

#### BevAnn22

WOW! Amazing again to receive Dr Mercola and Gui together with the one-two punch of vital health informations! Many thanks to both of you! I am counting my blessings when I read your articles and GUI's comments!

Posted On 04/19/2024

# Guillermou

Thank you BevAnn22, gratitude makes us happier. Grateful people are more satisfied with their life, their friendships, their family, their community and themselves. They experience more hope, optimism and self-esteem and perform better at school and work In the last 9 years that I have read Dr. Mercola's reports, I have managed to increase my level of knowledge and achieve significant learning. I am very grateful to Dr. Mercola and the entire community of this great website.

This review and other studies report 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 and depression. Gaba has antihypertension, antidiabetes, anticancer, antioxidant, anti-inflammatory, antimicrobial, antiallergic, hepatoprotective, and intestinal protection actions. Gaba can suppress neurodegeneration and improve memory as well as cognitive functions of the brain, neurodegenerative and cerebrovascular diseases, neuroinfections and insomnia hypertension which can affect fatigue.

Fatigue, or extreme tiredness, is a common symptom of diabetes. Gaba and Gaba-enriched natural products have been shown to be effective agents in lowering blood glucose, attenuating insulin resistance, stimulating insulin release, and preventing pancreatic damage. Sprouted rice and fermented foods contain a significant amount of Gaba and possess potential antidiabetic activity, increasing the activity of superoxide dismutase and glutathione peroxidase in the cerebral cortex. An altered gut microbiota, mucosal barrier dysfunction, and aberrant gut immunity contribute to the pathogenesis of chronic fatigue.

Gaba fights intestinal inflammation and improves the intestinal epithelial barrier. Gaba tea extract exhibited inhibitory activity. Gaba has an effect on the growth performance, intestinal immunity and intestinal microflora of weaned piglets. Gaba improved growth performance, inhibited the expression of pro-inflammatory cytokines, promoted the expression of anti-inflammatory cytokines, and increased dominant microbial populations, community richness, and diversity of the ileal microbiota, www.mdpi.com/.../htm (2019).--- www.thesciencebrigade.com/.../164 (2024).-- pubs.acs.org/.../acs.jafc.3c07260 (2024).---

GABA and the vagus nerve collaborate to control how the gut microbiota affects brain function. Insomnia is an inflammatory response that is associated with altered intestinal microbiota that damages the intestinal barrier function, increases permeability and damages the body's immune function and predisposes to fatigue. www.sciencedirect.com/.../S0753332223001324 (2023).---GABA is closely associated with intrinsic factors that contribute to physical performance and muscle dysfunction. Research shows that GABA production in your brain increases after a vigorous 8 to 20 minute exercise session.

#### www.nature.com/.../s41598-023-41628-x (2023).-- www.sciencedaily.com/.../160225101241.htm

Some tea companies also add GABA to their tea blends for an extra boost. If you already like drinking tea, this is probably the easiest way to increase GABA naturally. www.mcgill.ca/oss/article/health/gaba-supplements-glorious-gimmicky-or.. (2018).----- You practice yoga 60 minutes a day, 3 times a week for 12 weeks. Brain scans showed increased GABA in their brains. Participants also reported improved mood and decreased anxiety www.ncbi.nlm.nih.gov/.../PMC3111147 (2015).---

# Maritt

Great information GUI. GABA oolong tea used in study. meileaf.com/.../amber-gaba-oolong How much GABA was ingested by study participants? . It was a surprisingly low dose of GABA! They were given 4 cups a day of the GABA Oolong tea and this provided a total of 39.2mg GABA for the day. The authors share this about the amount of daily GABA the study participants received: With the GABA Oolong tea the dose would be approximately 280 mg per 100 g tea. Based on using 3.5 g per tea portion this equates to 9.8 mg of GABA; multiplied by 4 throughout the day, being 39.2 mg of GABA.

Posted On 04/19/2024

# juststeve

Gui, the extremely long list of positives afforded by GABA could potentially empty many peoples medicine cabinets. Just a casual observation, but so many seen suffering Depression or other mental illness seem to live to eat junk food and have little desire to learn how to eat to live. So much toxic overload a foundation for an ever expanding A Pill for That Treadmill. People who become trapped into bodies and minds turned into a self-contained Prisons. So many locked out, prevented from being able to meet their best potential, life. GABA is not just addressing much of the top forty Dis-eases, it is looking like it can address in a big way nearly all the top forty, and the Top Ten hits for Big Pharma Sales.

