PMS. Sleep. Mood. Stress.

VENETRON®

Clinically Researched for Reducing Hormonal Complaints in Women,
Supporting Sleep and Promoting a Healthy Mood

MAYPRO®

What is Venetron?

VENETRON® is a commercial botanical product made from the leaves of *Apocynum venetum L*. It contains flavonoids, with the main functional components being hyperoside and isoquercitrin.

Venetron For Women's Health

Each day women spend more time than men do making economic decisions for their families, including everything from consumer goods to services; in fact, women control over $31.8 trillion in global spending.[1]

Women are also set to drive the global market for women's health and beauty supplements from a 2022 value of $54.5 billion to $89.3 billion by 2032, reflecting compound annual growth at a healthy 5.2% rate.[2]

The Research

A new randomized, double-blind, placebo-controlled study published in *Japanese Pharmacology & Therapeutics* demonstrates the efficacy of Venetron in supporting women's health, specifically related to complaints associated with menstruation.[4]

68.4% Percentage of the health market that is dominated by products targeted toward women.[3]

5.1% The global CAGR for the Women's Health category.[3]

50% U.S. consumers who say stress, energy, and sleep are a top concern according to research presented at the 2023 NBJ Summit.

A randomized, double-blind, placebo-controlled, parallel-group comparison study saw 42 healthy Japanese women randomly assigned to receive either Venetron (50 mg) or a placebo daily for one menstrual cycle.

Women who received Venetron reported significant improvements of complaints described in a Menstrual Distress Questionnaire.* Areas of reported improvement included autonomic reactions, negative effects, concentration, and behavioral changes before menstruation, as well as pain, concentration, and control during menstruation.*

Additionally, women who received Venetron showed significant improvement in the initiation of sleep and maintenance of sleep, as assessed by the Oguri-Shirakawa-Azumi Sleep Inventory (Middle-age and Aged version).*

Venetron is an exciting ingredient with long-term growth potential," says Isabel Elias-Castro, President of the Maypro Global Nutrition Group which distributes the ingredient. "Venetron neatly intersects with the growing women's health category and the continued demand for sleep, mood and stress support—this new study just makes the case for this ingredient even stronger."*

While this latest study's results reinforce some elements of previous mood and sleep studies, it also demonstrates a strong condition-specific, measurable and perceptual experience.*

Table 2 MDQ total score and 8 subscales before menstruation (3rd day before menstruation), during menstruation (2nd day after the start of menstruation), and after menstruation (8th day after the start of menstruation)

