

Magtein®

BRAIN HEALTH

6 Functional Categories



Mood
Calm
Sleep
Memory
Focus
Brain Energy

In the United States, nearly one out of every four adults over the age of 70 has cognitive impairment and over one out of ten of those individuals progress to dementia every year. Nearly 47 million Americans have preclinical Alzheimer's disease with over 6 million Americans diagnosed with Alzheimer's disease. This is projected to increase to 15 million by 2060.

A primary cause of cognitive decline is synapse loss, or the connections between the neurons in the brain. Synapses help to code our memory and allow neurons to communicate with each other. The loss in synapses leads to memory loss and cognitive impairment. A reduction in magnesium levels in the brain may play a leading role in this loss of synapses. In fact, patients with Alzheimer's disease have been found to have low levels of magnesium in the brain.

A unique magnesium supplement called Magtein® (magnesium L-threonate) has been shown to increase brain levels of magnesium and functional neuronal terminals compared to other magnesium supplements including magnesium citrate, gluconate, malate and glycinate in animal studies. Furthermore, Magtein® also has been shown to prevent synaptic loss and reverse cognitive deficits in Alzheimer's disease animal models. In patients with cognitive impairment, Magtein® was shown to significantly improve overall cognitive ability and reverse the equivalent of 9 years of brain aging. Magtein® has also been shown to improve the MMSE score in patients with mild to moderate probable Alzheimer's disease.

Thus, Magtein® is a unique "brain boosting" magnesium supplement that has been shown to improve memory and cognition in those with cognitive impairment.

formula

Magtein® CALM

Millions of Americans complain of having feelings of stress or anxiety. States of stress can lead to an increase of magnesium loss out the body. Furthermore, magnesium deficiency can worsen stressful events. Thus, there is a vicious cycle, whereby stress can cause magnesium depletion and magnesium depletion worsens stressful events.

Additional ingredients that work synergistically with Magtein® for supporting calmness include:

Magtein® is a unique supplement capable of increasing brain magnesium levels. This helps to support healthy neurotransmitter levels in the brain supporting a healthy state of mind.

Ocibest® works synergistically with Magtein® as it helps to raise the calming neurotransmitter gamma-aminobutyric acid (GABA) and lower cortisol levels, whereas Magtein® helps to support serotonin, dopamine and norepinephrine levels in the brain. This is the perfect combination for supporting a healthy calm mind.

L-theanine helps to promote relaxation by increasing alpha-waves in the brain and stimulating GABA receptors.

Ashwagandha supports GABA levels and lowers cortisol levels. Ashwagandha reduces oxidative stress in the brain.

Rhodiola helps to increase neurotransmitter levels in the brain and lowers cortisol levels.

formulas at a glance

Target population: Individuals who experience stress throughout their day.



Dose:
1-2 grams

Mechanism of Action:
Helps provide magnesium to the brain which is depleted in stressful situations.



OciBest®

Dose:
1-2 grams

Mechanism of Action:
Increases the calming neurotransmitter GABA and lowers the stress hormone cortisol

Why it Works:
Increases neurotransmitters and GABA levels in the brain. Lowers cortisol levels.

L-theanine

Dose:
200 mg

Mechanism of Action:
Promotes relaxation by increasing alpha-waves in the brain and stimulates GABA receptors

Why it Works:
Increases alpha waves in the brain and stimulates GABA receptors.

Ashwagandha

Dose:
125 mg

Mechanism of Action:
Supports GABA and lowers cortisol. Supports the brain against oxidative stress.

Why it Works:
Supports GABA and lowers cortisol. Supports the brain against oxidative stress.

Rhodiola

Dose:
200 mg twice daily

Mechanism of Action:
Increases neurotransmitter levels in the brain and lowers cortisol levels.

Why it Works:
Increases neurotransmitter levels in the brain and lowers cortisol levels.

Calming Formula 1 Magtein® + Ocibest®



Description

- + Magtein® is a brain bioavailable magnesium.
- + Ocibest®, or Ocimum sanctum, is commonly known as Holy Basil or Tulsi. It is a traditional Ayurvedic herb native to India.



Mechanism of Action

Magtein® Magnesium can bind and stimulate GABA receptors⁴. GABA is an inhibitory neurotransmitter that helps with relaxation.

Magnesium reduces the release of adrenocorticotrophic hormone (ACTH) and lowers cortisol release.⁵

Ocibest® Contains numerous phytochemicals such as eugenol, ursolic acid, rosmarinic acid, apigenin, luteolin, B-sitosterol and carnolic acid.