And may I add here it is time to round up, start the process for another major health builder, having the good fortune to have the ability to Garden. While regenerating Life, healthy living soil that in turn creates healthy foods full of life. To be in the fresh air, sunshine, to participate in the Cycle of Spring and regeneration of the body and its' ability to heal and enjoy it all.

Thank you Maritt and Just for your practical and detailed information and the important advice to restore health by discarding the medications imposed by BigPharma protocols. You might think of the GABA in your nervous system as the brakes on a car. The right amount of pressure on the brake pedal slows the car. Similarly, the right amount of GABA slows down information in your nervous system to prevent you from becoming overwhelmed. Conditions associated with low GABA levels also include schizophrenia, autism spectrum disorder (ASD), attention deficit hyperactivity disorder (ADHD), panic disorder, post-traumatic stress disorder (PTSD), and major depressive disorder.

A randomized, double-blind, placebo-controlled experiment found that supplementing with 800 milligrams of GABA improved attention and cognitive performance. A study published in the Journal of Nutritional Science and Vitaminology found that supplementation with 50 milligrams of GABA helped relieve psychological and physical fatigue in a group of 30 healthy subjects, nine of whom were diagnosed with chronic fatigue syndrome. GABA works to calm the nervous system and help the nerves process sensory information in an organized way. In many of these disorders, people tend to confuse sensory information or feel overwhelmed by their senses, something that higher levels of GABA can prevent from happening.

Yes, green tea, white tea and oolong tea naturally have high amounts of GABA, as do lentils and other beans (soaked and pressure-cooked to decrease lectins). Nuts, especially walnuts and almonds. Fish, especially shrimp and halibut. Fruits and vegetables such as citrus fruits, tomatoes, berries, bananas, spinach, potatoes, cruciferous vegetables (broccoli, cabbage, cauliflower, Brussels sprouts). Peas, chestnuts, sweet potatoes. Cocoa. Fungus. Buckwheat, Sprouted grains. Rice, Yogurt and fermented foods. GABA supplements include: Green tea. Magnesium. Zinc. Vitamin B6. Taurine,

When it comes to whether GABA from foods or supplements can cross the blood-brain barrier (BBB), studies have been mixed, note the authors of the Frontiers in Psychology review. While GABA may not be able to cross the BBB, you may be able to alter GABA concentrations through the gut, also sometimes known as your second brain. It turns out that certain bacterial strains found in the gut, Lactobacillus and Bifidobacterium, produce GABA and can increase the neurotransmitter in the enteric nervous system, which can increase the concentration of the neurotransmitter in the cerebrospinal fluid, the study authors report. review in Frontiers in Psychology. longevity.technology/lifestyle/10-gaba-food-sources-you-might-be-overl.. (2023).-- mhanational.org/what-gaba (2022).-- www.livestrong.com/article/478780-a-list-of-foods-with-the-highest-gab.. (2018).--- summitmalibu.com/.../how-to-increase-gaba-naturally (2022).--

The adult brain contains 1011 neurons and on average 10,000 non-neuronal cells for each one. The molecules that allow the functioning of this important number of cellular elements are glucose (GLU) and oxygen (O2). The nervous system (NS) lacks energy stores; among its components, neurons are not capable of storing glucose, so they continually require blood flow to receive it. Glucose influences brain function, for example, its production of adenosine triphosphate (ATP), glutamate (GLT) and gamma-aminobutyric acid (GABA). This review aims to explore the participation of GABA and Glutamate in the cognitive dysfunction observed in metabolic conditions involving glucose, such as Diabetes Mellitus (DM).

Diabetes is a chronic-degenerative disease, it has been shown to have implications at a systemic level and currently compromises the nervous system, causing cognitive impairment. In recent studies it has been observed that the neurotransmission given by GABA and Glutamate is altered from its production, reuptake and action. Alterations in the TCA and the glutamate-glutamine system in a hyperglycemic state lead to an imbalance in the concentrations of GABA and Glutamate, generating neurotoxicity on its own. Throughout the review, unknowns have emerged that provide the opportunity to continue expanding knowledge of the subject.

