

SHODEN[®]

World's Most Bioactive Ashwagandha™



Shoden[®] is an innovative, new, clinically proven, high potency extract from the leaves and roots of the ashwagandha plant. With an industry leading 35% Withanolide Glycosides (as measured by HPLC), Shoden[®] offers high bioavailability and demonstrated activity even at low doses. This advanced ashwagandha extract is ideal for use in a variety of health and wellness formulas. Shoden[®] has been clinically studied for anxiety, stress, sleep-related conditions, vitality, testosterone in men, beauty from within, and for immunity.

Ashwagandha, *Withania somnifera*, is an adaptogen. Adaptogens mimic the body's own stress-reducing hormones and increase the body's ability to recover from stress while creating an overall feeling of balance and normalization. Shoden[®] is the perfect ingredient for the "new normal" where **emotional wellbeing** has become a primary concern.

Using advanced extraction technology, Shoden[®] harnesses the power of its key bioactives - found in the roots and leaves of the plant. The beauty of a root and leaf extract is that Shoden[®] contains not only the withanolide glycosides which are found in the roots, but the leaves contain expanded withanolide glycoside compounds. An extract which combines both roots and leaves gives a broader and higher potency range of bioactives. This leverages the full power of the plant, modernizing the traditional approach to ashwagandha extracts.



Clinical Studies & Science

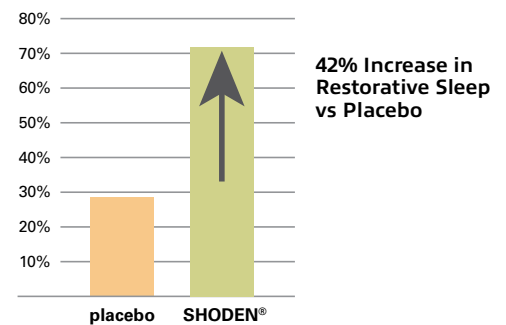
#	CATEGORY	DETAILS	RECOMMENDED DOSE	STATUS
1	Stress, Anxiety, Hormones	60 day RDBPC, n=60 healthy adults [India]	120-240 mg	Published
2	Non-Restorative Sleep	6 week RDBPC, n=150 healthy adults [India]	120 mg	Published
3	Testosterone, Vitality	16 week RDBPC, n=43 healthy overweight adults [Australia]	120 mg	Published
4	Immune Modulatory	30 day RDBPC, n=24 healthy adults [India]	60 mg	Data Analysis
5	Exercise Endurance	RDBPC, n=12 healthy adults [Belgium]	120 mg	Ongoing

RDBPC = Randomized, double blind, placebo controlled study

New Clinical Study on Non-Restorative Sleep

Non-Restorative Sleep (NRS) affects 700 million people worldwide. In a first of its kind study on improvement in NRS utilizing a randomized, double-blind, placebo-controlled design, 150 healthy individuals (M/F ages 18-65) consumed 120 mg Shoden® or placebo (taken 1 x day 2 hours before evening meal) during the 42-day (6-week) trial period, the following was observed:

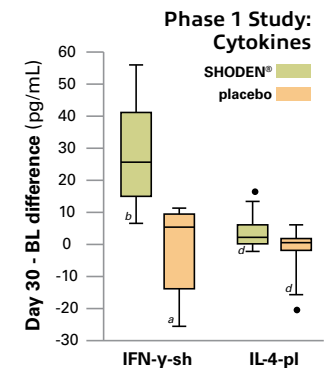
- Restorative sleep was increased by 42%
- Improved quantity of sleep by 36 minutes – Studies show that there is a significant increase in daytime function with a 30-minute increase in sleep
- Improved quality of sleep time increased by 39 minutes
- Time to fall asleep after lights out was significantly reduced by 11.8%
- Significantly improved quality of life parameters
- Improved participants' energy level, mood, & mental alertness