Menstruation	Parameters	Before ingestion		*P-value*	After ingestion		*P-value*
		Test food group (*n*=21)	Placebo group (*n*=21)		Test food group (*n*=21)	Placebo group (*n*=21)	
Before	MDQ total score	56.0 ± 26.0	57.2 ± 21.2	0.88	38.9 ± 16.3	50.0 ± 24.7	0.049*
	Pain	7.7 ± 4.9	8.5 ± 4.0	0.56	5.5 ± 3.8	6.5 ± 4.0	0.38
	Water retention	5.6 ± 3.0	6.6 ± 3.1	0.29	4.6 ± 2.8	5.3 ± 2.9	0.50
	Autonomic reactions	1.9 ± 2.0	2.1 ± 2.2	0.66	1.3 ± 2.1	2.5 ± 2.6	0.04*
	Negative affect	13.1 ± 7.2	12.0 ± 6.1	0.57	6.9 ± 4.8	9.1 ± 6.9	0.03*
	Concentration	12.1 ± 7.7	11.7 ± 6.1	0.84	8.0 ± 4.4	10.0 ± 6.6	0.049*
	Behavioral change	8.9 ± 5.5	8.9 ± 3.9	1.00	5.4 ± 2.8	7.1 ± 3.8	0.02*
	Arousal	4.2 ± 2.1	4.5 ± 3.3	0.82	5.2 ± 3.0	7.0 ± 4.7	0.21
	Control	2.5 ± 2.1	3.0 ± 2.6	0.56	2.0 ± 2.3	2.4 ± 2.6	0.73
During	MDQ total score	68.2 ± 30.2	54.0 ± 25.2	0.10	42.9 ± 24.5	44.0 ± 22.7	0.048*
	Pain	11.3 ± 4.8	9.9 ± 4.1	0.29	7.2 ± 4.2	8.2 ± 4.8	0.049*
	Water retention	6.7 ± 3.9	5.5 ± 2.4	0.26	5.5 ± 3.8	4.4 ± 2.0	0.56
	Autonomic reactions	4.2 ± 3.0	2.4 ± 2.0	0.03*	1.7 ± 2.6	1.7 ± 1.7	0.20
	Negative affect	13.9 ± 7.2	11.4 ± 7.8	0.29	8.1 ± 7.0	7.2 ± 7.1	0.45
	Concentration	14.1 ± 7.7	10.5 ± 6.3	0.10	5.5 ± 1.1 †	8.0 ± 1.0 †	0.04*
	Behavioral change	10.5 ± 4.3	8.5 ± 3.8	0.13	6.3 ± 5.1	6.7 ± 4.3	0.18
	Arousal	4.0 ± 3.4	3.0 ± 2.5	0.33	4.5 ± 4.0	5.6 ± 3.5	0.12
	Control	3.5 ± 4.1	2.7 ± 3.3	0.49	1.1 ± 1.6	1.9 ± 2.7	0.04*
After	MDQ total score	33.3 ± 28.3	21.1 ± 11.2	0.08	31.0 ± 22.8	23.6 ± 13.3	1.00
	Pain	3.5 ± 2.9	3.6 ± 3.5	0.96	3.6 ± 2.7	3.8 ± 3.1	0.74
	Water retention	3.2 ± 3.7	1.7 ± 1.2	0.09	2.9 ± 3.0	1.8 ± 1.5	0.65
	Autonomic reactions	1.1 ± 2.7	0.3 ± 0.7	0.20	0.9 ± 1.8	0.3 ± 0.6	0.70
	Negative affect	7.6 ± 7.2	3.0 ± 2.7	0.01*	5.7 ± 5.3	3.7 ± 4.1	0.64
	Concentration	6.1 ± 7.7	3.0 ± 3.0	0.10	6.2 ± 6.5	5.0 ± 3.9	0.52
	Behavioral change	4.2 ± 4.9	2.7 ± 2.1	0.19	4.5 ± 5.6	3.8 ± 2.6	0.80
	Arousal	6.1 ± 3.3	6.3 ± 3.7	0.86	6.1 ± 3.8	4.8 ± 3.1	0.17
	Control	1.4 ± 3.0	0.5 ± 1.2	0.21	1.1 ± 1.4	0.4 ± 1.0	0.16

All values except "Concentration during menstruation" are expressed as mean ± standard deviation † Concentration is expressed as EMM ± standard error. * *P<0.05* vs. the placebo group

Venetron For Sleep

The "sleep economy" includes everything from mattresses to wearable devices to supplements and more, and Statista projects it will reach a record high of $585 billion for 2024.[5]

Precedence Research reported the global sleep aids market size was an estimated $78.2 billion in 2022 and will reach $124.97 billion by 2030. That is a compound annual growth rate (CAGR) of 5.95% during the forecast period 2022 to 2030.[6]

$585B in global sleep economy spend for 2024.[5]

56% Percent of U.S. adults have consumed a sleep aid in the past month.[8]

82% U.S. consumers polled by Life Extension who said they're interested in ingredients and supplements that can improve quality of sleep. [9]

The Research

In a single-blind, placebo-controlled trial published in 201510, researchers recruited 16 participants with a suspected sleep disorder for a single-blind, placebo-controlled trial.

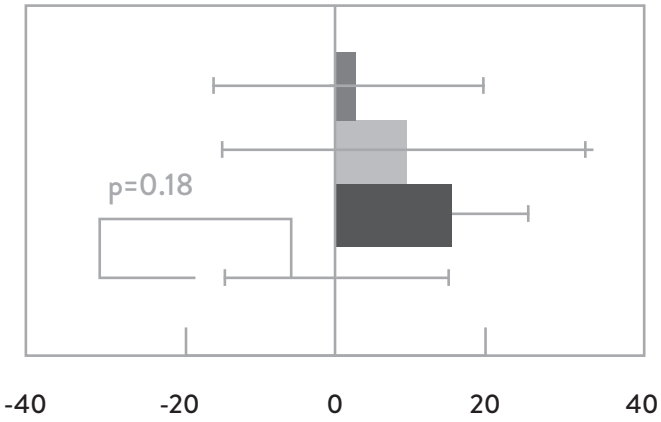
For one week, participants ingested 100mg of GABA and 50mg of Venetron either separately or in combination, 30-minutes before bed. The study consisted of two test periods with a washout period (1 week) in between.

