

# Study Shows This Supplement Can Reduce Depression and Anxiety

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✓ Fact Checked

September 01, 2022

## STORY AT-A-GLANCE

- › High doses of Vitamin B6 reduced symptoms of anxiety and depression. Researchers theorize the effect is a result of increasing levels of Gamma-Aminobutyric Acid (GABA), a chemical known to inhibit nerve impulses and lower excitability
- › Anxiety and inflammation have a bidirectional relationship. Vitamin B may also help lower the severity of COVID-19 by affecting the inflammatory process and reducing the potential for a cytokine and/or bradykinin storm
- › Low levels of magnesium also can increase the risk of anxiety and depression; the combination of vitamin B6 and magnesium has a greater potential to alleviate stress in healthy adults
- › Other options to lower stress and anxiety include Emotional Freedom Techniques (EFT), an energy psychology that corrects the bioelectrical short circuits that cause bodily reactions and the adaptogenic herb, ashwagandha
- › Big Pharma wants to end your access to supplements; I urge you to use the resources from the Natural Products Association and the Alliance for Natural Health to call or email your senators and oppose the Dietary Supplement Listing Act of 2022, and its inclusion in the FDA Safety Landmark Advancements Act

Your emotions, including anxiety and depression, have a strong connection to your overall health. One study<sup>1,2</sup> published in July 2022 found college students using high-dose vitamin B6 supplementation experienced a reduction in anxiety and a trend toward

less depression. The need for strategies to lower the risk of anxiety and depression has risen dramatically as more people report emotional challenges during the COVID pandemic.<sup>3,4</sup>

This need will presumably not dissipate as COVID-19 is likely not the last pandemic in the coming months and years. Developing strategies to improve resilience is one important step to protecting your health and the health of your family.

In addition to anxiety and depression impacting your productivity, creativity and enjoyment of life, emotions are also linked to your overall health. Anger, anxiety and depression are “predictors of greater disease morbidity and mortality.”<sup>5</sup> While these emotions can impact your immune system, people who are stressed or anxious, may also not make good decisions about their health.<sup>6</sup>

There is bidirectionality between emotion and disease. In other words, your emotional health influences your body's ability to be resilient to disease, and disease has a significant impact on your emotional health. Anxiety and depression can create chronic stress, which causes an imbalance in your hormones and brain chemistry.

For example, the Asthma and Allergy Foundation of America<sup>7</sup> notes an evidentiary link between asthma, anxiety and depression, which has also been associated with poor asthma control. The data from the featured study offers one approach to protecting your emotional health.

## **Vitamin B6 Helps Reduce Depression and Anxiety**

The double-blind study<sup>8</sup> engaged 478 college students over a five-year period. The participants received one of three options: a lactose placebo pill, 1,000 microgram vitamin B12 tablet or 100 milligrams (mg) vitamin B6 tablet for one month.

The researchers used several questionnaires to evaluate symptoms of anxiety and depression, as well as specific visual tests that showed evidence of GABAergic inhibitory interactions. In a press release, David Field, lead scientist from the University of Reading, explained:<sup>9</sup>

*“The functioning of the brain relies on a delicate balance between the excitatory neurons that carry information around and inhibitory ones, which prevent runaway activity.*

*Recent theories have connected mood disorders and some other neuropsychiatric conditions with a disturbance of this balance, often in the direction of raised levels of brain activity.”*

Gamma-Aminobutyric Acid (GABA) is a chemical known to inhibit nerve impulses in the brain and thus lower excitability. Vitamin B6 is a coenzyme in the production of GABA, and in other pathways that help reduce neural excitability, such as co-enzymatic activity in the production of serotonin and dopamine.<sup>10</sup>

The participants consumed vitamin B6 or B12 at 50 times higher than the recommended daily dose. However, as the researchers pointed out, recent evidence demonstrates that while the optimum level of vitamin B has not been established, it “certainly exceeds the Recommended Daily Allowance (RDA) and many individuals are borderline deficient.”<sup>11</sup>

Despite this, the researchers acknowledged they did not do a baseline or post-test blood serum analysis on the participants. In their view, the measurements would have indicated whether participants were compliant or would have indicated if the supplements raised the serum vitamin level.

However, it would have also indicated whether the participants were deficient when they began the intervention. Loading the body with more of a substance than is required can sometimes backfire since in optimal health many substances must be balanced.

The test results in participants who took vitamin B6 indicated that their GABA levels rose. Field noted that while there are foods that contain vitamin B6, the trial seemed to indicate that supplementation was necessary to achieve the desired levels of GABA. He noted that vitamin B6 had an effect that was lower than what would be found with medication. However, he believes that:<sup>12</sup>

*“... nutrition-based interventions produce far fewer unpleasant side effects than drugs, and so in the future people might prefer them as an intervention. To make this a realistic choice, further research is needed to identify other nutrition-based interventions that benefit mental wellbeing, allowing different dietary interventions to be combined in future to provide greater results.”*

The researchers found that B6 supplementation also produced a trend toward lower levels of depression, and B12 supplementation also helped lower anxiety.<sup>13</sup> The researchers believe there were potential reasons for B6 showing a positive effect on anxiety but only a trend for depression, and suggest future studies resolve these issues.

