

DR.VEGAN[®]

The power of Ashwagandha

*The benefits for anxiety
and thyroid health*

Practitioner Paper • For practitioner use only

Ashwagandha (*Withania somnifera*) is an important herb in Ayurvedic medicine. It has been used for over 3,000 years to promote resilience to stress, improve energy levels, and enhance overall wellbeing.

The active constituents in Ashwagandha include:

Withanolides: Steroidal lactones that contribute to the herb's adaptogenic, anti-inflammatory, and immunomodulatory properties.

Alkaloids: Help in stress management.

Saponins and sitoindosides: Support antioxidant activity and overall health.



Mechanism of action

Adaptogenic effects: Ashwagandha modulates the hypothalamic-pituitary-adrenal (HPA) axis, reducing cortisol levels.¹ It does this by regulating corticotropin-releasing hormone (CRH)² and reducing the release of the adrenocorticotrophic hormone (ACTH). Stress activates the hypothalamus to release CRH, which signals the pituitary to produce ACTH. ACTH then stimulates the adrenal glands to secrete cortisol. Ashwagandha reduces excessive CRH release in response to stress. By dampening the initial trigger of the stress cascade, it prevents hyperactivation of the HPA axis. ACTH amplifies the stress response by driving cortisol production in the adrenal glands. By modulating pituitary response, Ashwagandha reduces ACTH secretion, indirectly lowering cortisol levels.

Neurological benefits: Ashwagandha increases brain-derived neurotrophic factor (BDNF),³ supporting neurogenesis. BDNF is a member of the neurotrophin family of growth factors, which are essential for promoting the survival of existing neurones and encouraging the growth and differentiation of new neurones and synapses, particularly in the hippocampus, the brain's centre for learning and memory. BDNF enhances synaptic plasticity, which is essential for memory formation and adaptation to stress. Chronic stress reduces BDNF levels, impairing neurogenesis and increasing the risk of cognitive decline and mood disorders like depression. Ashwagandha reduces cortisol levels, decreasing the negative effects of chronic stress on BDNF expression. Ashwagandha creates a more favourable environment for BDNF synthesis by restoring homeostasis in the HPA axis. Oxidative stress and inflammation can decrease BDNF expression and impair neural function. Ashwagandha contains potent antioxidants, such as withanolides, that reduce oxidative damage in the brain. Its anti-inflammatory properties suppress pro-inflammatory cytokines (e.g. TNF-alpha and IL-6), which are known to inhibit BDNF production.

GABA and serotonin activity: Ashwagandha enhances Gamma-Aminobutyric Acid (GABA) activity,⁴ promoting relaxation and reducing the stress-induced suppression of BDNF. Ashwagandha increases serotonin signalling, which is positively correlated with BDNF levels and neural plasticity.

Activation of molecular pathways: Ashwagandha activates the phosphoinositide 3-kinase (PI3K)/Akt signalling pathway, which promotes BDNF expression and neuronal survival. It influences the cAMP (cyclic adenosine monophosphate) response element-binding protein (CREB), a transcription factor that directly regulates BDNF gene expression.

Thyroid health: Ashwagandha's main mechanism of action for supporting thyroid health is through hypothalamic-pituitary-adrenal (HPA) axis modulation, an axis that works in communication with the brain and the adrenal glands. The adrenal glands produce the stress hormone cortisol, and reducing the level of cortisol production can help those with chronic stress. Chronic stress and raised cortisol are known contributors to thyroid dysfunction, particularly hypothyroidism. Ashwagandha treatment effectively normalises the serum thyroid levels in those with thyroid dysfunction.⁵ Ashwagandha improves the secretory function of the thyroid gland and causes an increase in the secretion of triiodothyronine (T3) and thyroxine (T4) by the thyroid gland and a subsequent decrease in the level of thyroid-stimulating hormone (TSH) in accordance with the hypothalamus-pituitary-thyroid (HPT) axis.⁶

