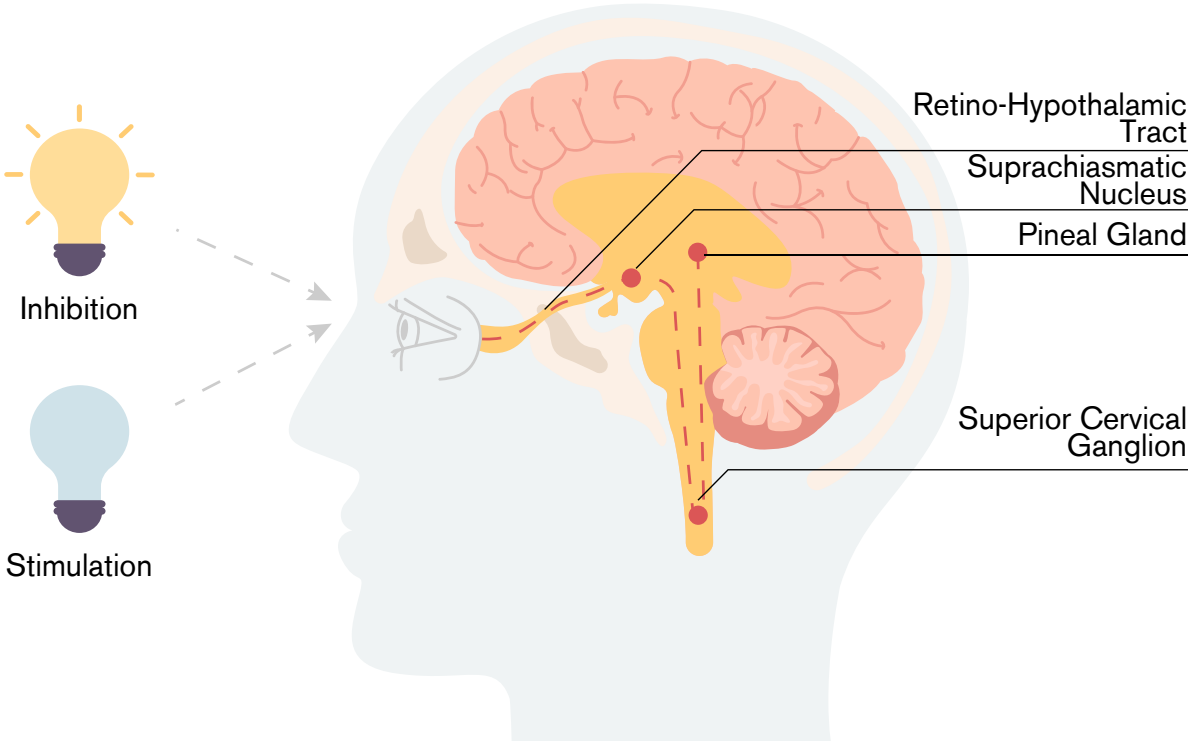
DR.VEGAN®

Restful sleep

Tools for better sleep

Practitioner Paper • *For practitioner use only*

PHYSIOLOGY OF MELATONIN SECRETION



Insomnia is defined by difficulty in getting to sleep, maintaining sleep, or waking up too early, with associated daytime impairment. Insomnia is diagnosed when symptoms occur at least 3 times per week. Insomnia lasting more than 3 months is classed as chronic insomnia. Studies have shown that insomnia affects up to 30% of the general population and up to 60% of those with poor mental health.[1]

Risk Factors

- Female
- Ageing
- Menopause
- Neuroticism
- Anxiety
- Depression
- Irregular sleep cycles
- Sedentary lifestyles
- Excessive consumption of caffeine or alcohol

Pathophysiology

Insomnia is associated with hyperarousal of the central nervous system, evident by elevated cortisol levels, increased metabolic rate and functional brain activity in wake-promoting areas during sleep.

Dysfunction in the hypothalamic-pituitary-adrenal (HPA) axis and imbalance between sleep-promoting (GABAergic) and wake-promoting (orexinergic) systems are involved.

