

Guillermou

Endotoxin levels in blood plasma are elevated during infections, intestinal inflammation, gum disease, and neurodegenerative disease. The addition of high levels of endotoxin to the blood induces microglial activation, priming and/or tolerance, memory deficits, and loss of brain synapses and neurons. Endotoxin promotes amyloid and tau aggregation and neuropathology, suggesting the possibility that endotoxin synergizes with different aggregating proteins to give different neurodegenerative diseases. In neurological diseases, endotoxin levels increase significantly both in the blood and in the brain, due to gum disease and/or alteration of the intestinal microbiota.

which leads to accelerated systemic infection with action on neurological diseases.

[link.springer.com/.../s12974-019-1564-7](#) (2019).--- [link.springer.com/.../978-3-030-66376-6_3](#) (2021).--- [moleculareurodegeneration.biomedcentral.com/articles/10.1186/s13024-0..](#) (2023).--- [ui.adsabs.harvard.edu/.../abstract](#) (2023).-- [www.mdpi.com/.../308](#) (2024).-- This review reports that Gaba is a major inhibitory neurotransmitter in the central nervous system with modulation of synaptic transmission, promotion of neuronal development and relaxation, and prevention of insomnia, depression, and neurodegenerative diseases.

Furthermore, various properties of Gaba have also been reported in non-neuronal peripheral tissues and organs due to antihypertension, antidiabetes, anticancer, antioxidant, anti-inflammatory, antimicrobial, antiallergic, hepatoprotective, reno-protection, and intestinal protection. Sprouted rice and fermented foods contain a significant amount of Gaba. [www.mdpi.com/.../htm](#) (2019).---- Green tea, white tea, and oolong tea naturally have high amounts of GABA. [www.mcgill.ca/oss/article/health/gaba-supplements-glorious-gimmicky-or..](#) (2018).-----

Posted On 03/05/2024

Guillermou

The physiological balance between excitation and inhibition in the brain is significantly affected in Alzheimer's disease (AD). GABA is the main inhibitory neurotransmission system in the mammalian brain. Dysregulation of glutamate and GABA. It has been shown in multiple brain conditions. As reported by Dr. Mercola, GABA deficiency is associated with anxiety, fear, depression, phobias, impulsivity, addictions, schizophrenia, irritable bowel, hypertension, tinnitus, chronic pain, migraines, allergies and muscle tension. Factors that can prevent the efficient conversion of glutamate to GABA include a lack of cofactors (B6 and magnesium) and a lack of the enzyme glutamate decarboxylase, which converts glutamate to GABA.

Infections and chronic stress inhibit the function of this enzyme. GABA and the vagus nerve collaborate to control how the gut microbiota affects brain function. The vagus nerve is also an important regulator of the immune response and appears to be important for microbiota-gut-brain communication. pubmed.ncbi.nlm.nih.gov/34769106 (2021).--- www.nature.com/.../s41380-023-02140-w (2023).--- www.sciencedirect.com/science/article/abs/pii/S0889159123000594 (2023).-- www.sciencedirect.com/.../S0753332223001324 (2023).--- Exercise at about 85% of your maximum heart rate, to be exact.

GABA is closely associated with physical performance since both intrinsic factors (inflammation, apoptosis, mitochondria, calcium metabolism, etc.) and extrinsic factors (endocrine, nutritional status, immobility, etc.) contribute to progressively defective myogenesis and dysfunction. muscle during aging www.nature.com/.../s41598-023-41628-x (2023).-- www.sciencedaily.com/.../160225101241.htm (2016).---- Meditation and yoga can increase GABA production in your brain. www.ncbi.nlm.nih.gov/.../PMC4769029 (2015).-----

Posted On 03/05/2024

Jeez Professor what a check list - serotonin destroys empathy, love and wisdom. Elevated serotonin is associated with anxiety, fear, depression, short temper, phobias, impulsiveness and disorganization - Lobotomizing emotion - "Sure, it'll numb your depression, but it will also numb everything else too." What a tradeoff; take a chill pill instead of working through life's struggle or encouraging seeking outside help and adding to many more numbers on the street to self-medicate, and rising the question, huh, has this been throwing fuel on a rising tide of violence? Is this why so many mass shooting, violence are a problem today, when once being nearly nonexistent?

Posted On 03/05/2024

Guillermou

Just, you refer to important aspects of GABA deficiency. To consider the relationship of the intestinal microbiota and neurotransmitters with insomnia. Numerous neurotransmitters produced in the intestine have direct interactions with the CNS, they can also communicate with the brain through GABA. Experimental studies have found that GABA can improve sleep by regulating the gut microbiota and increasing levels of SCFAs. Lactobacillus and bifidobacteria have the ability to produce GABA. This suggests that GABA may improve sleep by promoting probiotics in the gut. We hypothesize that insomnia is a common inflammatory response and that inflammation mediated by disorders associated with the gut microbiota may also cause insomnia.

There is a balance between the intestinal flora, which plays an important role in the immune function of the intestinal mucosa. When this balance is disrupted, the number of harmful bacteria will increase, intestinal barrier function will be damaged, permeability will increase, and the body's immune function will be impaired. The microbiota activates an inflammatory response mechanism that subsequently activates the CNS and worsens insomnia.

Butyrate production has been related to the presence of lower levels of proinflammatory cytokines. Even short-term sleep disorders are related to pro-inflammatory alterations; Healthy volunteers with such disorders showed elevated levels of C-reactive protein, IL-6, interleukin 7 (IL-7), TNF-, and myeloperoxidase. Butyrate may potentially function as a sleep-inducing signal molecule that increases sleep, and butyrate producers such as Blautia and Coprococcus may have an impact on sleep quality. www.sciencedirect.com/.../S0753332223001324 (2023)

Posted On 03/05/2024

Guillermou

We can also consider that research found that endotoxins are associated with intestinal bacteria and a healthy diet is related to a lower risk of colon cancer. Short-chain fatty acids have been shown to be anti-inflammatory in colon tissues by activating regulatory T cells. The oncogenic or tumor suppressive effects of the bacteria may be localized in nature or distal, mediated through the circulation. 1) production of putative oncometabolites, such as hydrogen sulfide; 2) impairment of barrier function, which increases the sensitivity of immune cells to bacterial endotoxins (e.g., lipopolysaccharides) and antigens; and 3) immediate impacts of bacterial metabolites and antigens on immune cells to stimulate inflammation by changing immune cell elements.