Helps with stress-induced depressed mood

Inhibits cortisol release

O. sanctum and its major phytoconstituent ursolic acid, inhibited corticotropin releasing hormone receptor 1 in the pituitary, which is what causes the release of cortisol by the adrenals

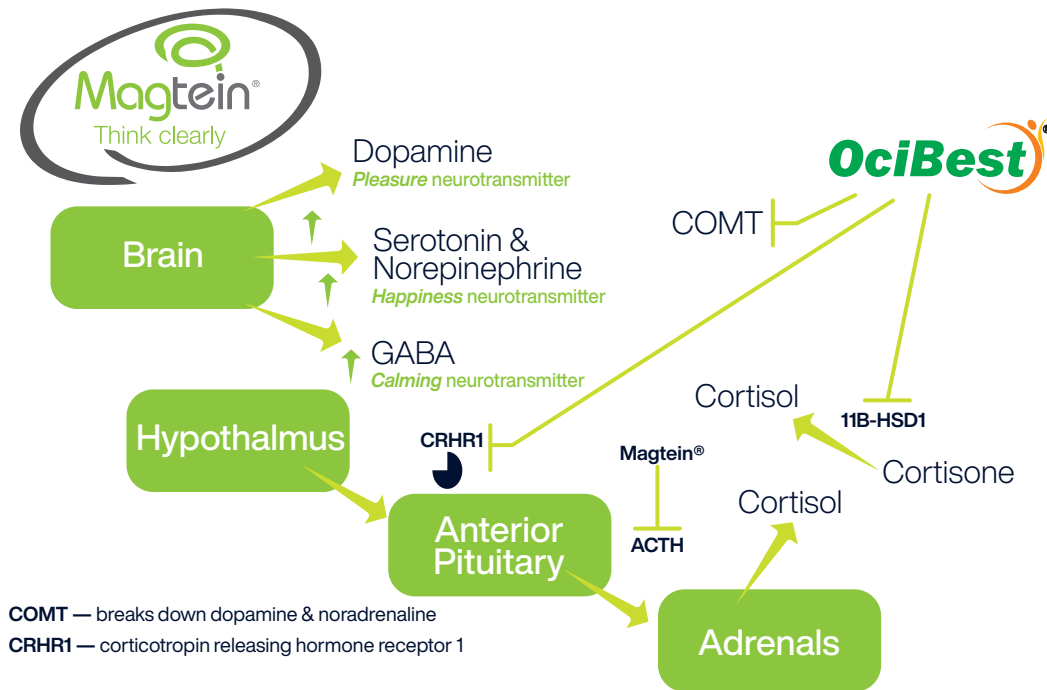
Inhibits activation of cortisone to cortisol

Ocimum sanctum also inhibits 11B-hydroxysteroid dehydrogenase type 1, which is what converts inactive cortisone to active cortisol. Excess activation of 11BHSD1 can lead to Cushing's syndrome, visceral adiposity, insulin resistance, depression, hypertension, heart disease and more.

Reduces cortisol release during stressful events

Chronic stress depletes dopamine and norepinephrine levels. Ocimum sanctum has COMT inhibitory activity, which increases dopamine and noradrenaline levels.

Magtein® + Ocibest® = SYNERGISTIC ANTI-ANXIETY PROPERTIES



Dose:

Magtein 1-2 grams.

Ocibest 1,200 mg.

Safety:

No adverse events reported in the human clinical. May lower blood pressure.

Benefit:

Increases neurotransmitters and GABA levels in the brain. Lowers cortisol levels.

Claims:

Supports stress.

Supports normal brain function.

Supports healthy neurotransmitter levels.

Supports healthy cortisol levels.

Clinicals

Animals — Clinical studies that subject rats to chronic variable stress, show that Ocibest® reduces immobility time, indicating effectiveness against stress-induced depression.

Human studies

1. Population: Ages 18-65 years suffering from at least 3 symptoms of stress.⁶

- Ocibest® 1,200 mg of actives per day: After six weeks of intervention, scores of symptoms such as forgetfulness, sexual problems of recent origin, frequent feeling of exhaustion, and frequent sleep problems of recent origin decreased significantly.
- Helps manage the following stress symptoms
 - Forgetfulness
 - Frequent feeling of exhaustion
 - Frequent sleep problems

2. Population: Young overweight and obese subjects⁷

- 250 mg of Tulsi extract twice daily on an empty stomach for 8 weeks
- Significantly improved triglycerides, LDL, HDL, VLDL, BMI, insulin and insulin resistance
- Reduces mRNA levels of hepatic lipogenesis genes, such as sterol regulatory element binding protein1c (SREB1c) and fatty acid synthase (FAS) and stimulates fat breakdown, by activating lecithin cholesterol acyl transferase (LCAT) and hepatic lipoprotein lipase, protects pancreatic islet cells from free radical damage and improves the antioxidant status. The tetracyclic triterpenoid from the aerial part of *O. sanctum* may be responsible for its improvements in metabolic parameters.
- Does not elevate liver enzymes in numerous human clinical studies showing its safety

Calming Formula 2 Magtein® + L-theanine



Description

- + Magtein® is a brain bioavailable magnesium.
- + L-theanine is a non-protein amino acid found in both green and black tea.