Immune Clinical Study

Immune health is seeing tremendous growth. Consumers are looking for ways to naturally boost their immune health, and Shoden® Ashwagandha is one way to offer a unique, proven product. An immune health study was conducted with Shoden® utilizing a randomized, double-blind, placebo-controlled design. Twenty five healthy individuals consumed 60 mg Shoden® or placebo during the 30-day trial period. The following was observed:

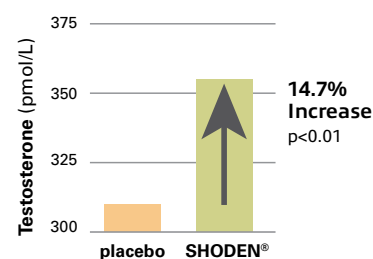
- Preliminary results indicate statistically significant activation of both the innate immune system (NK cells and other markers), and the adaptive immune system (interleukins, cytokines and antibodies)
- No excessive activation of cytokines (no "cytokine storm" effect observed)
- Manuscript for publication under preparation



Testosterone Clinical Study

Ashwagandha is commonly used to promote youthful vigor and enhance muscle strength and endurance. A 16-week, randomized, double-blind, placebo-controlled, crossover study, was conducted on 43 overweight men ages 40-70. Each was given 21 mg of withanolide glycosides from Shoden®. Improvements in fatigue, vigor, and sexual and psychological well-being were reported over time.

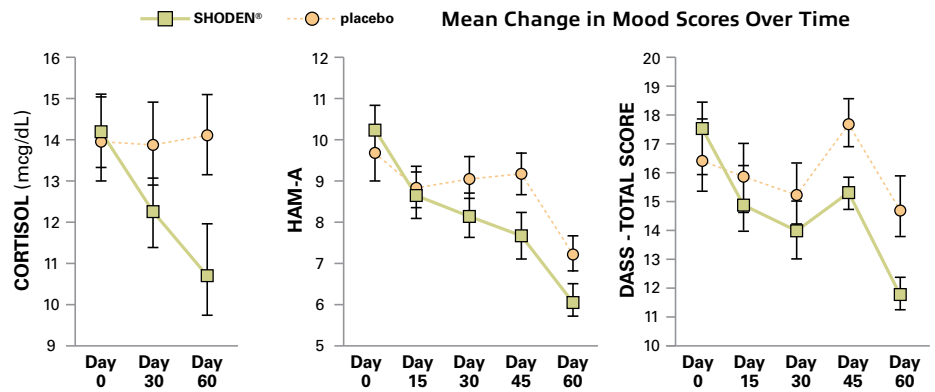
- Increased testosterone levels with Shoden® – 14.7% statistically significant increase in men
- Improvements in fatigue, vigor, wellbeing with Shoden®
- Decreases in cortisol and estradiol with Shoden®
- No increase in testosterone in women



Anxiety Clinical Study

Anxiety affects over 40 million people in the US alone. It is the #1 disorder affecting people globally. Shoden® has clinically shown statistically significant reductions in anxiety markers and scores.

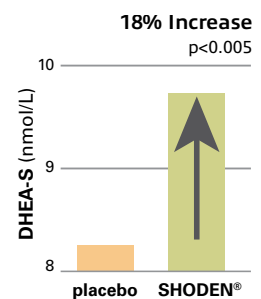
- 23% Reduction in morning cortisol levels ($p < 0.001$)
- 17.6% Reduction in HAM-A scores (Hamilton Anxiety Rating) ($p < 0.001$)
- 21.1% Reduction in DASS-21 scores (Depression, Anxiety, Stress Scale) ($p < 0.001$)



DHEA-S Study - Beauty from Within

Beauty from Within is a growing category, both for anti-aging and for overall skin health. With the increase in mask-wearing a new sub-category is popping up – maskne treatment. Maskne is a breakout caused by wearing a mask daily. Shoden® was shown to increase DHEA-S by 18% thus potentially decreasing the possibility of breakouts.