Human research and reviews

An alternative medicine review, which looked at 58 published studies, concluded that Ashwagandha possesses anti-inflammatory, anti-tumor, anti-stress, antioxidant, immunomodulatory, haemopoietic, and rejuvenating properties. It also positively influences the endocrine, cardiopulmonary, and central nervous systems.⁷

A review of preclinical studies and clinical trials concludes Ashwagandha's extensive potential as neuroprotective in various brain disorders.¹⁰

A systematic review of human trials concluded that Ashwagandha has a strong indication for the alleviation of stress and anxiety symptoms.⁸

A review published in the Journal of Molecular Science concluded that Ashwagandha improves the secretory function of the thyroid gland and causes an increase in the secretion of triiodothyronine (T3) and thyroxine (T4) by the thyroid gland and a subsequent decrease in the level of thyroid-stimulating hormone (TSH) in accordance with the hypothalamus-pituitary-thyroid (HPT) axis, among other endocrine benefits.⁹

DIET AND LIFESTYLE TIPS FOR CLIENTS TO AID WITH STRESS AND ANXIETY REDUCTION

Omega 3 fatty acids

Omega 3 fats support brain function and help reduce symptoms of anxiety and depression.

Maintain balanced blood sugar levels

Eating regular, balanced meals and snacks that include a combination of protein, healthy fats, and fibre can help keep blood sugar levels stable. This prevents the irritability or anxiety that can result from blood sugar fluctuations.

Avoid excessive caffeine

Avoid excessive caffeine and sugar, as they can increase anxiety by causing energy crashes and disrupting sleep patterns.

Magnesium-rich foods

Magnesium supports the nervous system and helps reduce anxiety. Foods like leafy greens, nuts, seeds, beans, and whole grains can help boost magnesium levels.

B Vitamins

B Vitamins are essential for brain health and can help manage stress. Vitamin B6, in particular, is essential for the production of serotonin, a neurotransmitter that helps regulate our mood.





Herbal teas

Chamomile, lavender, and peppermint teas are natural remedies to calm the mind. Chamomile, for example, has mild sedative properties that may help relieve anxiety and stress.

Hydration

Dehydration can worsen symptoms of anxiety, so ensure adequate water intake. Aim for at least 2 litres a day, but adjust based on individual needs.

Probiotics

The gut-brain connection is real. A healthy gut can improve overall mental health. Probiotic-rich foods such as yoghurt, kefir, and fermented vegetables help promote a healthy gut microbiome, which reduces anxiety and improves mood.

Limit alcohol and caffeine

Alcohol can increase anxiety over time. Reducing or eliminating it from the diet can help improve overall stress management.

Exercise regularly

Physical activity has numerous mental health benefits, including reducing anxiety. Activities like yoga, walking, swimming, or running help release endorphins, which are natural mood elevators. Aim for at least 30 minutes of moderate exercise most days of the week.

Practice mindfulness or meditation

Mindfulness and meditation practices are powerful tools for reducing anxiety. These activities help ground the individual in the present moment, reducing stress and promoting relaxation. Just 10-20 minutes a day can lead to noticeable improvements in stress levels.

Adequate sleep

Sleep is essential for mental health. Stress and anxiety can be worsened by poor sleep. Encourage clients to aim for 7-9 hours of quality sleep per night. Establishing a bedtime routine and limiting screen time before bed can help improve sleep hygiene.

Deep breathing and relaxation techniques

Practices such as deep breathing, progressive muscle relaxation, or guided imagery can help lower the body's stress response. Breathing exercises like the 4-7-8 technique are especially helpful during moments of acute stress or anxiety.

Create a support network

Strong social connections can act as a buffer against stress and anxiety. Encourage clients to seek social support when needed and be open about their feelings.





Time in nature

Spending time outdoors, particularly in green spaces or near water, can significantly lower stress levels. Encourage clients to take regular walks in nature or spend time in quiet, natural settings.

Therapy and counselling

Suggest professional help when needed, such as cognitive-behavioural therapy (CBT) or talk therapy, to address the root causes of anxiety and provide effective coping strategies.

Personal growth and mindset

Encourage clients to practice self-compassion, build emotional resilience, and challenge negative thought patterns, which can contribute to long-term stress reduction.