, address more about the alterations at the enzymatic and substrate level that are related to the variability in neurotransmission levels given the condition according to glycemic values, learn more in depth about the therapeutic approaches that this may have, know if they are an evaluative marking for cognitive impairment, knowing if insulin acts directly on the production cycle of any of the neurotransmitters. NEUROTRANSMISSION BY GABA AND GLUTAMATE IN METABOLIC DISEASES repositorio.ugto.mx/bitstream/20.500.12059/9480/1/68Neurotransmisi%c3%.. (2023).---

THE BEST SUPPLEMENTS FOR CHRONIC FATIGUE & EXERCISE RECOVERY 1) Besides Q10, glutathione is probably one of the most expensive products on the list, but if you experience benefits from taking it, it will be worth it! If you simply can't afford to take glutathione, a cheaper option is to take N-Acetylcysteine (NAC), which helps recycle the glutathione your body is already producing 2) Antioxidants (Curcumin, Quercetin and Resveratrol) 3) D-ribose is a natural sugar found in all cells, particularly the mitochondria, the energy factories of the cell. It is essential for energy/ATP production.

D-ribose supplementation may promote ATP production and research has shown it to be beneficial in chronic fatigue syndrome. 4) Creatine may support energy availability during exercise (but for those recovering from chronic fatigue conditions, I would personally add, creatine supplementation may have a positive impact on brain energy, increasing its production and use specifically in the frontal lobe that controls mood, cognition, memory, and emotions. As creatine energizes the frontal lobe, it decreases activity in the amygdala, the fear center in the brain. 5) Branched-chain amino acids compete with another amino acid, tryptophan, when crossing the blood-brain barrier.

This can reduce the brain's uptake of tryptophan, which can reduce physical and mental fatigue during exercise. 6) Electrolytes can be lost through sweat with exercise and low levels may be associated with additional cardiovascular stress and fatigue. Electrolytes also regulate fluid balance, or the amount of water in and out of cells and blood volume, and this promotes the transport of oxygen throughout the body, including oxygen to the brain. annamarsh.co.uk/supplements-for-exercise-recovery (2023).---

Methylation is a biochemical process that controls numerous vital functions that occur in the body, including the formation of neurotransmitters. Some people have a mutation in the MTHF gene that controls the gene methylation process. This leads to a tendency to overproduce serotonin, causing an excess in the brain. People with this gene usually have high levels of copper in their blood and also low levels of zinc. . Excesses of serotonin can cause carcinoid tumors. When located in the intestinal tract, they can cause the release of excess serotonin. 95% of your total serotonin is synthesized in your intestines by bacteria, and not in the brain. The results of a study concluded that individuals with social phobia produce too much serotonin and the more serotonin they produce, the more anxious they become.

The results of this study have been described as a "great leap forward" in the understanding of mental disorders. Bacopa (Bacopa monnieri) is a traditional Ayurvedic herb that tops this list of serotonin regulators. It is a master neurotransmitter regulator that increases or decreases neurotransmitter production as needed. In this way, bacopa balances the levels of serotonin and other important neurotransmitters. Both vitamin D and omega-3 fatty acids (fish oil) normalize serotonin levels by regulating the conversion of tryptophan to serotonin.

Schisandra is a traditional Chinese herb that balances the production of serotonin and stress hormones. Other supplements that may help regulate serotonin synthesis include Ginkgo biloba, Rhodiola rosea, and chamomile. While there are tests that measure the amount of serotonin in blood, saliva or urine, they are not as useful as you might think since no correlation has been found between these levels and those in the brain. The diagnosis of serotonin syndrome is made from the patient's symptoms and history of drug use, rather than from a blood test. bebrainfit.com/too-much-serotonin (2023).--

Posted On 04/19/2024

#### mike47

For years I've stayed in the background reading Mercola articles, and reading comments (especially, you Gui!!) - I'm almost 77 years old and in excellent health. Thank you, Ladies & Gentlemen!!

### imaginal110

Way to go Mike. That's awesome to hear. I'm just behind in years but I'm catching up!

Posted On 04/19/2024

### **1rennalls**

I'm the same, only 2years behind you. I wouldn't know all these health tips if it wasn't for Dr Mercola.

Posted On 04/19/2024

#### Guillermou

Very agree mike. Dr. Mercola's articles are excellent and he has also made an excellent progression of research to present innovations with great scientific content. For my part, I am 74 years old and it is a satisfaction to be useful.

Posted On 04/19/2024

# Efkaefka

Me as you too, I've mainly "lurked" - such incredible information both in the articles and also from the excellent comments and shares. And I highly ditto a huge thank you to Gui for all your superb input it means a lot.