- Increased DHEA-S levels with Shoden® – 18% statistically significant increase
- Shoden® is an adaptogen which has been used for skin anti-aging and for skin repair. DHEA has been shown to increase skin thickness and skin hydration through metabolic processes in the skin
- DHEA-S is sulfated DHEA and is better measured in the blood than DHEA. DHEA-S converts to DHEA in the body
- Shoden® is an ideal product to add to a Beauty from Within line or to help manage the now-common skin condition known as “maskne”, caused by wearing a face mask daily



Features & Benefits

World’s Most Bioactive Ashwagandha™ – Shoden® contains an industry leading 35% Withanolide Glycosides. It can readily be analyzed for its 21 bioactive withanolide glycosides, including a newly discovered withanolide glycoside – Ashwanoside. Shoden® additionally contains 4-5% bioactive withanolide aglycones, including withaferin A and withanone. The content of withanolide glycosides and withanolides aglycones make Shoden® the highest potency ashwagandha extract with phytochemical constituents exceeding that of any leading ashwagandha extract on the market.

High Bioavailability at Low Doses – Significant levels of Withanolides remain in the blood even after 24 hours. Shoden® has industry leading bioactives which provide the highest efficacy of Withanolide Glycosides and Withanolide Aglycones for maximum performance.

Multiple Health Categories – Shoden® can be used in stress, energy, sports performance, sleep, vitality, cognitive function/focus, Beauty from Within, and immune health categories. Perfect for *Emotional Wellbeing*.



Formulating with Shoden®

Shoden® is standardized to 35% total Withanolide Glycosides (tested by HPLC). The recommended dose is 60 mg – 120 mg per day. It can be formulated into capsules, tablets, powders, candies, gummies, lozenges and liquids. Anxiety, testosterone and sleep applications 120 mg/day dose. Immune support 60 mg/day dose.

Shoden® can be formulated with many other ingredients. It is particularly well suited to be combined with Suntheanine® L-Theanine, which is clinically studied to reduce stress and anxiety. Suntheanine® L-Theanine and Shoden® Ashwagandha have different modes of action over different time periods. Combining the two ingredients would deliver a premium, highly effective formula targeted to stress and anxiety.

Structure/Function Claims

Sports & Performance – Improves energy, recovery and endurance; reduces fatigue and stress

Sleep – Improves restful and restorative sleep

Stress – Reduces stress, supports the immune system

Cognitive – Improves mind/body feeling, improves cognitive focus

Fatigue – Increases resistance to fatigue, boosts energy, supports the immune system

Vitality – Improves testosterone and DHEA-S levels

Immune – Supports both innate and adaptive immune systems

Beauty from Within – Supports anti-aging and beautiful skin

Certifications & Quality Assurance

Non-GMO Project Verified

Kosher

Halal

Vegan

Gluten-Free

Allergen-Free

Safety

Ashwagandha's short-term safety has been well established through multiple studies and traditional use. It has been used for centuries as a food and a traditional tea. Completed Shoden® testosterone and sleep studies showed no serious adverse events and Shoden® was well tolerated by study participants. Ashwagandha is not recommended for pregnant women.

Mechanism of Action

Ashwagandha, *Withania somnifera*, is an adaptogen. Adaptogens mimic the body's own stress reducing hormones and increase the body's ability to recover from stress while creating an overall feeling of balance and normalization.

Applications

Capsules & Tablets

Sports & Performance Products

Functional Foods & Beverages

Candies, Gummies & Soft Chews

Gums & Chocolates

Creams & Topicals

Animal Health Products

Label Transparency

Shoden® is pure ashwagandha extract. No fillers, carriers, preservatives, anti-caking agents, etc. It is a Clean Label ingredient.

Source

Shoden® is sourced from ashwagandha plants grown in India. Shoden® extract is processed in India.

Product Characteristics

Shoden® comes from the leaves and roots of the Ashwagandha plant (*Withania somnifera*). It is a pale brown powder that is water soluble, making it a versatile ingredient.

Regulatory

Ashwagandha is listed in the American Herbal Products Association, Herbs of Commerce 1992 and is a pre-1994 grandfathered dietary ingredient. Shoden® is self-affirmed GRAS.

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