

AdrenaSense®

Stress & Energy Support

Available in 60 & 120 vegetarian capsules

AdrenaSense® is a combination of adaptogenic herbs that have been traditionally used to help reduce stress and fatigue.

- ✔ Suitable as a herbal formula to improve mental and physical performance, relieve nervous tension, increase energy production and support a healthy stress response.
- ✔ A multi-herbal formula (without nutrients) means it may be prescribed alongside high-dose multivitamin and B complexes (also indicated in chronic stress) without concern of overdose or toxicity.
- ✔ Features Extramel® melon extract that is a source of superoxide dismutase (SOD), a potent antioxidant that relieves symptoms of psychological stress and fatigue.
- ✔ Contains reishi mushroom which has been used in traditional Chinese medicine for immune support and energy.
- ✔ Includes Siberian ginseng and ashwagandha, traditionally used in herbal medicine to support a healthy stress response and mental endurance.
- ✔ Contains rhodiola for cognitive performance and mental stamina.



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Active Ingredients

Each capsule contains:

Ashwagandha extract dry concentrate (<i>Withania somnifera</i>)	300 mg
From minimum dry root	3 g
Stand. to withanolides	9 mg
Rhodiola extract dry concentrate (<i>Rhodiola rosea</i>)	100 mg
From minimum dry root	1 g
Stand. to rosavins	3.5 mg
Stand. to salidroside	1 mg
Schisandra extract dry concentrate (<i>Schisandra chinensis</i>)	100 mg
From dry fruit	2 g
Siberian ginseng extract dry concentrate (<i>Eleutherococcus senticosus</i>)	100 mg
From minimum dry root	1.5 g
Stand. to eleutherosides B+E	800 micrograms
Reishi extract dry concentrate (<i>Ganoderma lucidum</i>)	50 mg
From dry fruiting body	1.5 g
Sweet melon fruit juice concentrate (<i>Cucumis melo</i>) (SOD B Extramel®)	5 mg
From fresh fruit	185 mg

Directions for use: Adults: 2 capsules per day or as directed by a health care practitioner.

Features & Benefits

The adrenal glands are responsible for releasing stress hormones in response to both physical and mental stress. Healthy adrenal function is essential for stress management and adaptivity, while poor adrenal gland health can contribute to the negative effects of stress, such as high blood pressure, metabolic conditions and mood disorders.

Adaptogens are phytonutrients that buffer the effects of mental and physical stressors on the body, increasing tolerance for physical and mental exhaustion and enhancing mental focus. These herbal adaptogens do this by modulating the activity of the hypothalamus, pituitary and adrenal glands.¹

- **Ashwagandha** has been traditionally used in Ayurvedic medicine to calm the nerves, relieve symptoms of stress and help the body adapt to stress.
- **Rhodiola** has been traditionally used in Western herbal medicine to promote adaptation to stress, support mood, increase cognitive performance and support mental and physical endurance.
- **Schisandra** has been traditionally used in Chinese herbal medicine to relieve weariness and fatigue, support mental concentration and clarity, as well as acting as an adaptogen.
- **Siberian ginseng** is traditionally used in Western herbal medicine to support energy levels and mental endurance.
- **Reishi mushroom** has been traditionally used in Chinese herbal medicine to promote immunity, support energy levels and relieve symptoms of stress, whilst helping the body to adapt to stress.
- **Extramel® melon extract** is a potent antioxidant that relieves symptoms of stress, reduces cognitive fatigue and supports energy levels and mood balance.

Ashwagandha (*Withania somnifera*)

Ashwagandha, also called Indian ginseng, withania and winter cherry, has historically been used in Ayurvedic medicine to enhance vitality and longevity. Withania contains several active constituents including steroidal lactones (withanolides, withaferins), alkaloids and saponins. Ashwagandha may help inhibit overactivity in neurons to encourage cognitive calm via its effect on GABA receptors. Widely used as a nerve tonic in India, ashwagandha is traditionally used to help induce sleep, elevate mood and reduce anxiety.^{1,2}

Rhodiola (*Rhodiola rosea*)

Rhodiola has a long history of traditional use in Europe, particularly Russia as an adaptogen and cognitive stimulant.⁹ Rhodiola root contains more than 30 compounds and the adaptogenic effects of rhodiola are thought to be due to a phenylpropanoid glycoside called salidroside.^{8,9} Rhodiola extracts standardised to contain 3% rosavins and 1% salidroside have been found to be stimulants,^{11,12} along with improving learning and memory.^{9,10}

Mechanism of action

Cognitive benefits of rhodiola appear to be linked to its ability to regulate the breakdown of serotonin, dopamine and norepinephrine, helping to maintain neurotransmitter levels in the cerebral cortex, brain stem and hypothalamus. It is believed the changes in monoamine levels are due to inhibition of the activity of enzymes responsible for monoamine degradation and facilitation of neurotransmitter transport within the brain.³

Rhodiola may also stimulate the central nervous system and have effects on cognitive functions such as attention, memory and learning. Anti-fatigue effects have also been noted with rhodiola, as well as the potential ability to mitigate against stress-induced impairments of the neuro-endocrine system.^{4,7}

Clinical evidence

In one study, rhodiola helped decrease stress-related fatigue and improved overall wellbeing, physical fitness and performance on neuro-motoric tests in a double-blind, placebo-controlled trial where students sitting examinations took 50 mg twice daily.¹³

In another placebo-controlled, double-blind, crossover study, physicians on night duty who took 170 mg of rhodiola daily for two weeks had reduced overall fatigue and improved mental performance on tests involving complex perceptive and cognitive cerebral functions, such as associative thinking, short-term memory, calculation and ability of concentration and speed of audio-visual perception.⁹