DIET AND LIFESTYLE TIPS FOR CLIENTS TO AID WITH THYROID HEALTH

Iodine-rich foods

Iodine is essential for thyroid hormone production. A deficiency can lead to hypothyroidism. A good source of iodine is seaweed (kelp, nori and wakame).

Selenium-rich foods

Selenium plays a role in thyroid hormone metabolism and helps protect the thyroid from oxidative stress. Include selenium-rich foods such as Brazil nuts, sunflower seeds, organic brown rice, organic lentils, chia seeds, spinach and oats.

Zinc-rich foods

Zinc supports thyroid function by aiding the conversion of thyroid hormones into their active forms. Zinc is found in pumpkin seeds, chickpeas, lentils and nuts.

Vitamin D and sunlight exposure

Vitamin D may help manage autoimmune thyroid conditions. Sun exposure supports the production of Vitamin D.

Iron-rich foods

Iron is important for thyroid health, especially for individuals with hypothyroidism.

Healthy fats

Omega 3 fatty acids reduce inflammation and support thyroid health.

Gluten-free diet for autoimmune thyroid conditions

Individuals with autoimmune thyroid conditions like Hashimoto's may benefit from a gluten-free diet, as gluten can exacerbate inflammation and immune dysfunction in susceptible individuals.

Avoid excessive sugar and processed foods

Diets high in refined sugars and processed foods can lead to inflammation, insulin resistance, and thyroid dysfunction. Encouraging a whole-foods-based diet can help maintain stable thyroid function.

Hydration

Adequate water intake is essential for overall health, including thyroid function. Dehydration can affect metabolism, which may worsen symptoms of thyroid imbalance.

Regular exercise

Physical activity supports thyroid health by improving circulation and helping balance hormones. Regular exercise helps with weight management, energy levels and mood, which are often affected by thyroid disorders.

Manage stress

Chronic stress can affect the thyroid by increasing cortisol levels, which in turn can impair thyroid hormone production and lead to imbalances.

Get enough sleep

Sleep is essential for optimal thyroid function. Lack of sleep can increase cortisol levels and disrupt hormone balance.

Avoid toxins

Certain environmental toxins can interfere with thyroid health. Common culprits include endocrine-disrupting chemicals in plastics (BPA, phthalates), heavy metals like mercury (found in some fish), pesticides and herbicides. Reduce exposure by using glass containers, avoiding processed foods, and opting for organic produce, which can help support thyroid health.



Ashwagandha KSM-66®

Our Ashwagandha KSM-66® (500mg) is 100% organic and the most scientifically studied form of this herb, acclaimed for supporting mental wellbeing, emotional balance, calm, stamina and endurance.



PER
CAPSULE

Organic Ashwagandha
Root Extract (5% withanolides)

500mg

Ingredients

Organic Ashwagandha KSM-66®
(*Withania somnifera*),
Capsule Shell (HPMC).

Free from

Added Sugar, Starch, Sweeteners, Gluten, Wheat,
Soya, Lactose, Dairy, Artificial Flavours, Colours and
Preservatives.

Directions

Take 1 capsule daily, with or without food.

It is most commonly taken in the evenings due to
its benefits for supporting better sleep; however,
it can be taken at any time of day.

Pairs well with



Vegan
Nights®



Magnesium
Citrate



Daily
Multi-Vitamin

DRUG INTERACTIONS

Interaction Severity

Moderate

Antidiabetes Drugs	Ashwagandha may increase the risk of hypoglycemia when taken with these drugs.
Antihypertensive Drugs	Ashwagandha may increase the risk of hypotension when taken with these drugs.
Benzodiazepines	Ashwagandha may increase the sedative risks of these drugs.
CNS Depressant	Ashwagandha may increase the sedative effects of these drugs.
Hepatotoxic Drugs	Ashwagandha may increase the hepatotoxic effects of these drugs.
Immunosuppressants	Ashwagandha has an immunostimulant effect and may decrease the effectiveness of these drugs.
Thyroid Drugs	Ashwagandha may increase the levels of thyroid hormones, and caution is advised in those on thyroid medications.