Consequences Of Long-Term Insomnia

Increased risk of:
Depression
Anxiety
Cardiovascular disease
Type 2 diabetes
Impaired cognitive function

Pathophysiology of Insomnia

Hyperarousal is a central process in the mechanisms of insomnia.[2] This hyperarousal can be attributed to various factors, including alterations in cognitive functions related to hyperarousal in perceptual and memory processes.[2] Neurobiological models also show instability in the sleep-wake balance, with orexin possibly involved.[2] Studies have found that insomnia is associated with elevated high-frequency electroencephalogram power in the waking state.[3] Increased brain activity can cause difficulties in falling asleep and staying asleep. Insomnia can disrupt the body's natural sleep-wake cycle, changing the levels of neurotransmitters, such as melatonin and serotonin, which regulate sleep.[4]

Furthermore, insomnia has been linked to inflammation, disruption of the autonomic nervous system, endothelial dysfunction, and aberrant metabolic processes, all of which can contribute to the development of mental disorders.[5] There is a close relationship between insomnia and mental health. Insomnia can be a consequence of mental health disorders. Insomnia can also be a contributing factor to their development and severity.[6]

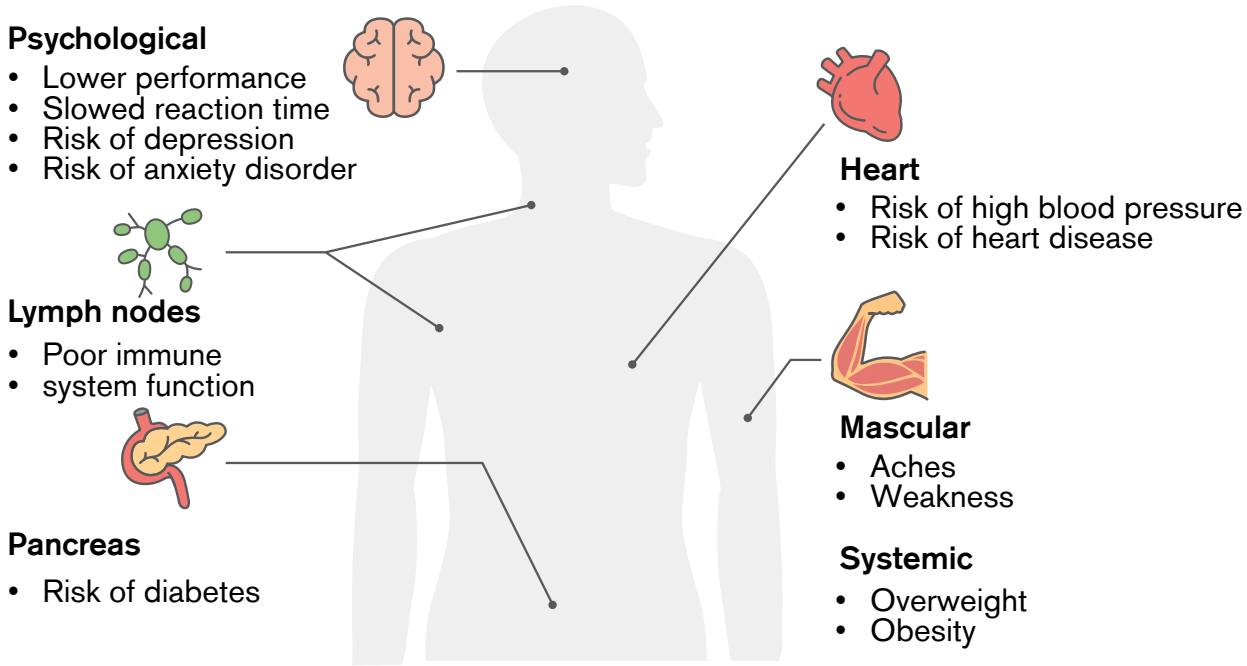
Mechanisms underlying insomnia include:

- Increased activity in the brain's stress response system, including the hypothalamic-pituitary-adrenal (HPA) axis.[5]
- Imbalances in neurotransmitters, such as serotonin and melatonin, which regulate sleep and wakefulness.[4]
- Disruptions in the body's natural sleep-wake cycle, including changes in the levels of certain hormones, such as cortisol and insulin.[4]
- Increased inflammation and oxidative stress, which can contribute to the development of insomnia.[5]

In addition to these physiological mechanisms, research has also identified several psychological and behavioural factors that can contribute to insomnia, including:

- Stress and anxiety.[6]
- Poor sleep habits and sleep environment.[4]
- Cognitive and emotional processes, such as rumination and worry.
- Comorbid mental health conditions, such as depression and anxiety disorders.[6]

PHYSIOLOGY OF MELATONIN SECRETION



DIET AND LIFESTYLE TIPS FOR CLIENTS

Consume foods rich in magnesium

Magnesium is found in nuts, seeds, leafy greens and whole grains.

Consume foods rich in tryptophan

Tryptophan is found in beans, bananas and walnuts. Tryptophan helps produce serotonin and melatonin.

Consume foods rich in complex carbohydrates

Whole grains, oats, and quinoa help increase serotonin for better sleep.

Caffeine

Found in coffee, tea, chocolate and energy drinks. Avoid at least 6 hours before bed.

Alcohol

Disrupts deep sleep and REM cycles, leading to fragmented rest.

Avoid heavy, spicy, or fatty meals before bed

They can cause acid reflux and indigestion, disrupting sleep.

Excess sugar and processed carbohydrates

Lead to blood sugar spikes that can cause nighttime awakenings.

Consistent sleep schedule

Encourage clients to wake up and sleep at the same time daily, even on weekends. No screens 1 hour before bed. Use blue-light filters or night-time modes. Avoid news, work or stressful conversations at night.

Relaxation

Reading, meditation or deep breathing exercises can help with winding down before bed.

A warm bath or shower

Helps lower core body temperature for better sleep.

Managing sleep disruptions

Limit fluids before bed to reduce nighttime awakenings for bathroom trips.

White noise or soft music

White noise or soft music helps block disruptive sounds.

Vegan Nights®

Vegan Nights® is an advanced nootropic to help your mind and body relax for better sleep. It puts your mind and body at rest so you enjoy complete and deeper sleep, recover and wake regenerated.

	PER CAPSULES	EC NRV % *
L-Glycine	250mg	**
Magnesium (as Citrate)	145mg	39%
Griffonia Seed Extract	100mg	**
L-Theanine	50mg	**
Zinc (as Citrate)	10mg	100%
Chamomile Extract *(Matricaria recutita)*	25mg	**
BioPerine® Black Pepper Extract (Piper nigrum)	2.5mg	**

* NRV - Nutrient Reference Value
** No NRV Established

Ingredients

Magnesium Citrate, L-Glycine, L-Theanine, Zinc Citrate, Griffonia Seed Extract, Chamomile Extract, BioPerine® Black Pepper Extract, Brown Rice Flour, Capsule Shell (Hydroxypropyl Methylcellulose).

Free from

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

Directions

- Take one or two Vegan Nights® capsules up to two hours before bed.
- Results can vary between individuals. While taking Vegan Nights® 30 minutes before bed works best for some, for others, taking their dose two hours before bed can suit them better. Adapt to what works best for the client for optimal results.
- If taken alongside Ashwagandha KSM-66®, we recommend taking Ashwagandha KSM-66® up to 1-3 hours before bedtime to give it time to help lower cortisol levels.

Pairs well with

Stay Calm®

Gut Works®

Magnesium Glycinate

Ashwagandha KSM-66®

What customers can look forward to

1 day
Some might experience immediate results. If your client doesn't have immediate results, don't worry; most people don't! For most people it can take a few days for the body and mind to adapt.

1 week
Better-quality sleep, feeling restored and refreshed the next day, with no groggy feeling.

2 weeks
Improvement in feelings of stress.