An electroencephalogram (EEG) measurement was used to reveal the effect of oral intake of GABA and Venetron on sleep. Sleep quality was evaluated in 4 stages:
1. Wakefulness
2. Rapid eye movement (REM) sleep
3. Light non-REM sleep (stage N1 and N2)
4. Deep non-REM sleep (stage N3)

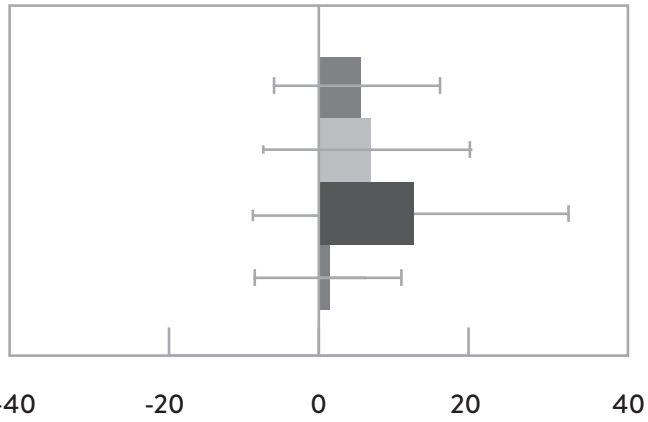
Sleep latency, or how long it takes to fall asleep, was also measured in the 16 subjects to gauge the impact on sleep disorder.

Using the Visual Analog Scale (VAS) and the Pittsburgh Sleep Quality Index (PSQI), participants reported improved sleep quality and increased satisfaction.

The results showed that the combination of GABA and Venetron shortened sleep latency by 4.3 minutes and increased non-REM sleep by 5.1% while Venetron alone significantly increased non-REM sleep time by 7.6%.



CHANGES OF VAS VALUES ABOUT SATISFACTION WITH SLEEP (MM)



CHANGES OF VAS VALUES ABOUT EASINESS TO FALL SLEEP (MM)

GABA AVLA GABA and AVLE Placebo

Venetron for Mood and Stress

Research shows that stress management has become a global concern for health, mental wellness and productivity, making consumers turn toward supplements for relief and relaxation.

With the global stress relief supplements market size projected to register a CAGR of 6.75% and reach a value of $900 million by 2032, finished product brands need to captialize on safe, clinically substantiated ingredients with a reliable supply chain, a high perceptual experience at a low dosage, and can work in multiple delivery formats. .[11]

$530MM in global consumer spend for stress relief supplements in 2024.[11]

76% of consumers report experiencing negative health impacts due to stress in the prior month. [12]