Rhodiola may also help to counteract the negative effect on cognitive performance that occurs with sleep deprivation, as demonstrated in a trial in young military cadets who took 370-555 mg after 24 hours without sleep and who had improved mental processing and short-term memory compared to those cadets taking a placebo.¹⁴

There is some evidence from clinical trials that suggests a benefit of rhodiola on athletic performance, including improvements in stamina and respiratory function when healthy volunteers took 200 mg before exercise.¹⁵

Schisandra (*Schisandra chinensis*)

Schisandra is a traditional Chinese medicine (TCM) that has been used for centuries. Schisandra has been used as an adaptogen to increase resistance to stress, increase energy and increase physical performance and endurance.^{16,17}

A number of actions have been identified including adaptogenic and antioxidant properties, neuroprotective and hepatoprotective activity and immunomodulatory effects.^{16,17}

Mechanism of action

Schisandra appears to exert its effects by acting on the central and sympathetic nervous systems, as well as the endocrine, immune, respiratory, cardiovascular and gastrointestinal systems.⁶ The neurotoxic activity of glutamate in the nervous system appears to be inhibited by the compounds in schisandra known as schisandrins A, B and C.³

Siberian ginseng (*Eleutherococcus senticosus*)

Siberian ginseng is a traditional Chinese medicine (TCM) that has been used medicinally for over 2000 years to increase vitality and energy and to support immunity, according to ancient Chinese records. Siberian ginseng has been used in Russia to increase stamina and endurance in athletes and astronauts, to increase quality of life and to improve alertness.^{16,17}

Siberian ginseng is also called by its common name eleuthero and has been used in Western herbal medicine to support energy levels and mental endurance.

The applicable part of the plant is the root, with a content of a minimum 0.08% for the sum of eleutheroside B and eleutheroside E.^{16,19} Several kinds of chemical compounds have been reported for Siberian ginseng, of which Eleutheroside B (also called syringin), Eleutheroside E (also called syringaresinol diglucoside) and isofraxidin are considered to be the most bioactive components of Siberian ginseng.^{18,20}

Organic reishi mushroom
(*Ganoderma lucidum*)

Reishi mushroom has been used in traditional Chinese medicine for years to improve health. Reishi mushroom is a source of biologically active polysaccharides. In addition reishi has been used in traditional Chinese medicine to help relieve symptoms of stress, enhance immune function and increase energy levels.^{21,22}

Melon (*Cucumis melo*)

Mechanism of action

As a source of SOD, melon juice acts on oxidative stress at a cellular level, protecting against DNA damage.

Psychological stress and fatigue lead to oxidative stress, and the main enzyme of the enzymatic antioxidant defence system

against oxidative stress is superoxide dismutase (SOD).

Melon, or cantaloupe juice is naturally high in SOD and other antioxidants. The clinically trialled concentrated extract of melon juice (Extramel®) is made from a unique proprietary, non-GMO cantaloupe melon variety, containing 5-10 times higher content of SOD than other melon varieties, for improving stress management, fatigue and mental focus.²³

Clinical evidence

A randomised, double-blind, placebo-controlled study of 70 healthy volunteers, aged between 30 and 55 years, who felt daily stress and fatigue, took the melon juice concentrate (10 mg Extramel® corresponding to 140 IU SOD per capsule) or a placebo once a day for 4 weeks. The supplement significantly improved signs and symptoms of stress

and fatigue linked to performance, physical (pain, sleep troubles), cognitive (concentration, weariness, sleep troubles) and/or behavioural (attitude, irritability, difficulty of contact) causes compared to the placebo. In the same way, quality of life and perceived stress were significantly improved with SOD supplementation.²⁶

A further randomised, double-blind, placebo-controlled trial of 61 people taking either 10 mg of Extramel® SOD-melon concentrate (140 U of SOD) or placebo for 12 weeks, were also evaluated for stress and fatigue. The findings confirmed those from the earlier study that the SOD-melon concentrate significantly decreased perceived stress, improved quality of life and reduced physical and mental fatigue compared to placebo, indicating SOD-melon concentrate is an effective and natural way to reduce stress and fatigue.²⁵

Summary of actions

	Adaptogenic	Nervine	Immunomodulating	Energy support	Support mood	Cognition / focus	Memory / recall	Physical endurance	Antioxidant	General tonic
Ashwagandha	Y	Y					Y			
Rhodiola	Y			Y	Y	Y		Y		
Extramel® melon extract				Y	Y	Y		Y	Y	
Schisandra	Y		Y					Y		Y
Organic reishi mushroom	Y		Y	Y					Y	Y
Siberian ginseng	Y		Y	Y				Y		Y

Warning

- If symptoms persist, talk to your health professional.

Precautions and contraindications^{16,17}

- Ingredients in this product should be used with caution in patients with diabetes, hypertension, autoimmune diseases, organ transplant recipients, thyroid disorders and oestrogen sensitive cancers.

Adverse effects¹⁸

- The ingredients in the product are generally well-tolerated at normal therapeutic doses.
- Mild gastrointestinal effects have been reported with ashwagandha, Siberian ginseng, schisandra and reishi mushroom.
- Dry mouth, excessive salivation and dizziness have been reported with rhodiola.
- Dizziness, dry mouth, rash and itch have been reported with reishi mushroom.

Pregnancy and lactation^{16,17}

- Safety of this product in pregnancy and lactation has not been established and should be avoided.

**References available on request.*

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