## **Anxiety and Inflammation Are Interconnected**

During my interview with Dr. David Hanscom,<sup>14</sup> we discussed the strategies he developed to prevent and survive COVID-19 that focus on strengthening the immune function by reducing stress and anxiety. During the interview, he discussed the specific recommendations he has used to accomplish that goal.

Research data have linked the role that inflammation plays in anxiety-related disorders, including the bidirectional relationship<sup>15</sup> between levels of inflammatory markers and anxiety. Neuroimaging has demonstrated that inflammation affects areas of the brain that reduce motivation and increase anxiety. A similar relationship<sup>16</sup> has been found in individuals with major depressive disorder.

Chronic stress can induce systemic inflammation that has shown to have both direct and indirect neurotoxic effects.<sup>17</sup> Neuroimaging studies in individuals with panic disorder or generalized anxiety disorder (GAD) have demonstrated changes in the structure, connectivity and function of the brain.

The featured study is not the first time that scientists have suggested nutrition as a treatment for anxiety. Despite the prevalence of the condition and Big Pharma's attempt to address it using drugs and medication, patients often fail to get complete symptom resolution.<sup>18</sup>

Vitamin B6 may also be important in reducing the severity of COVID-19 disease by affecting the inflammatory process. One of the factors that makes the illness so dangerous to people with underlying medical conditions is its ability to over-activate the immune system and therefore trigger a cytokine and/or bradykinin storm. Dr. Uma Naidoo, a nutrition expert at Harvard Medical School, explains that:<sup>19</sup>

*"In a poorly regulated immune system, the body's cytokine storm induced by COVID cause lots of inflammation in the body, just as if little grenades were being tossed around. This is what causes the worst outcomes and death in COVID.*

*It follows that anything that improves immune system function and decreases the chances that an infected person will have a catastrophic cytokine storm may improve the outcome of COVID-19 cases and decrease the overall death rate. Therefore, it's quite feasible that B-vitamin supplementation could contribute to preventing the worst COVID outcomes."*

## **Low Magnesium Levels Can Trigger Depression and Anxiety**

Magnesium is the fourth most abundant element in your body<sup>20</sup> and one of the seven essential macrominerals that we cannot live without.<sup>21</sup> Although the brain is just 2% of your body weight, it uses nearly 20% of your oxygen supply.<sup>22</sup> Magnesium facilitates processing in the neural networks and is used to keep the blood-brain barrier healthy.<sup>23</sup>

Data<sup>24</sup> have also shown it is essential for learning, concentration and memory, and supports the brain's plasticity, which is its ability to adapt to challenges. Magnesium has such a powerful effect on depression and anxiety that Psychology Today calls it the "original chill pill."<sup>25</sup>

Researchers have demonstrated that magnesium has a beneficial effect on an individual's subjective perception of anxiety,<sup>26</sup> and that magnesium was effective in the treatment of mild to moderate depression in adults without the need for monitoring for toxicity.<sup>27</sup>

Roughly 50% of American adults do not get the estimated average requirement for magnesium each day – 400 mg. In fact, most only consume 250 mg per day. This means a substantial percentage of the population is likely deficient and could benefit from supplementation.

Based on serum magnesium levels,<sup>28</sup> up to 30% of the population is deficient and up to 84% of some populations are deficient when tested using the gold standard IV magnesium load test. In addition to low intake, high levels of stress can also lead to deficiency by increasing the amount of magnesium excreted in the urine.<sup>29,30</sup>

It is a vicious cycle since magnesium deficiency enhances the stress response and the stress response increases the amount of magnesium your body excretes. Animal studies have demonstrated that diets low in magnesium lead to anxiety-related behavior and supplementing with magnesium L-threonate could reduce anxiety.

## **Magnesium and Vitamin B6 Is a Superior Combination**

Magnesium and vitamin B6 work even better in combination. The importance of this was highlighted in a 2018 study<sup>31</sup> published in the journal PLOS ONE. When these two nutrients are taken together, animal studies demonstrate they have a complementary effect on stress reduction.

The research was a Phase IV, investigator-blinded trial that enrolled healthy adults who scored greater than 18 on the Depression Anxiety Stress Scales and had a serum level of magnesium between 0.45 nanomoles per liter (nmol/L) and 0.85 mmol/L. The participants were randomized to receive either:<sup>32</sup>

- 300 mg of magnesium and 30 mg of vitamin B6
- 300 mg of magnesium only

Researchers were looking for changes in the stress scale score and any adverse events. According to the authors, adults with a stress score at or above 25 had a 24% greater improvement with magnesium-vitamin B6 versus magnesium only at Week 8.