4 weeks
The time taken to fall asleep and the frequency of waking up in the middle of the night should decrease. Supports the body's ability to drift back to sleep more easily if woken up during the night. Longer periods of deep sleep.

Improved sleep results in better mood, productivity and concentration throughout the day.

KEY INGREDIENTS IN VEGAN NIGHTS®

Glycine

Glycine is a non-essential amino acid that is needed for many biological physiological processes, including sleep regulation.

Sleep-wake cycle regulation: Glycine influences sleep-wake cycles, and its supplementation has been studied for its benefits on sleep quality.[7]

Glycine's effects on sleep are mediated by its interaction with other neurotransmitters, such as glutamate and GABA quality. Glycine acts as an inhibitory neurotransmitter, and its release can stimulate the release of GABA, promoting sleep.[9]

Calms neuro activity: Glycine is a major inhibitory neurotransmitter; it helps calm neural activity, which is crucial for initiating and maintaining sleep. Its interaction with GABA (another inhibitory neurotransmitter) suggests it plays a role in promoting relaxation and deep sleep. Glycine acts as a co-agonist at NMDA receptors; it works with glutamate to regulate excitatory signals in the brain. Proper glycine-glutamate balance is necessary for REM sleep and cognitive function.[8]

Magnesium

Magnesium is an essential mineral that plays a role in over 300 biological processes, including sleep regulation.[10]

Magnesium regulates GABA and glutamate: Magnesium's effect on sleep is due to its interaction with other neurotransmitters, such as GABA and glutamate.[11] Magnesium acts as an inhibitory neurotransmitter, and its release can stimulate the release of GABA, promoting sleep.[12] Magnesium's interaction with glutamate, an excitatory neurotransmitter, can regulate the sleep-wake cycle.[13]

Increases sleep duration and improves sleep quality: Studies have investigated the effects of magnesium supplementation on sleep quality and duration. A systematic review found that magnesium supplementation improved sleep quality, including sleep duration, sleep latency, and sleep efficiency.[14] Another study found that magnesium supplementation reduced symptoms of insomnia and improved sleep quality in older adults.[15]

Griffonia Seed Extract

This natural extract contains 5-Hydroxytryptophan (5-HTP), a serotonin precursor, which plays a crucial role in regulating sleep-wake cycles.[16]

Contributes Towards Melatonin Production: Griffonia Seed Extract's effects on sleep are mediated by its interaction with the serotonin system. 5-HTP, the primary active compound in Griffonia Seed Extract, is converted into serotonin and then into melatonin in the brain, which regulates sleep-wake cycles.[16]

Promotes Relaxation and a Reduction in Anxiety: Additionally, Griffonia Seed Extract may also interact with other neurotransmitters, such as GABA and glutamate, to promote relaxation and reduce anxiety.[17]

L-Theanine

L-Theanine, a non-protein amino acid found in tea, has been studied for its potential benefits on sleep quality and duration.

L-Theanine tnteracts with neurotransmitters: Research suggests that L-Theanine influences sleep-wake cycles by interacting with neurotransmitters such as GABA, serotonin, and dopamine.[18] L-theanine's effects on sleep are thought to be mediated by its ability to increase the expression of GABAergic, serotonergic and glutamatergic receptors.[18] This increase in receptor expression is associated with decreased electrocorticography (ECoG) frequency, increased amplitude and enhanced delta wave powers.[18]

Reduces sleep onset latency: A study published in the journal Nutritional Neuroscience found that L-theanine supplementation reduced sleep onset latency and improved sleep quality in healthy adults.[19]

Zinc

Research has shown that Zinc influences sleep-wake cycles, and its supplementation has been studied for its potential benefits on sleep quality and duration.[20]

Stimulates the release of GABA: Zinc acts as an inhibitory neurotransmitter, and its release can stimulate the release of GABA, promoting sleep.[21]

Improves sleep quality and reduces insomnia: Studies have investigated the effects of zinc supplementation on sleep quality and duration. A systematic review found that zinc supplementation improved sleep quality in adults compared to control groups.[21] Another study found that zinc supplementation reduced symptoms of insomnia and improved sleep quality in older adults.[22]

Chamomile

Chamomile, a natural herb, has been traditionally used for its calming effects and potential benefits on sleep quality. Research has shown that Chamomile influences sleep-wake cycles, and its supplementation has been studied for its potential benefits on sleep quality and duration.