5) the manufacture of putative tumor suppressor metabolites, such as butyrate, that function through multiple mechanisms; 6) barrier function; 7) immediate impacts on immune cells to protect inflammatory responses by changing immune cell subsets and 8) competitive exclusion of pathogenic bacteria. Local and distant microorganisms play a role in the genesis, progression and general prognosis of cancer. A dysbiotic microbiota predisposes the body to cancer by producing genetic instability, initiating DNA damage, and perpetuating damaged progeny by provoking a positive immune response, metabolic dysregulation, and altered therapeutic response.

ars.els-cdn.com/content/image/1-s2.0-S0753332222002876-gr3_lrg.jpg

www.sciencedirect.com/.../S0753332222002876 (2022). In this study increases in blood endotoxin levels were associated with increases in C-reactive protein concentrations and, in most cases, were paralleled by an increase in markers of intestinal permeability. [www.cghjournal.org/.../S1542-3565\(22\)01110-7/fulltext](http://www.cghjournal.org/.../S1542-3565(22)01110-7/fulltext) (2023)

Posted On 03/05/2024

mar4070

As always Guillermou, you are a wealth of information. I always go to Dr Mercola's comments to see what you have to say.. as your comments are most helpful. So I usually read everything you post including the research included. The last article on your above comment .. the author called Dr Mercola a quack .. wow. I have learned so much from Dr Mercola .. it's too bad others don't realize what a blessing it is to have a doctor speak the truth and share his wisdom..

Posted On 03/05/2024

phoenix999

Thanks Gui for expounding upon the Endotoxin concept. Dr. Mercola states what we almost never hear: that too much fiber can harm gut health and fuel the wrong kind of (endotoxin-creating) bacteria: "When complex carbs that aren't digested in your stomach travel down to your intestine, they end up feeding gram-negative bacteria that produce endotoxin, also known as LPS (lipopolysaccharide)." Thank you Dr. Mercola, because all we seem to hear in both vegetarian AND omnivore circles is "Eat fiber ad libitum; we simply can't get enough of it".

The only thing I'd take issue with is Dr. M's recommendation of leafy greens, because raw spinach & chard can generate an inflammatory fibrotic response anywhere in the body due to very high oxalic acid content. Ditto for many nuts and seeds, especially almonds and flaxseed which, JUST like grains & beans, contain many different toxic compounds and anti-nutrients which Cancel out whatever nutrients they have "on paper". Dr. Georgia Ede has been speaking about this for many years but I only just now listened to her! Thankfully she has given many new interviews on YouTube.

Posted On 03/05/2024

phoenix999

Juststeve: You hit the nail on the head about meds and rising violence. Many mass shooters are found to be on psychotropic medication, frequently with the manic state called "Serotonin syndrome". Harvard psychiatrist Dr. Christopher Palmer is bluntly honest about the failure of our mental health system in treating everything from depression to schizophrenia. Like Dr. Mercola he states that metabolic & mitochondrial health worsen with many medications. He talks about how he's used diet to reverse even schizophrenia: www.youtube.com/watch

Posted On 03/05/2024

Guillermou

Thanks Phoenix. Breast cancer is already the most diagnosed tumor in the world, with more than 2.2 million cases in 2020, surpassing lung cancer for the first time, according to data published in 2021 by the Cancer Research Center. About one in 12 women will have breast cancer in their lifetime. Breast cancer is the main cause of mortality in women. In this study, we report that chronic exposure of mammary epithelial cells to oxalate promotes the transformation of mammary cells from normal cells to tumor cells, inducing the expression of a proto-oncogene such as c-fos and proliferation in breast cancer cells mother.

. Furthermore, oxalate has a carcinogenic effect when it penetrates the breast fat pad, generating undifferentiated and highly malignant tumors with characteristics of breast fibrosarcomas. Since oxalates appear to promote these differences, it is expected that a significant reduction in the incidence of breast cancer tumors could be achieved if oxalate production or its carcinogenic activity could be controlled. It is important to note that treatment with potassium oxalate induced tumor formation more rapidly than treatment with calcium oxalate microcrystals, although the final concentration of oxalate was the same in both cases.

These differences are probably due to the fact that calcium oxalate is poorly soluble and the concentration of free oxalate, as an ion, at equilibrium is very low. On the other hand, potassium oxalate is highly soluble and all oxalate exists in its ionic form in solution at the concentrations used. Therefore, we conclude that free oxalate, as an ion, is the chemical species that has the carcinogenic effect on breast tissue. [bmccancer.biomedcentral.com/.../s12885-015-1747-2](https://doi.org/10.1186/s12885-015-1747-2)

Posted On 03/05/2024

Guillermou

Metabolic reprogramming has been shown to be involved in the formation of cancer-induced premetastatic niches (PMNs). In this study, we showed that a rate-limiting enzyme of oxalate synthesis was increased in alveolar epithelial cells of mice with metastatic breast cancer cells at the premetastatic stage, leading to the accumulation of oxalate in lung tissue. Pulmonary oxalate accumulation induced the formation of neutrophil extracellular traps (NETs) by activating NADPH oxidase, which facilitated the formation of a premetastatic niche. Furthermore, pulmonary oxalate accumulation promoted the proliferation of metastatic cancer cells by activating the MAPK signaling pathway.

www.nature.com/.../s41388-022-02248-3 (2022).--TABLES OF CONTENT OF OXALATES IN FOODS.

THE FIRST LINK IS A SEARCH ENGINE. ----- <https://oxalate.org/> .-----

----- www.botanical-online.com/.../oxalate-content-foods .----- www.stjoes.ca/patients-visitors/patient-education/patient-education-k-..