Those taking magnesium and B6 in combination also experienced fewer side effects: 12.1% of those taking magnesium-vitamin B6 versus 17.4% of those taking magnesium only experienced some form of adverse event. As noted by the authors:<sup>33</sup>

*"These findings suggest oral Mg supplementation alleviated stress in healthy adults with low magnesemia and the addition of vitamin B6 to Mg was not superior to Mg supplementation alone. With regard to subjects with severe/extremely severe stress, this study provides clinical support for a greater benefit of Mg combined with vitamin B6."*

## **Two More Options to Lower Stress and Anxiety**

Two more effective tools for anxiety are Emotional Freedom Techniques (EFT) and ashwagandha. EFT is an energy psychology technique that reduces anxiety by correcting the bioelectrical short circuits that cause your body's reactions, without adverse effects.

In essence, EFT helps "reprogram" your circuitry and it works on real and imagined stressors. It's based on the same energy meridians used in traditional acupuncture for more than 5,000 years to treat physical and emotional ailments. However, there are no invasive needles, and you can do it anywhere, at any time.

In 2019 it was pronounced an "evidence-based self-help therapeutic method and over 100 studies demonstrate its efficacy."<sup>34</sup> It can significantly increase your experience of positive emotions such as hope and enjoyment, and decrease negative emotional states, including anxiety. It is particularly powerful for stress and anxiety as it specifically targets your amygdala,<sup>35</sup> which is one part of your brain that helps decide whether something is a threat.

You can learn the basics of EFT on your own. But if you or your child have a serious anxiety disorder, I highly recommend consulting with a qualified EFT practitioner. For serious or complex issues, they are trained to guide you through the process, as it

typically takes years of training to develop the skill to tap on and relieve deep-seated, significant issues.

You can learn the mechanics and basics in the [EFT tutorial](#), which can also help you gain an appreciation of its wide-ranging applications for things such as food cravings, tension headaches and stress.

A second option is an adaptogenic herb called ashwagandha. It has been used in ancient Ayurvedic<sup>36</sup> and Chinese medicine for thousands of years. The herb helps your body adapt to stress by balancing your immune system, metabolism and hormonal systems. As noted in one medical review:<sup>37</sup>

*"Studies indicate ashwagandha possesses anti-inflammatory, antitumor, antistress, antioxidant, immunomodulatory, hemopoietic, and rejuvenating properties. It also appears to exert a positive influence on the endocrine, cardiopulmonary, and central nervous systems ... Toxicity studies reveal that ashwagandha appears to be a safe compound."*

Ashwagandha can give your morning exercise a boost. Yet, when taken before bed, it can help you get a good night's sleep. It's also able to "intelligently" upregulate or downregulate your adrenal cortisol as needed, which makes it a valuable adjunct against stress and anxiety.

## **Big Pharma Wants to End Your Access to Supplements**

Big Pharma wants to end your access to supplements that can help correct deficiencies and improve your overall health. One of the biggest reasons why drug companies engage in sleight-of-hand techniques and lobby legislators is to grow their bottom line. Once a substance can be classified as a drug, the company can raise the price over the typical retail price and may choose to produce their "natural" vitamins in a test tube.

One of the most recent examples of Big Pharma's influence happened in July 2020, when the FDA tried to shut down access to the supplement N-acetylcysteine (NAC). It has been a widely used dietary supplement for six decades, yet the FDA decided to



crack down in late July 2020<sup>38</sup> after it was discovered how useful it was in the prevention and treatment of COVID-19.<sup>39,40,41</sup>

The FDA claimed that NAC was originally excluded from the definition of a dietary supplement because it was approved as a drug in 1963.<sup>42</sup> Yet, it apparently took them 57 years to act. There was some concern that the FDA would target NAC more widely, but thus far it hasn't happened. The Natural Products Association (NPA) president and CEO, Daniel Fabricant notes that:<sup>43</sup>

*"The war is far from over. We need America's health and wellness advocates to continue writing to their members of Congress through the NPA Action Center. Grassroots involvement over the coming weeks is absolutely critical to defeating this radical and dangerous proposal."*

I join Fabricant and urge you to contact your senators to oppose the Dietary Supplement Listing Act of 2022, and its inclusion in the FDA Safety Landmark Advancements Act, through which they are trying to limit widespread access to dietary supplements. A list of contact numbers can be found [here](#). On that same page, the NPA also has a sample script with key talking points.

Although phone calls are more effective, you may also take action by sending an email. The Alliance for Natural Health makes it easy on [SaveSupplements.com](#). They have created a prewritten email that will be automatically sent to the U.S. president, senators and representatives.

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