Improves sleep quality: Studies have investigated the effects of Chamomile supplementation on sleep quality and duration. A systematic review found that Chamomile supplementation improved sleep quality in adults compared to control groups.[23]

Black Pepper

Stimulates GABA release: Black Pepper acts as an inhibitory neurotransmitter, and its release can stimulate the release of GABA, promoting sleep. Additionally, Black Pepper's interaction with serotonin, a neurotransmitter involved in regulating sleep-wake cycles, can regulate the sleep-wake cycle.[24]

DRUG INTERACTIONS

Interaction Severity

Major	Levodopa	Magnesium may decrease the absorption of this drug.
Moderate	Clozapine	Glycine may decrease the effectiveness of this drug.
	Aminoglycoside Antibiotics	Magnesium may increase the risk of neuromuscular weakness when taken with this drug.
	Bisphosphonates	Magnesium can decrease the absorption of this drug.
	Calcium Channel Blockers	Magnesium may interfere with the effects of these drugs.
	Digoxin	Magnesium may reduce the effects of this drug.
	Ketamine	Magnesium may increase the risk of ketamine toxicity.
	Quinolone Antibiotics	Magnesium and zinc may decrease the absorption of these drugs.
	Dextromethorphan	*Griffonia simplicifolia* seed extract may increase the risk of serotonergic adverse effects from this drug.
	Meperidine	*Griffonia simplicifolia* seed extract may increase the risk of serotonergic adverse effects from this drug.
	Monomine Oxidase Inhibitors	*Griffonia simplicifolia* seed extract may increase the risk of serotonergic adverse effects from these drug.
	Sulfonylureas	Magnesium may increase the absorption of these drugs.
	Tetracycline Antibiotics	Magnesium and Zinc decreases the absorption of these drugs.
	Antidepressant Drugs	*Griffonia simplicifolia* seed extract may increase the risk of serotonergic adverse effects from this drug.
	Carbidopa	*Griffonia simplicifolia* seed extract may increase the risk of serotonergic adverse effects from this drug.
	CNS Depressants	*Griffonia simplicifolia* seed extract may increase the risk of CNS depression. Theanine and chamomile may increase the effects of these drugs.

Interaction Severity		
Moderate	Pentazocine	*Griffonia simplicifolia* seed extract may increase the risk of serotonergic adverse effects from this drug.
	Tramadol	*Griffonia simplicifolia* seed extract may increase the risk of serotonergic adverse effects from this drug.
	Antihypertensive Drugs	Theanine may increase the risk of hypotension when taken with these drugs.
	Cephalexin	Zinc may decrease the absorption of this drug.
	Cisplatin	Zinc may interfere with this drug.
	Integrase Inhibitors	Zinc may decrease the absorption of these drugs.
	Penicillamine	Zinc may reduce the level of this drug.
	Ritonavir	Zinc reduces the level of this drug.
	Warfarin	Chamomile may increase the effects of this drug.
	Anticoagulant / Antiplatelet Drugs	Black Pepper may increase the risk of bleeding when taken with these drugs.
	Antidiabetes Drugs	Black Pepper may increase the risk of hypoglycaemia when taken with these drugs.
	Atrostatin	Black Pepper may increase the levels of this drug.
	Lithium	Black Pepper may increase the levels of this drug.
	Nevirapine	Black Pepper may increase the levels of this drug.
	P-glycoprotein Substrates	Black Pepper may increase the levels of these drugs.
	Pentobarbital	Black Pepper may increase the sedative effects of this drug.
	Phenytoin	Black Pepper may increase the levels of these drugs.
	Propranolol	Black Pepper may increase the levels of this drug.
	Rifampin	Black Pepper may increase the levels of this drug.
	Theophylline	Black Pepper may increase the levels of this drug.
Minor	Amiloride	This drug may reduce the excretion of Zinc.
	Carbamazepine	Black Pepper may increase the levels of this drug.