----- renalcop.com/oxalate-values-for-foods .-----

ucikidneystonecenter.com/wp-content/uploads/2020/06/Oxalate-Content-of.. .-----

www.urinarystones.info/resources/Docs/Oxalate-content-of-food-2008.pdf .---

Posted On 03/05/2024

leangreencafe

Question: A friend had a heart attack at 37. 2 mRNA shots later he had a stroke at 53. Going thru a Divorce after losing both parents. 1 1/2 yrs. later, he's off meds and using a multi, coq, bp supplement, C and fish oil. He is off alcohol for 2 yrs. He was given Niacinamide by a friend, and showed signs of a small stroke after taking it. Movement or rushing of blood in a stroke area didn't seem like a good idea. He is showing signs of memory loss, dejavu, anxiety, distrust, overwhelm, etc. His history included a seizure while in the hot tub (had used drinks with aspartame) and a couple months later, one in bed. He had a traumatic head injury at 8 months gestation, and a head injury with suture on the left side of his head, behind his ear, shortly before separating from the mate. I read the article, and thought the liquid B complex might be a good thing for brain healing, but it does have niacinimide in it. Any suggestions? Thank you

Posted On 03/05/2024

Arlen1

So, is low serotonin good for you? Serotonin is used by the brain to make melatonin. What SRI's do is prevent that conversion. That's why people who take drugs like Prozac end up taking sleep medicine. Which is worse, sleep deprivation, or depression? Sleep deprivation will cause major health problems, including dementia. I did research on this during the 90's. People with seasonal allergies tend to have lower serotonin levels. Processed foods, grains, and foods high in toxic lectins (seeds, nuts, legumes, and grains) are usually the culprit.

Lectins have an affection for mucus. The largest concentration of mucus resides in your intestines. Lectins are concentrated in the shell of seeds. The lectins latch on to the mucus, coating the seeds with a protective coating of mucus, so they can't be digested. The seeds get expelled during defecation and then they sprout (circle of life). Therefore, consuming mostly a plant/seed/grain/legume based diet all but guarantees that you will suffer from low serotonin levels and seasonal allergies.

Taking SRI's will make this problem worse, not better. The cure for this is to stop eating processed foods, all seed-like foods or foods made from seeds, and foods containing seeds. That doesn't leave you with much to eat. DON'T DISPARE! For all you vegans out there, you can have your seeds and eat them too! All you have to do is PRESSURE COOK THEM or FERMENT THEM! It's that simple. Many people have food allergies to things like peanuts, soybeans (beans in general), and grains.

You can pressure cook pinto beans in 45 minutes WITHOUT soaking them and there's no side effects after eating them. Rice cooks even faster and in my opinion taste better when pressure cooked. Nato (fermented soybeans) is one of my favorite side dishes. It is a tremendous BLOOD THINNING agent. It works better than prescription blood thinners. I'm severely allergic to soy, but I can consume fermented soy 3 meals a day. No more seasonal allergies.

Posted On 03/05/2024

Arlen1

Back to the mucus.....mist of the serotonin in your body is in the mucus lining in the small intestine. Hence, the brain-gut connection. Consuming foods that are less prone to stripping that mucus lining promotes healthier serotonin levels in your brain. However, you need starches in order to produce mucus. That's where pressure cooking the rice comes to play. You get your mucus producing starches withal the mucus robbing lectins. Same for potatoes. You peel the potatoes and pressure cook them. Unfortunately, they're only good for mashed potatoes because they turn to mush. Another benefit to pressure cooking these seed-like foods is that they keep a really long time in the refrigerator. I cook at least a pound of pinto beans at a time and they keep without freezing for more than 2 weeks.

Posted On 03/05/2024

stoneharbor

Good advice Arlen1. Lectins can definitely be a problem and as you say, pressure cooking grains can be a solution. After eating starches or seeds that have been pressure cooked, all the fiber still remains, which helps insure that these foods will reach the large intestine, as fiber just doesn't get broken down by the enzymes in the small intestine. But the microbes in the large intestine DO digest all kinds of fiber, and thereby produce short chain fats and vitamins that directly feed the enterocytes.

The enterocytes in turn produce the mucus (2 layers in the large intestine) that protect against all kinds of bacterial insults and penetrations of the gut wall. The fact that a very small component of fiber still consists of tryptophan is actually a godsend in that this is the only way that Serotonin can be made in the large intestine, with 5% of it absorbed for use by the central nervous system, and the other 95% needed by the enteric nervous system to power all the intestinal muscles to move the food bolus along & massage it to provide better distribution of enzymes and microbes.

I totally endorse eating plenty of fiber containing carbohydrate foods that help maintain up to 4 pounds of microbes in the large intestine. This is known these days as "80% of our immune system". Cutting back on all fibrous carbohydrates in order to reduce the chance of endotoxins entering our bodies seems to be a false economy, as it will certainly also reduce the microbial component of our immune system.

We need the microbes, and the mucus that they allow the enterocytes to produce, to dutifully guards against intrusion by lipopolysaccharides (LPS) or endotoxins. Notice that all ruminants in a natural state, whether cows or deer, feast totally on fiber-rich grasses and leaves, that need several compartments to achieve complete digestion of the fiber. In these animals there is tons of time for the microbes to die and leave these LPS to "poison" the animal. It just doesn't happen! WHY?

Posted On 03/05/2024

seo5952

Thank you for your comments. Been vegan for about 6 months and the article was concerning since vegan is a lot of the things that are supposed to be bad even though all the Veggies and fruits are good. I generally pressure cook but now will do all beans, legumes, and rice. I don't eat white potatoes.

Posted On 03/05/2024

8385283

Arlen, I take a supplement from Boost Ceuticals called Flow Nattokinase. One capsule is 200 mg of Nattokinase. Do you actually make the fermented soybeans? Am wondering if the capsules I take are fixing my problem of high blood pressure.