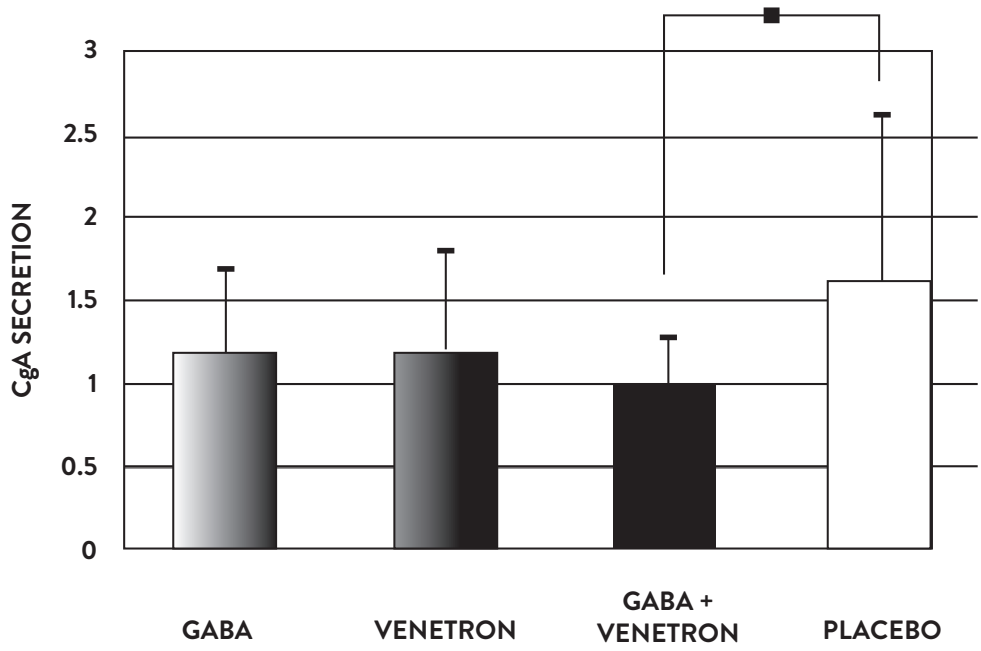
The Research

Unlike some other mood support herbs, Venetron does not affect the CYP3A pathway or P-glycoprotein, in this way ensuring safe use. Human studies have confirmed its high safety profile, even at three times the recommended daily intake.[13]

In a survey conducted by a Japanese think tank[14], Venetron ranked first in perceptual experience, surpassing other mood support ingredients.* In that survey, approximately 80% of consumers reported superior satisfaction, demonstrating a 3.5 times higher satisfaction rate compared to other ingredients.

Venetron given in a proprietary 1:1 blend of Apocynum venetum extract and a highly bioavailable form of GABA at a dosage of 50 mg/day was tested for its effect on the reduction of a stress marker known as salivary chromogranin A (CgA) in students undergoing stress related to cognitive function.[15] This was a double-blind, placebo-controlled crossover study to examine the stress-reducing effect of GABA, Venetron (Apocynum venetum leaf extract or AVLE), and concurrent ingestion of both.

The results? After a 4-day trial period, the 12 students underwent a stress-inducing mental task. Those who consumed Venetron with bioavailable GABA showed a reduction in salivary CgA secretion and reduced markers of cognitive-induced mental stress.



Mechanism of Action

Venetron contains flavonoids, with the main functional components being hyperoside and isoquercitrin. Venetron and its water-soluble form Venetron-W are believed to exert their effects in the following ways:

- Reducing secretion of chromogranin A, a stress marker*[15]
- Working in synergy with GABA, whose main function is to calm brain excitation, enabling GABA to be better received by receptors. *[10]
- Increasing serotonin levels, thereby boosting mood*[4,15]

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Venetron and Safety

The safety of Venetron has been evaluated in animals and in human clinical trials.

An 8-week sub-chronic toxicity study in rats revealed the no observed adverse effect level for Venetron to be at least 250 mg/kg body weight/day[13] Briefly, the 50% lethal dose of Venetron was determined to be greater than 2000 mg/kg body weight in an acute oral toxicity study of mice. Drug interaction testing indicated that Venetron did not influence cytochrome P450 3A or P-glycoprotein in rats.[16]

Furthermore, 30 healthy volunteers in Japan participated in a safety study, ingesting 50 mg/day for weeks 1-8, followed by 150 mg/day for weeks 9-12.[17] No adverse effects resulted from taking Venetron, and bio-chemical parameters remained within the reference ranges. Also, through a placebo-controlled study with 17 healthy volunteers in Japan, ingesting 50 mg/day for 8 days, showed no adverse effects from taking Venetron.[13]

In addition, an 8-week study of 50 mg Venetron/day was also conducted in 39 individuals in Canada, the UK, and the USA. The adverse events and blood health records indicated no difference between the Venetron and placebo groups. These results demonstrate the safety of Venetron and provide overall support for the potential of Venetron in various health-related applications.[13]

Recommended Dosage

50 mg for both Venetron & Venetron-W

Status

Functions

Delivery Formats

In a saturated market with many me-too borrowed-science brands working hard to promote their ingredients, Venetron® — derived from a patented, purified and powdered extract of *Apocynum venetum L.* — stands apart for its:

- Low-dose cost efficiency
- Delivery format flexibility
- High perception experience
- Lack of adverse effects
- Safety and Efficacy in drug-to-drug interactions

VENETRON® is a patented ingredient developed by Tokiwa Phytochemical Co., Ltd.

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*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.