

Nutritional and Herbal Medicine for Anxiety Disorders

Naturopathic Approaches



by Kaitlyn Zorn, ND
<https://drkaitlynzornnd.wixsite.com/naturopath>

Anxiety is a very common mental-health disorder and can have implications on all aspects of one's life. This may come from a variety of factors such as finances, relationships, health, and more. Anxiety lends itself well to natural treatments such as herbal medicine, supplements, and lifestyle modification.

Symptoms of anxiety are:^[1]

- excessive worrying;
- sleep disturbances (insomnia);
- muscle tension (neck/shoulders);
- headaches;
- fatigue;
- shortness of breath, palpitations;
- difficulty concentrating; and
- gastrointestinal and other psychosomatic complaints.

Anxiety can be classified into different subcategories, being generalized anxiety disorder, social anxiety, and panic disorder. First-line treatments for anxiety are antidepressants such as selective serotonin reuptake inhibitors (SSRIs).^[2] Others may be benzodiazepines,



serotonin–norepinephrine reuptake inhibitors (SNRIs, such as norepinephrine) or tricyclic antidepressants. Depression is a very common comorbidity as well.

It is important to properly diagnose anxiety, as numerous other conditions share the same symptoms. These conditions may be, but are not limited to:^[3]

- hyperthyroidism and hypothyroidism;
- substance abuse;
- Cushing's disease;
- pheochromocytoma;
- depression;
- schizophrenia;
- cardiac arrhythmias;
- respiratory disorders; and
- posttraumatic stress disorder.

Anxiety Causes

From a clinical naturopathic perspective, anxiety can also arise in cases of suboptimal thyroid function (subclinical or sublaboratory), hormone imbalances, chronic pain/fibromyalgia, blood-sugar imbalances, vitamin deficiencies, and others.

Psychological

Psychologically, anxiety may arise from adverse child events such as traumas, or altered thinking patterns that have arose over time. The anxiety may be in a broad sense, as seen in generalized anxiety disorder, or towards certain situations (e.g. social, performance). A more severe type of anxiety is panic disorder, where the individual feels that their life is at risk from their symptoms.

Inflammatory

It has come more to medical attention that systemic inflammation may be a contributing factor to mental health conditions such as anxiety. This inflammation, either a low-grade chronic type or due to an inflammatory condition (e.g. inflammatory bowel disease, rheumatoid arthritis) often have anxiety and depression as a coexisting condition.

To go along with this theory of mental illness is also the fact that anti-inflammatory herbs such as curcumin have shown benefit for mental health concerns.

Endocrine

Certain imbalances in the endocrine system—such as hormonal, thyroid, and adrenal conditions—can be a cause of anxiety.

It has been medically documented and seen clinically that hormonal fluctuations—such as low progesterone, estrogen dominance, or low estrogen (menopause)—can present with anxiety. This is seen as a hallmark symptom in premenstrual syndrome (PMS).

Clinically, hypothalamic pituitary adrenal dysfunction (HPA) or “adrenal fatigue” and thyroid dysfunctions may also have anxiety as a symptom.

Nutritional

It has been documented in the research and clinically that having deficiencies in certain macronutrients (protein, healthy fats), along with micronutrients (B vitamins, magnesium, and iron) may also produce symptoms of anxiety. Gut health has been shown to do the same, through the interaction of the gut microbiome with brain functioning.

Herbal Medicine

Certain herbs such as passionflower, valerian, lemon balm, skullcap, chamomile, and kava have been researched for anxiety.



Passionflower and Kava

A study using 45 drops per day of passionflower versus a benzodiazepine (oxazepam 30 mg/d) led to lowered anxiety in patients with GAD.^[4] There were no significant differences between groups, and the passionflower group reported having less impairment of job tasks related to cognitive performance. Passionflower is an anxiolytic, sedative, and analgesic—which may be helpful in cases where insomnia is present with anxiety.^[5] Kava has shown amelioration of different types of anxiety and traditional use in various cultures. However, it is important to note the potential for liver toxicity, though this is at higher doses up to 400 mg/d.

Lemon Balm

Lemon balm (*Melissa officinalis*) is considered a nervous-system tonic, carminative, sedative,

antidepressant, and antispasmodic.^[6] Due to these qualities, it is also helpful in cases of anxiety that involve digestive distress such as irritable bowel syndrome (IBS). It is known that IBS commonly has a mental-health correlation through the gut-brain connection. Another property is as an antithyroid, which would be helpful in anxiety related to hyperthyroidism. In this case, lemon balm, along with *Lycopus* and *Leonorus*, are good herbal adjuncts.

Lavender

Both internal supplement form of lavender and the aromatherapy essential oil have been shown to help reduce anxiety symptoms. A study showed that a 6-week intake of oral lavender preparation (silexan 80 mg/d) compared to 0.5 mg/d of lorazepam reduced anxiety comparably.^[7]

There have also been various studies looking at the use of lavender essential oil in hospital-care settings, in which anxiety and stress have been reduced presurgery and in neurological patient units. Lavender aromatherapy has been helpful for women with postpartum depression as well, showing a significant improvement on the Generalized Anxiety Scale.^[8]

Lavender and other essential oils are thought to have a rapid impact on the brain due to their physiological effects of volatile compounds (linalool and linalyl acetate). Inhaled lavender is able to restructure the amygdala and hippocampus through limbic-system activation and increasing GABAergic neurotransmission.^[9] GABA is an inhibitory neurotransmitter, promoting calming effects centrally.

Adaptogens

Adaptogenic herbs are helpful anxiety-management tools since anxiety may also be from endocrine imbalances such as adrenal fatigue or suboptimal thyroid function.