Posted On 03/05/2024

Arlen1

Thanks Stone! This has been a lifelong project. Learning about my lectin sensitivity and going low-carb was a band-aid that got me past a near death situation. It bought me time. I'm finally eating carbohydrates in moderation and it is phenomenal! I started with pressure cooked rice because I read an NIH PEER-REVIEWED study that said all of the lectins were destroyed, but all of the nutrients were preserved. It helped that I love rice. Another study I read suggests that you have to have starches in order to produce mucus. What a dilemma! Pressure cooking solves this problem. There's just one issue in the back of my mind. The first pressure cooker was invented in 1679! So, how did this become a means for survival for someone like me 350 years later?

Posted On 03/05/2024

Good question on the pressure cooking question. My guess is that before pressure cookers became a somewhat common device humans just ate far less grains, and what they did eat got cooked far longer, or were soaked or sprouted before they did the cooking. Also, you ask "Is Serotonin good for you?" implying that we certainly need some amount in order to have a healthy gut, where 95% is utilized, and a healthy brain, where about 2% is utilized. The answer is "yes" BUT, what may happen in some individuals is that they eat far too often, and also eat far too much meat/grains in a single meal. Eating often (or eating too much protein in one meal - more than 3-4 ounces) can exhaust the enzymes that break down protein into amino acids.

When the enzymes are not present in the small intestine (SI) during this digestion process, and some of the protein is then passed on, into the large intestine where the enzymes are not present, you can have very heavy quantities of tryptophan still present, being released from the fiber of plants, or the muscle of animal products. If this tryptophan is finally processed by microbes in the colon instead by enzymes in the SI, a person may obtain far higher quantities of Serotonin than normal, providing a toxic load to the nervous system. So excess protein over what can be broken down in the small intestine will pass on into the large intestine where it can no longer be digested via enzymes, and it just putrefies there.

This causes many health problems besides just the absorption of high levels of Serotonin. But read this link: www.ncbi.nlm.nih.gov/.../PMC7231603 There are several ways that commensal bacteria derive Serotonin from Tryptophan for use by the gut enterocytes. However, there is just one way that some of that Serotonin can be absorbed and put into circulation. That 1-2% needed by the central nervous system. And it is by passing Serotonin to receptors that are enticed by the LPS (endotoxins)! LPS is essential!

Posted On 03/06/2024

Serotonin may be an important issue for people if they eat poorly, but generally the human body does a great job of regulating it, and the SSRIs that big-Pharma wishes to push is nothing that anyone needs in order to have better neurological function. Proper diet and meal timing can fix most mental problems. If excess Serotonin is absorbed, it's probably due to tryptophan being broken down in the colon due to too much protein being eaten in one meal. If you eat more than 3-4 ounces of protein in a meal, there's not enough enzymes to break it down to amino acids. It's passed into the colon where the protein, including tryptophan, putrefies, and there, LPS from gram negative bacteria will allow absorption of Serotonin.

The small intestine is designed to digest all the protein in a meal, via enzymes. If not allowed to do so by eating excess protein, its bad. Otherwise, worrying about what happens in our cell as to the effect of Serotonin is probably not worth one's time, as that is all regulated quite well in human physiology. The "Serotonin worry" may be driven by the fact that big-Pharma has a huge interest in "Serotonin" and now people are talking about it, when the subject is probably on the table from gaslighting by the drug industry. Just keep in mind that most Serotonin is produced in the human gut, and 95% of it remains there for proper gastrointestinal health.

Your whole enteric nervous system (ENS), or your "second brain", depends on Serotonin to regulate all kinds of things in your intestine, including all kinds of muscular exercise that keeps your gut continually massaging and propelling your digesting food material on through the digestive process. There are nearly a dozen Serotonin receptors and subtypes in the gut that need Serotonin as a signaling agent or you are going to have some form of gut "dysbiosis". You can see a list of these receptors and what aspects of gut motility they effect here: www.ncbi.nlm.nih.gov/.../PMC8911970

Posted On 03/05/2024

stoneharbor

Though I'm not convinced that the average person, already on a healthy diet such as Dr. Mercola has recommended, needs to worry about lowering their level of Serotonin, specifically the 5% that ever gets from the gut to effect the central nervous system, I think following the advice here on maintaining a diet plentiful in GABA certainly can be an acceptable way to achieve better health. After all, look at some of the most GABA packed foods: Spinach, sweet potatoes, broccoli, kale and fermented foods. Every one of these happens to be something that is a major part of my diet every week. Not because they contain a lot of GABA, but because I happen to think they are healthy foods. I'm only finding out today that they are providing GABA. www.webmd.com/.../gaba-uses-and-risks So since there seems to be no bad side effects from consumption of these foods or the amount of GABA they provide, why not work on getting most of these items into your diet every week?

Posted On 03/05/2024

Guillermou

Interesting references, stoneharbor. Certain neurological and mental health conditions are linked to times when GABA messaging activity is not in balance and not functioning as it should. Decreased GABA activity can contribute to anxiety and mood disorders and depression. This review provides a comprehensive assessment of the current literature on GABA and shows that intake of natural and biosynthetic GABA may have beneficial effects on stress and sleep.

www.frontiersin.org/journals/neuroscience/articles/10.3389/fnins.2020... (2020).--- The current results showed that a high-fat diet (HFD) reduced GABA levels in the frontal cortex (FC) and hippocampus.

These findings suggest that lower levels of neurotransmitters in the FC and hippocampus could affect the inhibitory processes underlying eating behavior. High Gamma-Aminobutyric Acid (GABA) Oolong Tea Alleviates High-Fat Diet-Induced Metabolic Disorders in Mice www.scielo.cl/scielo.php?script=sci_arttext&pid=S0716-976020160001.. (2017).---- pubs.acs.org/.../acsomega.3c04874 (2023).--- An interesting fact is that alcohol inhibits the central nervous system.

