



GABA - For Natural Anxiety Relief

GABA, or “gamma aminobutyric acid,” produced in the central nervous system, is the body’s natural muscle relaxant, tranquilizer, and nerve calmer. GABA, a brain chemical (neurotransmitter), also available as a supplement, works by limiting the nerve cell activity in areas of the brain associated with anxiety. Some anxiety disorders have increased cell activity in these areas. GABA functions as a calming neurotransmitter in your brain inhibiting nerve impulses related to stress and anxiety.

Current anti-anxiety medications include benzodiazepines. Benzodiazepines are widely prescribed, with four of them, alprazolam (Xanax), clonazepam (Klonopin), diazepam (Valium) and lorazepam (Ativan), listed among the top 100 most commonly prescribed medications.(1) These prescription medications target GABA receptors in the brain, and limit the nerve cell activity in areas of the brain associated with anxiety. However, the down side is that chronic reliance on benzodiazepines can be addicting. Antidepressants such as Prozac (SSRIs) are also prescribed for anxiety. While antidepressants are not associated with physical dependence, their side effects are numerous including depletion of the very neurotransmitters that they affect.

If you’re one of the millions who suffer from anxiety or panic disorders, consider amino acids as an alternative to prescriptions. GABA as a supplement, is available as an amino acid and has few side effects, especially when stacked up against prescription medications. Clinically, **GABA has been used in the treatment of anxiety, depression, panic disorders, substance abuse recovery, manic-depressive (bipolar) disorder, seizures, and premenstrual mood disorder.** In a healthy, well-nourished person, the brain produces sufficient amounts of GABA. However, amino acid deficiencies are not uncommon due to protein deficient diets, and from protein maldigestion. Amino acids are metabolized from dietary protein. A good balanced diet should include half your body weight in grams of protein each day-i.e. if you weigh 120 lbs., then your minimum protein intake should be 60 grams of protein daily. Active individuals and athletes require more. Additionally, B vitamins are important cofactors to amino acid metabolism- especially B6. B12 and B3 (niacinamide) are also integral in a number of enzyme reactions to help convert glutamine, an amino acid, to GABA. In one study Nicotinamide, a form of vitamin B3, also referred to as Niacinamide, produced an anti-anxiety effect equivalent to a benzodiazepine. Like benzodiazepines, Niacinamide appears to stimulate GABA receptors without binding to receptor sites. GABA deficiencies are strongly correlated with states of anxiety, and attempting to rectify a possible chemical imbalance within the brain by using GABA may be very useful.

Most of the research on GABA has focused on how drugs enhance GABA activity in the brain. There is a dearth of research on GABA supplementation and it’s impact on mood disorders or any of the other conditions noted above. However, a recent study at the Yale University School of Medicine demonstrated a relationship between GABA levels and panic disorder. Overall, the tests showed a 22% reduction in GABA levels in the participants with panic disorder compared with



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those without panic disorder. According to the researchers, there was previously “no direct assessment” of GABA levels in people with panic disorder. (2) Similarly, another recent study, demonstrated the benefits of GABA administration for anxiety reduction, as a natural relaxant, and for immune enhancement and protection under stressful conditions.(3)

Another effective method for managing anxiety and panic disorders is exercise and walking. Acupuncture, meditation and movement meditation exercises like yoga can be very beneficial as well. Researchers at Boston University School of Medicine (BUSM) and McLean Hospital have found that practicing yoga may elevate brain GABA levels.(4) The findings, which appear in the May issue of the Journal of Alternative and Complementary Medicine, suggest that the practice of yoga be explored as a possible treatment for anxiety and depression, disorders associated with low GABA levels.

Another useful nutrient for anxiety relief is Glycine. Like GABA, Glycine exerts inhibitory effects in certain areas of the brain which results in significant anxiety relief. Glycine is an amino acid and a neurotransmitter as is GABA. In one study on the biochemical effects of Glycine on anxiety responses it was noted that benzodiazepines “may exert their anti-anxiety, anticonvulsant and muscle-relaxant effects by mimicking the effects of the neurotransmitter Glycine at its central nervous system receptor sites”. (5)

Many anxiety disorders are exacerbated by stress, and regular exercise and meditation disciplines are important methods for ameliorating stress responses and the anxiety that accompanies it. Along with such techniques, evaluation by an experienced practitioner or an alternative mental healthcare professional can shed insights into underlying physiological causes of anxiety. Adrenal exhaustion, hormonal imbalances, blood sugar fluctuations, anemia and neurotransmitter imbalances are all common underpinnings to anxiety responses.

Women who are pregnant or breast feeding and people with liver or kidney disease should not take GABA. Prescription medications for anxiety target GABA receptors in the brain. Individuals who are taking such medications should not use GABA supplements without the advice of a medical professional. Finally, GABA is contra-indicated in the following conditions: Prader-Willi Syndrome (8), Angelman Syndrome (8), encephalopathy (brain disease including dementia) due to liver disease (9), or behavior disorders such as attention deficit hyperactivity disorder-ADHD. (10)

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