Drug-nutrient interactions have been taken from the Natural Medicines Database, April 2025. Please do your own due diligence before recommending this product to individuals taking medicines.

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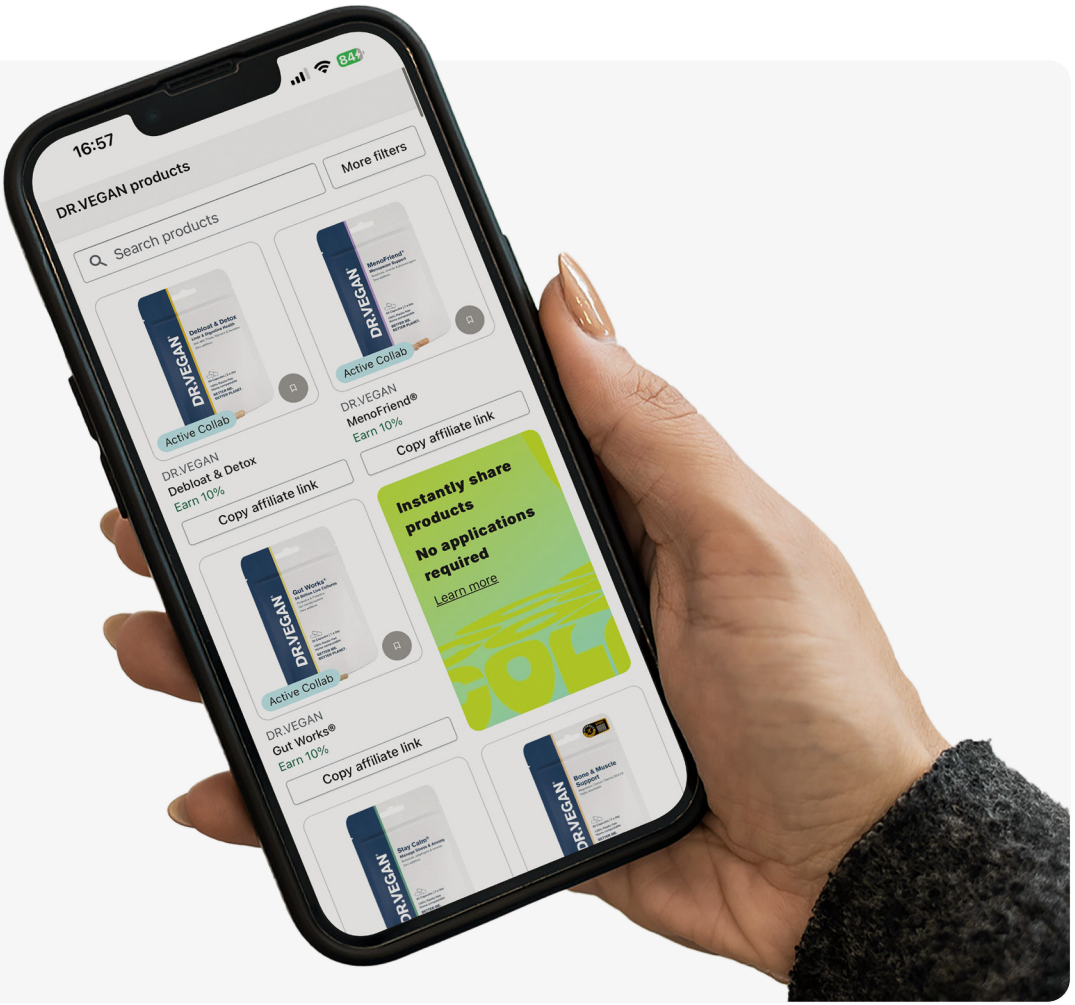

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