To put this into perspective, think about the common side effects of drinking. These often include loss of motor skills, slurred speech, blurred vision, impaired judgment, etc. Many of these symptoms are caused by how alcohol affects the brain. Not only does alcohol effectively kill essential cells that help keep you alert and healthy, it can also cause GABA withdrawal by reducing its production. www.gbhoh.com/gaba-and-alcohol-how-drinking-leads-to-anxiety (2023).---

Posted On 03/05/2024

Guillermou

Stressful situations require a rapid response from the body to promote adaptation and survival. The functionality of the hypothalamic-pituitary-adrenal (HPA) axis is essential for such a response and depends on many mediators, such as steroid hormones (for example, cortisol), neurotransmitters (including glutamate and GABA), cytokines and neuropeptides, which function in time- and manner-dependent on the brain area. The hippocampus, amygdala, and prefrontal cortex (PFC) are particularly interesting regions, as they project to the HPA axis via the inhibitory GABA system and the excitatory glutamate system, but the stress-related dynamics of these systems largely extent remains unclear.

Of note, stress exposure generally increases prefrontal cortex glutamate levels in the rodent brain and primarily decreases GABA levels in the brain, depending on the type and duration of stress, and the brain region. examined. Furthermore, rapid changes in GABA(A) receptors occur after acute stress in animals. www.sciencedirect.com/.../S2213158217300013 (2017).----
my.clevelandclinic.org/health/articles/22857-gamma-aminobutyric-acid-g..

Posted On 03/05/2024

stoneharbor

Very interesting, Gui. Nice to know the effects that obesity, high-fat diets, stress and alcohol have on the GABA that is allowed to circulate in our bodies, and then of course the effects that result if we have low levels of GABA. Another factor that affects the amount of Serotonin absorbed by some people is probably that they eat far too often, and also eat far too much meat/grains in a single meal. This results in an "Excess Protein" and thus an "excess Tryptophan = excess Serotonin" problem. As I mentioned elsewhere in a reply to Arien1: eating often (or also eating far too much protein in one meal - like more than 3-4 ounces) can exhaust the enzymes that break down protein into amino acids.

When sufficient quantities of the enzymes are not present in the small intestine during this digestion process, and some of the protein is then passed on, into the large intestine where the enzymes are not present, you can have very heavy quantities of tryptophan still present, being released from the protein part of plants (like the seeds), or the muscle of animal products. I'm guessing that if this tryptophan is finally processed by gut microbes in the colon, a person may obtain far higher quantities of Serotonin than normal, and set the stage for excess absorbed Serotonin, providing an overwhelming burden on the nervous system.

We must realize that any protein swallowed that is in excess of what can be broken down in the small intestine will pass on into the large intestine where it can no longer be digested via enzymes, and it just putrefies there. This causes many health problems besides just the absorption of high levels of Serotonin.

Posted On 03/05/2024

jamNjim

WOW! "Air ionizers, which also tend to decrease extracellular serotonin may be helpful too and can provide benefit 247 without any conscious effort on behalf of the person/people using them." My wife and I were just talking about buying an air ionizer last weekend. I was skeptical. My wife freaks out over airborne particles like mold spores, bacteria, and dust. Air ionizers are supposed to reduce these particles that also act as carriers for viruses to hitch a ride on. I will for sure show her this! She's also concerned about dementia. She was forced to get the mRNA JAB and believes it impaired her ability to think. An air ionizer might ease her mind. Thank You Dr. Mercola!

Posted On 03/05/2024

wns115

We have ionizers in every room...I believe everyone should consider ionizer air/filters...with all the PCBs, bazillions of other chemicals coming from upholstery, carpets, vinyl flooring, plastics, clothing, we all live in a swirling jungle of chemical-producing off-gassing furnishings and textiles. Unless you live in a log home made from untreated wood with home-made furniture free of lacquers, paints, plastics, etc....we are all surrounded with these chemicals (thank you DuPont et al)

Posted On 03/05/2024

standstrong

No body is forced to do anything. There are always choices.

Posted On 03/05/2024

Segstar

I'm planning to open up a Company that makes air Ionizers..

Posted On 03/05/2024

Guillermou

Air ionizers are inspired by nature, which purifies itself through the process of electrostatic attractions. Naturally, air molecules in the atmosphere are negatively charged, while air pollutants are positively charged. Air pollutants attach to negative molecules, become heavier, and fall to the ground or surfaces. That's how outside air maintains its freshness, and it's why we feel rejuvenated spending a weekend in the mountains after spending weeks in cities breathing polluted air. The outside air is constantly negatively charged when; 1).- Natural landscapes such as waterfalls and rain release negative ions when water droplets hit surfaces. 2).- Friction between the wind and surfaces such as trees creates negative ions that are released into the air.

3.- Organic radioactivity in the soil produces energy that transports many negative ions. There are many more sources of negative ions in the atmosphere, but if you want to imagine the ionization of air at play, think about lightning and thunderstorms or the northern lights/aurora borealis. An air ionizer is effective in cleaning the air of the smallest particles that pollute clean air. These particles are typically between 0.01 and 0.1 microns and include smog, tobacco, and smoke. Additionally, an air ionizer releases ozone gas, which is effective in killing pathogens such as mold, fungi, and bacteria.

Posted On 03/05/2024

Guillermou

Air ionizers can help relieve tension and help improve sleep patterns. Some studies suggest that people with Seasonal Affective Disorder (SAD) may benefit from using an air ionizer in their home. According to Felix Gad Sulman, MD, the reported physiological effects of negative ions have had remarkable benefits for those who used an air ionizer. These physiological effects include decreased respiratory rate, decreased blood pressure, increased well-being, decreased skin temperature, increased resistance to infection, and more. Are Air Ionizers Safe? In the link morrisdirect.co.uk/ionizer-air-purifier--- www.airoasis.com/.../air-ionizer-benefits .---

Posted On 03/05/2024

Ronald_H

Regarding: "... benefit 24 7 without any conscious effort on behalf of the person/people using them."
I'm thinking similarly with adding a few parts per million of hydrogen into bedroom air. Different subject, similar thinking.

Posted On 03/05/2024

Naplam

Again, WOW! I learned a lot today. I thank everyone, especially Dr. Mercola and Gui for all the mind-boggling information! My brain is in overdrive just soaking all of this in. I'll be buying an air ionizer. Does Dr. Mercola have a recommendation for any air ionizer, or does he sell one on his website?