Mechanism of Action

Magtein® Magnesium can bind and stimulate GABA receptors ⁴. GABA is an inhibitory neurotransmitter that helps with relaxation.

Magnesium reduces the release of adrenocorticotrophic hormone (ACTH) and lowers cortisol release.⁵

L-theanine Promotes relaxation without drowsiness by increasing alpha waves in the brain. It crosses the blood brain barrier within 30 minutes after consumption directly impacting the brain.

An increase in the activity of alpha-bands also appears important for suppressing distracting visual information during demanding tasks. Thus, L-theanine may also help with focus.

Dose:

Magtein 1-2 grams.

L-theanine 200 mg or 0.2 g.

Safety:

No safety issues reported in the clinicals.

Benefit:

Increases alpha waves in the brain and stimulates GABA receptors.

Claims:

Supports stress.

Relaxes the mind.

Helps with focus.

Clinicals

A systematic review of 9 randomized controlled trials in humans concluded,

- "Our findings suggest that supplementation of 200-400 mg/day of L-theanine may assist in the reduction of stress and anxiety in people exposed to stressful conditions".⁹

Calming Formula 3 Magtein®+Ashwagandha



Description

- ✚ Magtein® is a brain bioavailable magnesium.
- ✚ Ashwagandha is known as withania somnifera. It is an Ayurvedic adaptogenic herb that has been used in India for centuries.



Mechanism of Action

Magtein® Magnesium can bind and stimulate GABA receptors ⁴. GABA is an inhibitory neurotransmitter that helps with relaxation.

Magnesium reduces the release of adrenocorticotrophic hormone (ACTH) and lowers cortisol release.⁵

Ashwagandha Anti-inflammatory, analgesic in osteoarthritis, anti-tumor, antioxidant, immunomodulatory, hemopoietic and rejuvenating properties¹⁰

Adaptogen that stabilizes the body's response to stress

GABA-mimetic, decreases cortisol release, decreases reactive oxygen species generation and lipid peroxidation, increases antioxidant enzymes (SOD, CAT), improves luteinizing hormone and follicle stimulating hormone release and testosterone levels improving male fertility.¹¹

Dose:

Magtein 1-2 grams.

Ashwagandha 125 mg.

Safety:

Good safety profile.¹²

Benefit:

Supports GABA and lowers cortisol. Supports the brain against oxidative stress.

Claims:

Supports stress.

Relaxes the mind.

Supports a healthy brain.

Clinicals

A systematic review of five human randomized controlled trials found that all five studies showed greater improvements with ashwagandha versus placebo in outcomes on anxiety or stress scales.¹²

Calming Formula 4 Magtein® + Rhodiola



Description:

- ✚ Magtein® is a brain bioavailable magnesium.
- ✚ Rhodiola is an adaptogenic shrub that has been used in traditional medicine to alleviate anxiety, stress, fatigue and depressed mood for centuries.



Mechanism of Action:

Magtein® Magnesium can bind and stimulate GABA receptors ⁴. GABA is an inhibitory neurotransmitter that helps with relaxation.

Magnesium reduces the release of adrenocorticotrophic hormone (ACTH) and lowers cortisol release.⁵

Rhodiola contains more than 140 active ingredients, the two most potent being rosavin and salidroside. It is an adaptogen that is thought to make the body more resilient to stressful events.

Centrally and peripherally affecting monoamine and opioid synthesis, transport and receptor activity and antioxidant potential

Inhibits monoamine oxidase B (MAO-B) increasing noradrenaline and serotonin which are "Feel good" neurotransmitters.¹³

Dose:

Magtein 1-2 grams.

Rhodiola 200 mg twice daily.

Safety:

Should not take with antidepressants.

Rhodiola has an adequate safety and tolerability profile, with a positive benefit-risk¹⁴ ratio

Low incidence of adverse events¹⁵.

Benefit:

Increases neurotransmitter levels in the brain and lowers cortisol levels.

Claims:

Supports stress.

Supports mood.

Relaxes the mind.

Clinicals

1. Rhodiola 200 mg twice daily

- Significantly reduces self-reported, anxiety, stress, anger, confusion and depression at 14 days and a significant improvements in total mood.¹⁴

2. Rhodiola 200 mg twice daily (before breakfast and before lunch) in 118 patients with a history of burnout showed clear improvements after just 1 week of treatment with continued improvements to the end of the study.¹⁵

3. Rhodiola 200 mg twice daily in 101 subjects with life-stress symptoms improved stress symptoms, disability, functional

impairment and overall therapeutic effect. Improvements were observed even after 3 days of treatment, as were continuing improvements after 1 and 4 weeks.¹⁶

- Rhodiola was safe and generally well tolerated. Adverse events were mostly of mild intensity and no serious adverse events were reported. Rhodiola extract at a dose of 200 mg twice daily for 4 weeks is safe and effective in improving life-stress symptoms to a clinically relevant degree.