# Maritt

Trudy Scott recommends GABA powder on the tongue (or open capsules and put in mouth) for quick absorption and immediate relief. GABA worked amazingly for 18-year-old during a MCAS/histamine flare, helping with OCD, anxiety, rage and skin issues. www.everywomanover29.com/blog/gaba-workedamazingly-for-18-year-old-du.. GABA and taurine reduce high blood pressure: the anxiety connection and what do when on blood pressure medication or if blood pressure is already low www.everywomanover29.com/blog/gaba-and-taurine-reduce-high-blood-press.. Using GABA to ease the visceral / abdominal pain and hypersensitivity of colitis, ease anxiety and reduce inflammation? www.everywomanover29.com/blog/using-gaba-to-ease-the-visceral-abdomina..

Thanks Maritt for your excellent information. Hormonal imbalances, physical and emotional trauma, immune system problems. Viral infections can be causes of chronic fatigue. For an extra boost of energy you can use ashwagandha, omega 3, vitamins B12, D and C, DHEA, tyrosine, Q10, carnitine and others in the links. In the eight-week study, 80 participants received 200 mg of CoQ 10 once daily plus 20 mg of NADH once daily or placebo (73 participants were included in the analysis). Heart rate was measured at the beginning and at the end of the run-in period. At eight weeks, the group receiving CoQ 10 plus NADH had significant reductions in maximum heart rate during a cycle ergometer test, compared to baseline.

Participants also reported reduced fatigue at each follow-up visit. Furthermore, a recent review suggests the ability of supplementation with coenzyme Q10, L-carnitine, Zn, methionine, nicotinamide adenine dinucleotide (NAD), and vitamins C, D, and B to decrease fatigue in fibromyalgia and SCF. On the other hand, supplementation with D-ribose and omega-3 fatty acids produced positive results in relieving CFS symptoms. Astragalus polysaccharide (APS), an important bioactive component derived from the dried root of Astragalus gallinaceus, regulated the abundance of intestinal microbiota and increased the production of SCFAs and anti-inflammatory bacteria.

Furthermore, APS reversed the abnormal expression of Nrf2, NF-B, and their downstream factors in the gut-brain axis and alleviated the reduction of SCFAs in cecal contents associated with CFS. wthn.com/blogs/wthnside-out/what-supplements-should-i-take-for-chronic.. (2023).-- www.ncbi.nlm.nih.gov/.../PMC5010273 (2018).--- www.mdpi.com/.../182 (2024).--

Postviral fatigue syndrome (PVFS) encompasses a wide range of complex neuroimmune disorders of unknown causes, characterized by disabling post-exertional fatigue, myalgia and joint pain, cognitive impairment, non-restorative sleep, autonomic dysfunction, and neuropsychiatric symptoms. Includes myalgic encephalomyelitis, also known as chronic fatigue syndrome (ME/CFS); fibromyalgia (FM); and more recently the post-COVID-19 condition. Dietary Interventions Based on CoQ10 Co-Supplementation Specifically Targeting Stimulating Mitochondrial Function to Improve Neuroimmune and Inflammatory Health Outcomes in ME/CFS, FM, and Long COVID www.mdpi.com/.../574 (2024).--

Posted On 04/19/2024

### kw12546

The link provided for the progesterone is for a transdermal one. Then you go on to say not to use transdermal progesterone. Please clarify. Thank you.

Posted On 04/20/2024

#### pecanroll

Alert alert, I will probably be censored for saying this: This is why xanax works so well for many. It's cheap and effective. Part of the problem we have is that supplements are too expensive for many many people. So, if someone gets relief from an old drug that costs nothing, can work and be happy and sleep, then so be it. I was a pharma rep many many years ago and when I heard a rep tell a doc to just get pregnant women started on a ssri prior to delivery to cover for the chance of post partum depression, I about freaked out. Even back then I did not know the horrid effects or the fact that these drugs have a fluoride attachment.

I knew that was WRONG and UNETHICAL. I was misdiagnosed with PPD and left to suffer tremendously. Instead, what really happened is I suffered from Shehan's syndrome, and my pituitary was slowly dying. It took 5 years to get an astute neuroendocrinologist to figure it out. And because so many miss this condition, I suffered migraines, misdiagnosed and had many many unnecessary MRIs with gadolinium. Now I have gadolinium stuck in my brain (you can see it). I do take daily GABA supplements. About 5 years now. And yes, I have eliminated seed oils to the best of my ability. My whole house has.