Posted On 03/05/2024

JGW1950

This has been said before, but 75% of all school shooters, especially young men, were depressed, suicidal, and on some kind of anti-depressant when they decided to shoot up a school. Their suicidal thoughts weren't taken seriously, or their medication was changed or increased, or they weren't given the proper counseling for their condition--just given more medicine then sent home to deal with their demons on their own. I can't sympathize with people who kill, but it seems to me that when no one took the suffering of these young people seriously (in several cases, their parents just bought them guns to make them happy), shooting up a school or a parade or a street was a desperate way of saying, "NOW will you take me seriously??"

Posted On 03/05/2024

wns115

I've also read that many of the shooters were MK-Ultra program folks (I remember watching several different interviews with shooters where they said something like..."I don't know what happened - I blanked out and then after it was all over, later, I came back to consciousness and saw that I had this gun in my hand" - When you get a chance, watch the movie "Hypnotic" with Ben Affleck....this is most likely a "Disclosure" movie as many of the sci-fi movies are.

Posted On 03/05/2024

stoneharbor

Right on, JGW!!! There's a very simple set of blood tests that can be done that will show whether a depressed or suicidal person can SOMEWHAT safely be given an SSRI medication. Likewise such medications should NOT be given to people with quite the opposite test results. These blood tests have been known, but only by a slim number of doctors, for 2 dozen years! But they are not used to determine safety. But they SHOULD BE REQUIRED before prescriptions are written. If they aren't done, there should be a law that leaves a doctor open to arrest for accessory to murder in such a case where the person turns homicidal. This is common sense law. But of course the drug empire hides this whole story from the public and from practicing doctors.

As elsewhere, I'll recommend listening to this lecture on this danger from SSRI's given to whoever tests positive for overmethylation: www.youtube.com/watch Though there are simple personality tests involved in identifying overmethylation, the blood tests that are usually sufficient are: whole blood histamine below 40ng/ml and an elevated SAMe/SAH ratio. These findings, plus low serum folate and an absolute basophil count below 30 are almost a certain sign of overmethylation and thus a warning that SSRI medication could prove deadly or seriously destructive to the subject and/or people in contact with them.

Posted On 03/05/2024

wor9463

Agree with you, JGW1950, and wns115. I think the number is way more than 75% though.

Posted On 03/05/2024

standstrong

Inside jobs, gov false flags like 911, Cuba, Vietnam start, Oklahoma City bombing, Titanic with the Non Fed Reserve Bankers , Luciana ,etc etc. All Wars are Bankers Wars. The Gov wants our guns and will murder people, even mass murder them until they can force them away from us. Look at the WW3 they keep trying to start (also Civil War) so they can enact their already in place Marshall Law andtake away what is left of our rights. This is painfully obvious to many. Don't be the last to figure it out. The evidence is overwhelmingly obvious unless you still think the DOD contracted the Permanent Gene Editing " Counter Measure Bioweapon " Injection with Pfizer and Moderna/NIH (no liability for either entity) is to " help " us. If you do, go get a bunch more shots (boosters) so the gov can continue to help you (die).

Posted On 03/05/2024

epi-cure

I took Prozac briefly (no longer than 3 weeks) in the very early '90s. I was under a lot of pressure and not sleeping well. At first it seemed to quell the head trash / shut down the noise of the internal dialogue (yeah, that's the problem, binky, you've got multiple entities (dialogue) vying to take ownership of yur frame :-) Then one morning 3 young men who must have been drinking all night were playing loud music at the street around 6AM. I stormed out the door, approached them and told them to turn it down. They did not like my suggestion and my suggestion didn't like them. I had to disengage because of the murderous state I was in. I hadn't felt violence like that in a long time. That morning I threw away those capsules that at first seemed to serve me well.

Posted On 03/05/2024

Segstar

EPI those 3 lads had no clue how close they came to gittin their filament burnt :) AND good call to toss that garbage out...

Posted On 03/05/2024

epi-cure

Seg, I would have called you for support but you were some 33 years down the road :-) Not my finest hour and thankfully Guardian Angel intervened because one way or another Plan A, as goes the saying, would not have ended well. He who'd fight then walks away lives to uncork another day. Cheers !

Posted On 03/05/2024

Segstar

Epi i would been there in a jiffy..But you woulda have to holler a wee bit louder, which by itself could cause you to work up a mighty thirsty....And yep those who fight and runaway live to uncork another day, a win win situ..Now let's see how those evil chicken wings are coming along in the oven :)cheers...

Posted On 03/05/2024

Let's analyze this statement from Dr. Mercola above: "When complex carbs that aren't digested in your stomach travel down to your intestine, they end up feeding gram-negative bacteria that produce endotoxin, also known as LPS (lipopolysaccharide)... Endotoxin catalyzes a series of metabolic reactions that converts tryptophan in your gut to serotonin. So, to inhibit serotonin production in your gut (which is where most of the serotonin in your body is produced), you want to prevent endotoxin production," Woops. The only carbs that get digested in the stomach are the simple sugars, and these still need absorption in the small intestine (SI).

So ALL carbs get into the intestine. BUT, the small intestine digests most tryptophan and absorbs it. Most tryptophan comes from eaten protein, like meats, eggs, even beans and grains. Most is absorbed in the SI. AND, in the healthy gut, the stomach acid has killed most all bacteria, and SI absorption of tryptophan and most other carbs, proteins, and fats occurs in an hour or two, before any bacteria can grow from the few that are left after the stomach acid-bath. So where does the tryptophan come from that finally escapes to the large intestine, where it is finally digested by microbes that feed on the remaining fiber left from each meal? It comes from the very small amount of protein left within that woody fiber material.

