesis.

How can you expect us to live with NO CO2 to provide HALF of the molecules required for this process? Some magical Communist or Globalist fairy? There is a reason that the green plant growth now seen on the earth is increasing WITH the SLIGHT increase in CO2. In former ages on earth, there were huge amounts (relative to today) of CO2 in the atmosphere AND the earth was a lush green with bountiful plants to feed the animals. Re-read your BASIC science and botany. Look at the geological records before they are removed from public view by people trying to murder us. Also remember, that these same plants release O2 for us to breathe while they are producing our food!

They LIE about CO2 in order to dupe us into giving them a world dictatorship which will control ALL energy use on earth, that would give them control of every aspect of your life. There are easy to understand and well illustrated scientific explanations that you can find on the internet to demonstrate how photosynthesis proceeds and how necessary it is for life on earth. Look up photosynthesis. Educate yourself so that you KNOW, and do not need to depend on someone else to dupe you with lies to destroy your own Nation. Belief is for religion, not science or voting. You need to KNOW or we will perish.

Posted On 04/24/2024

In late 2019/early 2020 I spent 3 months in Quito, Ecuador (elevation 9,350 ft above sea level). At two weeks I got over the altitude headache. At 6 weeks I thought, huh, I must be losing weight because my pants fit a bit looser (even though I wasn't restricting my food intake). At 8 weeks I cursed the lighting in the bathroom because I couldn't see well enough to sweep up the hair that must be there. At 10 weeks I bought a magnification mirror and realized that hey I couldn't find the hair on the floor because my hair and eyebrows are growing back in.

Then at 12 weeks Covid hit and foreigners were encouraged to leave (so I did). Within 2 month of returning to the U.S. (not a high altitude location), I started gaining the weight back and my hair loss began again. At first I was thinking maybe I was just eating better in Ecuador, or getting more direct sunlight or something. But now I live in California and get LOTS of sunlight and eat very clean and basic - and no changes in weight or hair density. So ...carbon dioxide?

Posted On 04/23/2024

billstri

It is not CO2 that causes the global climate change, but that is what government controllers mistakenly worry about. Air is about 80% nitrogen, 20% oxygen, and has traces of CO2 and other gases. One of nitrogen's main purposes is to control burn rates and prevent runaway forest fires from destroying the planet. Lots and lots of careful design in how this planet was originally constructed. Not random change as politicians want you to believe to put them in control. Nitrogen could be used in fire extinguishers instead of CO2, except it makes for a very heavy fire extinguisher.

I think those who worry about climate change should worry a lot more about the oil, plastics, and micro plastics that float on our oceans, swamps, and lakes, slowing down the breathing rate of the oceans and waters. Most of our oxygen comes from the oceans, but that is being cut off by pollution floating on the surface of oceans. Oil and micro plastics on our oceans slow down the evaporation rate of the oceans so we have more drought, less humidity, and less evaporative cooling. That, along with the loss of minerals in our soils is converting more and more productive land into deserts that can't grow much.

Air pollution is killing our forests with toxic elements and toxic gases and same is true of water pollution in the forests living in the oceans. I really doubt the federal government multiplying our taxes and spending trillions of dollars on reducing CO2 emissions will result in any meaningful governmental control of our climate. Increasing CO2 in the air has been shown in studies to greatly benefit plant life and all life that depends on the sun for energy.

Posted On 04/23/2024

Weknow

God did a wonderful job in making the world and atmosphere. Gracias Dios. The weather is not constant. As a retired farmer I know.

Posted On 04/23/2024

nancy_falster

Can someone help me with the mask issue then? I argued against them vehemently due to freedom issues. I did not wear a mask and will choose other ways to increase my CO2 but I must be missing the dangers that masks presented: too close to face, too much moisture, etc., because too much carbon dioxide must not have been the issue. The powers that run things would have prohibited them if they were really doing good. Thanks, as always. I'm grateful to be connected to this chat.

Posted On 04/23/2024

juststeve

This just how I am currently understanding this. The masks beyond they plain just don't work as they were advertised and having a host of negatives would put one in a constant state of CO2 saturation. A state of constant O saturation is no better. Either carries its own problems. How I understand the information is if one is out of sorts because of an imbalance with too much O, one quick reboot is to breath into a small paper bag. Not the same as becoming Oxygen starved wearing a face diaper most of the day. Those who require Oxygen due to lung problems use O at a low-level delivery. Pure O would actually burn the lungs. If I'm understanding the information, in a good range, most of our day there is balanced range between the two. Too much beyond this in either direction causes problems.

Posted On 04/23/2024

dav42443

Also, the particles which are released from the crappy masks and end up somewhere in the pulmonary system.

Posted On 04/23/2024

1digger

Good for you staying the course against being forced to wear a mask. Unfortunately too many go along with the mask wearing mindset w/o considering the repercussions. Mask wearing isn't supported by science. In fact it's more harmful to healthy individuals as it reduces oxygen, increases CO2 in the body, lowers pH which can lead to Acidosis, allows bacteria or viruses to enter the mask by inhaling and exhaling, furthermore it creates a moist environment, all of which allows pathogens to grow and since individuals repeatedly touch the mask and other things throughout the day, they contaminate and cross contaminate items or others in their midst. I would argue that mask wearers and especially those multi 'vaccinated' are potential super spreaders of whatever they may carry or transmit depending upon what 'vaccines' they may have received. Dr. Blaylock: Face Masks Pose Serious Risks to the Healthy journal.com.ph/dr-blaylock-face-masks-pose-serious-risks-healthy/

Posted On 04/23/2024

RJC2001

When using the paper bag technique, should you also breathe slow with a low volume?

Posted On 04/24/2024

Dr. Mercola

Of course.

Posted On 04/24/2024

My7kds!

Your articles continue to inspire me. Every time I read an article and think this is the best one yet, another one amazes.

Posted On 04/23/2024

dav42443

Very interesting. As far as getting CO2 levels up whilst sleeping, go under the covers! I've been doing this for decades, without really knowing why. After some minutes, I can notice the higher CO2 levels, since it feels the same as breathing into a paper bag (which I never really realised until starting to breathe into bags - Thanks Dr. M!).

Posted On 04/23/2024

ghfinn

I was under the impression that the CO2 slowed down the hyperventilating process, thus creating a normal calm. I have been wrong before.

Posted On 04/23/2024

michaelrbuley

CO2 is vital to our health. Interesting that it's been made out to be this life-threatening thing -- it is life-giving! Finished a book called "Cancer: The Metabolic Disease Unravalled." Easy read, chock full of things I was unaware of. He talk at some length about CO2. Highly recommended. Not just for information about healing caner, but understanding all disease.

Posted On 04/25/2024

markone64

Should these be limited...Foods high in methionine nuts, beef, lamb, cheese, turkey, pork, fish, shellfish, soy, eggs, dairy, and beans. Foods high in tryptophan beef, lamb, pork, poultry, and dairy, as well as in nuts and seeds, whole grains, and legumes

Posted On 04/23/2024

jef9075

should they be limited? yeah, probably. I guess it depends on how much of them you are eating.
should they be balanced? absolutely. foods high in methionine need to be balanced with things like
organs (liver, heart, kidney, etc..) and collagen as in bone broth.

Posted On 04/23/2024