Drug-nutrient interactions have been taken from the Natural Medicines Database, October 2024. Please do your own due diligence before recommending this product to individuals taking medicines.

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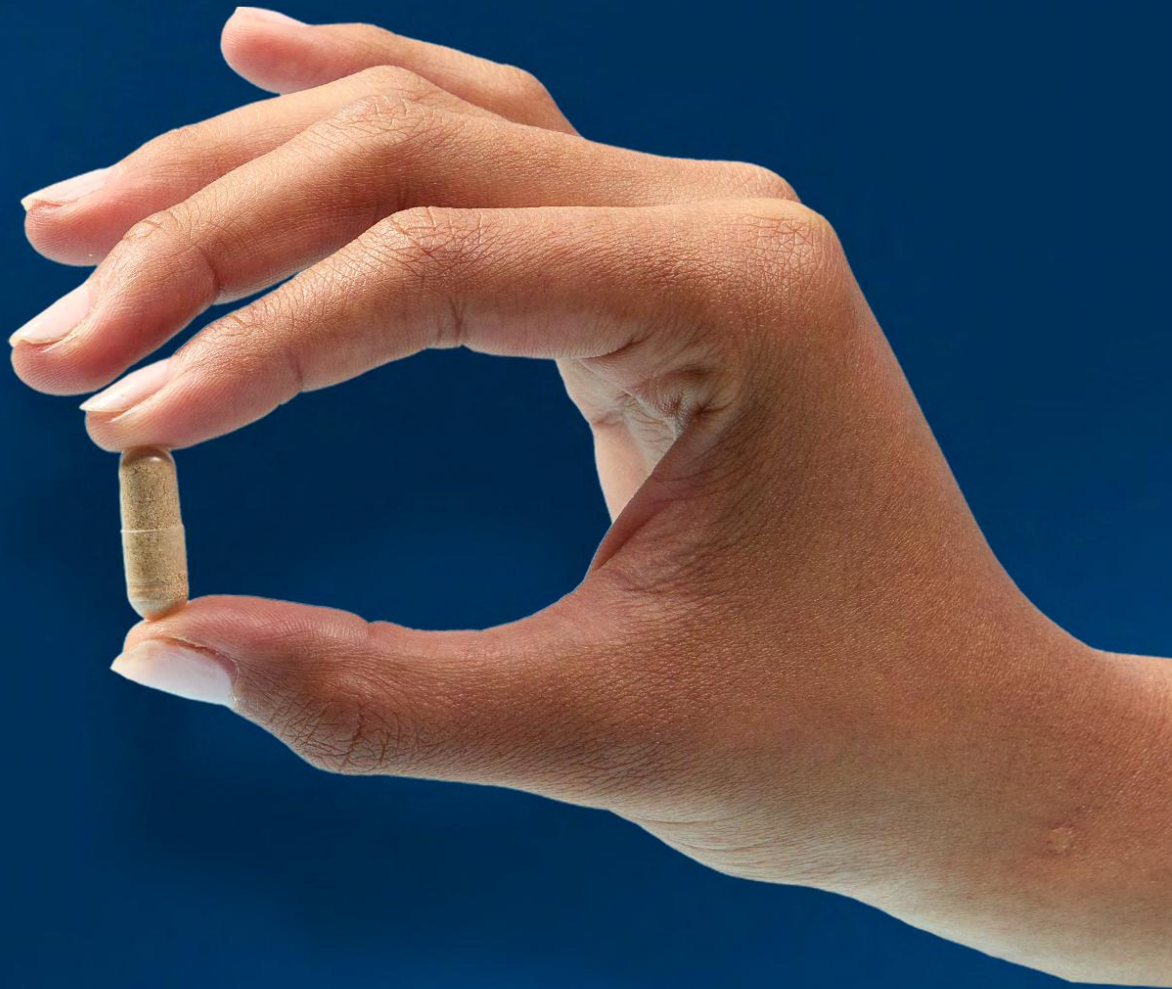


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