That is, VERY LITTLE of it, but it's required there in order to make Serotonin that triggers peristalsis and other muscular processes. www.ncbi.nlm.nih.gov/.../PMC7231603 The output from colonic microbes also feeds the colon enterocytes which produce 2 layers of mucus that both feed and protect against bacteria though. The colon is built to protect against absorption of endotoxins. The whole Georgie Dinkov worry about "endotoxins" is a non-event if you achieve and maintain a healthy gut by eating plenty of, guess what? Fiber. Immune system is 80% gut microbes. 3 pounds of them. Trust it.

Posted On 03/05/2024

wns115

I like what you state above. And that intestinal mucous you discuss above can be both a blessing and a curse. You also shared above: The whole Georgie Dinkov worry about "endotoxins" is a non-event if you achieve and maintain a healthy gut...The only problem with this statement is that the majority of us do NOT have a healthy gut unfortunately..... Glyphosate, GMOs, and a myriad of toxic chemicals invade our microbiome every day through the Globalist's poisoning of our food supply. It's nearly impossible to have a perfect gut in today's world even if you pride yourself on 'organic'. That website you quote from ncbi.nlm.nih.gov is radio-silent about these horrific poisons in our food system...because they ARE the cabal.

I've helped my gut substantially by eating almost everything direct from local farmers...but it ain't easy!!!! If you buy ANYTHING from a big box store, you are most likely a victim of glyphosates, GMOs and a whole host of chemicals that kill the gut microbiome which of course is at the core of health and wellness and the cause of aging, hormone breakdown and imbalance, nutrition deficiency, bone, skin, organ, and brain degeneration, etc. It's why kids can wolf down gigantic amounts of garbage food and adults (40 and above) suffer terribly if they attempt the same thing. For most adults, the microbiome and entire GI has been compromised by poison in foods.

Posted On 03/05/2024

stoneharbor

Thanks WNS. You may certainly be right that "most of us" still may not have a healthy gut due to the Globalist poisoning of our food supply. I guess I assume that most of the readers here have been following Dr. Mercola's advice for years, and generally have great digestion. I just assume that if they read a lot on this, they would follow the advice. I certainly hope so. It's a shame if people spend hours each year digesting the information available on this site, and then still don't do their best to get fresh, organic, whole foods that thoroughly nourish their bodies. I wish the best advice reaches the greatest number of people, and that they strongly consider taking it to heart and continue to plan their meals and life style such that they can live vibrant, long lives!

Posted On 03/05/2024

reg5821

If you were to look at the amount of 5htp sales, it appears there are a lot of people mistakenly operating on the premise that more serotonin is good.

Posted On 03/05/2024

PathNotes

SSRIs, PPIs, and Statins are medical marketing scams. All harm, no help.

Posted On 03/05/2024

billstri

It is said oatmeal is high in Linoleic Acid (PUFA). So I looked it up. If your goal is getting rid of LA from you diet, eliminating oats is not the first thing to get rid of. Processed foods are the first to rid of. Oats only have 2.5g/100g PUFA of uncooked dry oats (around 1/3 cup). Walnuts naturally have 47g/100g of PUFA! Most nuts need to go before oats. But I think Dr Mercola's aim is to get total LA/day down to under 7 grams, which is nearly impossible to do as lots of natural foods have traces of it. For those with digestive issues, getting rid of all grains including oats may help and getting rid of foods like lentils and beans may also help.

I think the best idea for digestive issues is get rid of anything that may cause a problem and stay 100% away from those for a month and then add one in at a time and test it for a week before adding in another to see if you have a reaction. I don't normally eat oatmeal, but I do use steel cut oats to reduce liquid to thicken soups made with tomato juice or collagen rich liquid made from simmering turkey bones/fat/skin. 100 grams of water is 1/10 of a liter and a cup of water is 240 grams. I get my tomato juice from grinding tomatoes from my garden in a VitaMix and freezing the liquid.

Posted On 03/05/2024

Guillermou

Also: LINOLEIC ACID – THE MOST DESTRUCTIVE INGREDIENT IN YOUR DIET
takecontrol.substack.com/.../linoleic-acid (11/2023)

Posted On 03/05/2024

GoldCoaster

Oats are very high in phytic acid, so will block mineral absorption. There are much better thickeners.

Posted On 03/05/2024

kchagnard

I have taken many brands of antidepressants through the years. I am presently taking 20mg Lexapro and wish to wean off it. I have switched to alternative methods, such as light therapy, probiotics, vitamins, green and oolong tea, yoga, a reverse osmosis water system and air purifiers. I quit Celexa cold turkey 10 years ago with disastrous results. I never want to go through that again. This time I'm smarter and more cautious. I expect my doctor will strongly disagree with my decision. Regardless, my mind is made up. I quit smoking 40 years ago. quit daily drinking and have endured the agony of Celexa withdrawal, so I know I can do this. I'm terrified about what is to come and pray for encouragement and community support.

Posted On 03/05/2024

standstrong

Kch, I just did this, D/C Lexapro. I did not know it was a big deal and did not discuss it with my physician, which I prob should have but I knew she would try to advise me to stay on. I was very happy and fine for 3 months with good food, sunshine, Vit supplements, company. Then things started to slide, I think it was negative family matters (the reason I went on it in the first place) not to mention knowing and following the Cabal's actions. I used to get so mad and people said, don't get so angry , so now it is worse without the anger and fighting spirit. Interestingly, strangely I find myself not wanting to drink alcohol anymore. TBContinued. Best Regards

Posted On 03/05/2024

joa3842

I was on SSRI inhibitor for five years and weaned off it. I feel better than while on it.

Posted On 03/05/2024

GoldCoaster

There are many forums on weaning off antidepressants, found via google. It can be quite stressful for a patient when you decide to go against doctor's "orders". The stress that builds before you announce what they may take offense to, and can make you feel like a disobedient child. Many conventional doctors can be intimidating with a superiority complex. With the internet now, patients can know more than the average doc that doesn't practice any form of functional/alternative medicine, or know of the dangers their prescriptions can cause.

Posted On 03/05/2024

GoldCoaster

I have high cortisol during the day based on the Dutch test, and it does drop by the end of the day, but spikes at night waking me up for the last 5 years. Although early morning blood tests don't show a high level. My doc's sups and herbs didn't fix the insomnia. I tried GABA for awhile, but after reading this article, I better get it out of the cupboard and start taking it again! Will have to research doses. With high cortisol, I see from the article I have high serotonin.