Posted On 04/19/2024

#### jamNjim

There's no telling what kind of neurological damage is done to the developing fetus when someone takes an SRI while pregnant. The medical system is disgusting!

### barnatt123

During my first pregnancy I went to a well known birth center in Chapel Hill for a more natural birth experience. At my first visit the most senior doctor pressured me to go on antidepressants "just in case" because I had struggled with anxiety and depression as a teen (luckily I knew better - the many cocktails of Rx they tried on me never worked and in fact made me worse). I immediately felt I could trust no one there. I felt so intensely alone and lost during such a crucial time in my life. Dr Mercola - I'd love to see more articles helping guide women through healthy pregnancy, birth and newborn care. There is also a huge pressure to supplement with iron during pregnancy. We need some more insight here as well.

Posted On 04/19/2024

# GoldCoaster

Need a purchasing link for progesterone powder. I've only found it for sale in a form that would suit pharmacists, as it needs processing into food grade

Posted On 04/20/2024

#### Sun6320

Gaba has been a game changer for my life long anxiety - thank you so much for such valuable information, as always, Dr. Mercola! I am wondering what you think of 5htp? I have been taking 100mg daily for years. After reading one of your articles about Gaba, I stopped the 5htp but became depressed again.

#### pecanroll

Thanks Barnatt for you sharing what I experienced with what I was overhearing pharma detailing in a doctor's office many years ago. Dr. Mercola, I am also hearing that the ferritin level is now recommended to be raised to 70. What is going on with that? I have a doctor pushing me to get my ferritin levels up. I am in the 20's

Posted On 04/19/2024

#### songlover

So is 5 htp good to take in place of the GABA? Or does it raise serotonin?

Posted On 04/21/2024

#### Deb695491

Can you research Benzos They raise GABA but have bad long term effects. Does taking GABA supplements help get off a Benzo easily

Posted On 04/19/2024

# Kangdog

I have witnessed photobiomodulation help people with pain, fatigue, and depression.

### memeKnight1

Wonderful chart on oils. Thank you.

Posted On 04/19/2024

#### hisgarness

There you go again down the naturopathic path. The remedies you present are not patentable. Accordingly insufficiently profitable. Much like COVID natural immunity, ivermectin and hydroxychloroquine big money will call this witch doctoring and use their major media minions to propagandize and brainwash the masses to not use this cow paste or whatever the highly paid promotional firm comes up with.

Posted On 04/19/2024

# jamNjim

WOW! I didn't know Benadryl was a serotonin blocker! Benadryl is one of the few drugs I take from time to time. Is there any drug you can trust? Thanks for the information Dr. Mercola!

Bacopa (Bacopa monnieri) is a traditional Ayurvedic herb that tops this list of serotonin regulators. It is a master neurotransmitter regulator that increases or decreases neurotransmitter production as needed. In this way, bacopa balances the levels of serotonin and other important neurotransmitters. Both vitamin D and omega-3 fatty acids (fish oil) normalize serotonin levels by regulating the conversion of tryptophan to serotonin. Schisandra is a traditional Chinese herb that balances the production of serotonin and stress hormones.

Other supplements that may help regulate serotonin synthesis include Ginkgo biloba, Rhodiola rosea, and chamomile. While there are tests that measure the amount of serotonin in blood, saliva or urine, they are not as useful as you might think since no correlation has been found between these levels and those in the brain. The diagnosis of serotonin syndrome is made from the patient's symptoms and history of drug use, rather than from a blood test. bebrainfit.com/too-much-serotonin (2023).--

Posted On 04/19/2024

### balancedaviannut

There's a WONDERFUL book, "7 Weeks to Emotional Healing", by Joan Mathews Larson. It provides specific info on using nutrition and supplements for depression, anxiety and a world of other mental and emotional related disorders. Early on in the book around page 33, there is a test the reader can take to focus in on their own specific areas. For me having a balance of EFAs and the B vitamins helped me get off of the meds I was taking and helped me FEEL emotionally healthy and alive. Check it out.

Posted On 04/19/2024

# DoorlessCarp

Magnesium is also very important for treating depression. \* \* \* Magnesium deficiency and associated pathologies: Part 3 doorlesscarp953.substack.com/p/magnesium-deficiency-and-associated-f58