Ashwagandha (*Withania somnifera*) is a nervous-system tonic, an adaptogen, an anti-inflammatory, and a



sedative.^[10] The adaptogen quality in ashwagandha makes it helpful in cases of anxiety due to adrenal or thyroid insufficiency.

There have been several studies reviewing the antistress and antianxiety properties of ashwagandha. One study found that ashwagandha had an antianxiety effect comparable to psychotherapy. Ashwagandha use showed a 56.5% reduction in anxiety scores on the Beck Anxiety Inventory (BAI), compared to psychotherapy which only had a reduction of 30.5% ($p < 0.0001$).^[11] Other sources show similar affects and significant reductions on the Hamilton Anxiety Rating Scale (HAM-A), as well as reductions in morning cortisol at a daily dose of 240 mg of standardized ashwagandha extract.^[12] The antianxiety and antistress effects are due to plant compounds in ashwagandha such as alkaloids, steroidal lactones (withanolides), and saponins.

Panax species (*ginseng* and *quinquefolium*) are adaptogens and nervous-system relaxants/tonics. The steroidal saponins inhibit the reuptake of glutamate and serotonin, balanced by ginsenosides that are more of a CNS depressant.^[13]

However, it should be noted that *Panax ginseng* may be too stimulating for some individuals. In this case, *Panax quinquefolium* or Siberian ginseng (*Eleutherococcus senticosus*) should be used. Human trials are lacking, as these are mostly animal studies.

Diet and Food Sensitivities

There have been links of anxiety and mood disorders in those that have poor-quality diets low in fruits and vegetables but high in processed sugar and fats.^[14] Research has also shown that high-sugar diets negatively affect dopamine response in the pleasure centre of the brain. This explains how mood imbalances such as anxiety and depression can fuel a negative feedback loop of “pleasure seeking.” Sugar and processed carbs will give an initial surge of endorphins; however, over time, this will actually downregulate this area of the brain, leading to more anxiety and depression.

An often-overlooked dietary intervention for mental health management is to increase protein. Protein-rich foods are high in B vitamins that help support healthy neurotransmitter production. Along with B-vitamin support from protein are also their blood-sugar-stabilizing effects. This is important for anxious individuals who likely are causing issues with blood-sugar imbalances from diets high in carbohydrates. In addition to incorporating more dietary protein would be including other blood-sugar-stabilizing foods high in healthy fats and whole-grain carbohydrates.

Foods rich in proteins and B vitamins are lean animal products (eggs, chicken, turkey, cheese), legumes, and nuts/seeds.^[15]

Along the lines of inflammation, research also suggests that reducing food sensitivities may also positively impact anxiety symptoms. Similar to probiotics, gut health related to inflammation from food sensitivities can also have an impact on anxiety and mental health. A study of food sensitivities and irritable bowel syndrome showed a reduction in anxiety scores by eliminating individual sensitivities.^[16] There have also been correlations between psychosomatic reactions in those with food reactions (e.g. behavioural and mood changes, especially in children).

Common food sensitivities are dairy, wheat, soy, eggs, sugar, caffeine, alcohol, citrus fruits, and nightshade vegetables (bell peppers, eggplant,

mushrooms, tomatoes, paprika, Cayenne pepper, and white potatoes).

Supplements

Omega-3 Fatty Acids

Observational studies have found a correlation between lower omega-3 (n-3) fatty acids and higher omega-6 (n-6) levels with inflammation and depression. Human trials have found a reduction in both inflammation levels (interleukin-6) and reduced anxiety symptoms.



A study of 1,200 mg/d EPA and 600 mg/d DHA v. placebo did improve anxiety scores at 52 weeks, although it was not statistically significant.^[17] The combination of vitamin D and omega-3 fatty acids may also be a helpful anxiety-management tool. This was seen in women with polycystic ovarian syndrome. The dose given was 2,000 mg/d of omega-3 fatty acids and 50,000 IU vitamin D every two weeks (which is equivalent to around 4,000 IU/d of vitamin D) and led to significant differences in both depression and anxiety inventories.^[18] The ratio of EPA:DHA fatty acids should be at least a 2:1 ratio to offer a benefit to mental health, and greater than 1 g/d of total fish oils.

Probiotics

The gut-brain axis has been given much attention in the past years, providing an area of complementary mental-health support. Specific probiotic strains

have been shown to reduce anxiety in animal studies, but the same result in human trials have been mixed. *Lactobacillus rhamnosus* species has been focused on in particular. Some research has shown that probiotics offer a positive effect on emotional processing in women and improved self-reported mood in healthy adults experiencing negative effect.^[19] These psychotropic effects are from the bidirectional neural, metabolic, and immune pathway of the gut-brain axis. Another example of this relationship is the fact that anxiety disorders may arise after a gastrointestinal pathogen infection, which has been seen in animal studies as well. Certain microbiome strains can either promote mental distress and inflammation or promote the production of the calming brain chemical GABA.

Other Supplements

Other notable supplements are B vitamins—particularly vitamin B₆—magnesium, multivitamins, GABA, and L-theanine. A multivitamin may be useful in individuals with poor diet. Research shows 60 mg of vitamin B₆ and 200 mg of magnesium to be effective, especially in cases where anxiety is premenstrually related.^[20]

Conclusion

Various supplements, dietary interventions, and herbal remedies have been shown to be effective therapies to both treat and manage anxiety. The use of these treatments combined with psychotherapy, exercise, and other mind-body therapies provides a comprehensive approach to anxiety disorders. •NC

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