Posted On 03/06/2024

les145

Magnolia bark has been with me for some time now for help with cortisol, anxiety, inflammation and gut health. Not on it all the time, muscle test for all of our supplement use.

Posted On 03/06/2024

GoldCoaster

Dinkov said in an interview with Mercola, that melatonin has a feed back loop, and converts back to serotonin. This was his case for not taking melatonin. Since listening to the interview with Mercola and world expert on melatonin Russell Rieter, I had been taking age appropriate high dose melatonin. Being concerned about what Dinkov said, I wrote to Russell enquiring about the possible feed back loop issue. Russell said it is wrong what Dinkov said, and asked me for Dinkov's contact details. He said at my age, 67, I would be making very little melatonin, and this was revealed from a saliva test showing below range levels. It was reassuring to hear back from Russell and not fear taking melatonin, as it's anti-aging benefits are quite amazing.

Posted On 03/05/2024

Almond

More on AI. Once again, this is off-topic, but important. childrenshealthdefense.org/defender/bb-doctor-office-might-be-bugged/?.. "Your Doctor's Office Might Be Bugged. Here's Why Forbes reported: It used to be safe to assume your doctor's visit was a completely private affair between you and your physician. This is changing with ambient artificial intelligence, a new technology that listens to your conversation and processes information. Think Amazon's Alexa, but in your doctor's office. An early use case is ambient AI scribing: it listens and then writes a clinical note summarizing your visit.

Clinical notes are used to communicate diagnostic and treatment plans within electronic health records, and as a basis to generate your bill. A recent report in NEJM Catalyst described the deployment of ambient AI in The Permanente Medical Group, Kaiser's Northern California physician group. Since October 2023, ambient AI scribes have been used by more than 3,400 doctors in more than 300,000 encounters. In the study, the doctors cited many benefits including more meaningful interactions and reductions in after-hours note-writing.

Patients also reportedly liked it. Some described their physicians as more attentive, possibly because ambient AI avoids the practice of doctors writing their notes during the visit, which is distracting. Okay, your conversation just got recorded. But where does it go? Is it stored somewhere? How is it used beyond writing my note? The AI technology companies need to address these questions and comply with Health Insurance Portability and Accountability Act laws. Additionally, new regulations may be needed as the technology evolves."

Posted On 03/05/2024

grits1

This website might be of interest to some, and I will post the link to the specific article about sprouting legumes and grains for reduction in lectin and phytic acid content. There are lots of great articles, tips and tricks at this site so you may want to periodically check it out. Jaqueline (the author) even has an article about the benefits of pressure cooking. I love the fact that so many health conscious people share knowledge on Mercola's platform. Thanks to Dr. Mercola for hosting! <https://deeproootsathome.com/> <https://deeproootsathome.com/soaking-beans-and-grains-byebye-phytic-acid-and-beano/>

Posted On 03/05/2024

Newlife90

Methylene Blue?

Posted On 03/05/2024

erfeerick

This is SO helpful. I've been taking a serotonin mood support supplement quite regularly and already have a thyroid condition. Thank you for your thorough research!

Posted On 03/05/2024

jgkirtley

So would taking methylene blue be a bad idea? I thought I remembered reading an article about all its positive benefits. Doesn't it increase serotonin?

Posted On 03/05/2024

Newlife90

I'm taking methylene blue. I just want to make sure it's okay to keep taking it?

Posted On 03/05/2024

Newlife90

Is methylene blue still okay to take? Does that affect your serotonin levels?

Posted On 03/05/2024

Dr. Mercola, I do all the things you mention above from what to eat (not eat) as well as taking GABA every night (and sleeping like a baby :) - My only weakness is that I sometimes cave into the starches so I don't eat perfect every day (only when I am on strict 2-4 week cleanses). I believe that most of us have some level of SIBO with the way the Globalists have tampered with our food but there appear to be 'levels' of SIBO infection that cause more problems as the SIBO becomes out of hand (i.e. I have one friend who can no longer eat any citrus or even pineapple without having an almost immediate skin reaction of itchy, burning skin) - I believe this may be a super SIBO infection

Posted On 03/05/2024

Guillermou

Small intestine bacterial overgrowth, or SIBO, occurs when bacteria from the large intestine can spread to the small intestine. SIBO is a common digestive disorder that can cause a number of digestive symptoms. There are two common bacteria that can induce SIBO: hydrogen-producing bacteria and hydrogen sulfide (H₂S)-producing bacteria. A different organism called archaea can create a third type of gas, methane (CH₄) that causes a disease called intestinal methogen overgrowth (IMO). Research has found that people have higher amounts of *Desulfovibrio* spp., a bacteria that can produce H₂S, if they have ulcerative colitis, a form of inflammatory bowel disease.

Anyone can have this bacteria, and in fact, having small amounts of these bacteria is beneficial. At low levels, these bacteria can create ATP, a form of energy. At higher levels, around 5 parts per million (ppm), bacterial overgrowth can develop. And at extremely high levels, colorectal cancer can develop. Even a type of yeast called *S. cerevisiae*, also known as brewer's yeast, can produce highly toxic H₂S gas. That said, H₂S SIBO is incredibly rare: less than 5% of all SIBO cases.

Some SIBO organisms create hydrogen sulfide (H₂S) gas as a byproduct. We now know that *Fusobacterium varium* and *Desulfovibrio piger* are the two main producers of H₂S gas in most cases of SIBO. This H₂S gas causes damage to the body's cells. Anyone who has been near an erupting volcano will know the smell of H₂S. This sulfur and sulfur smell is very irritating to the nose but also to the rest of the body. brodynd.com/sibo-hs-hydrogen-sulfide-h2s drruscio.com/hydrogen-sulfide-sibo www.ibs-solutions.co.uk/phdi/p1.nsf/supppages/ibs?opendocument&par..

Posted On 03/05/2024
