# NUTRIS Herbal melatonin

- ✓ NUTRIS HERBAL MELATONIN is a **100% natural plant extract** from *Oryza sativa* spp., *Medicago sativa* and *Chlorella vulgaris* with a 1% melatonin standardization.
- ✓ As **effective** as synthetic or animal melatonin.
- ✓ It complies with the **European Food Safety Authority** legislation (EFSA)
- ✓ NUTRIS HERBAL MELATONIN is currently the first and only **plant-based melatonin** in the market.
- ✓ NUTRIS HERBAL MELATONIN is **completely pure** containing no magnesium stearate, silicon dioxide, fillers, chemicals, excipients or additives.
- ✓ **High stability**: stable for up to 3 years.
- ✓ **Vegan** Grade.
- ✓ **Organic** Grade available.

Melatonin:

Melatonin is a naturally occurring hormone produced in the mammalian pineal gland and secreted into the bloodstream. Its main function is to modulate processes such as mood, sleep, body temperature, locomotor activity, food intake patterns, circadian rhythms and immunological regulation among others.

Latest evidences have also linked melatonin to the prevention of different ageing-associated disorders and oxidative stress, such as type-2 diabetes, cardiovascular or neurodegenerative diseases. It is worth noting that melatonin is produced in response to darkness, and that exposure to dim light such as blue light from TV, cell phones, computers, drastically suppresses melatonin production (**Figure 1**).

On average, melatonin production in adults ranges from 0.1-0.8 mg/day, however melatonin production gradually declines during aging. Factors such as lifestyle, diet or stress may also affect melatonin secretion. Examples include jet lag, shift works or changes in the normal circadian rhythm, which would all require external melatonin supplementation. Exogenously administered melatonin may improve mood performance, reduce sleep onset latency, improve rest quality and reduce the physical impact of stress and other adverse circumstances. Furthermore, melatonin has also raised great interest as an anti-oxidant in brain care, due to its ability to cross the blood-brain barrier (BBB).
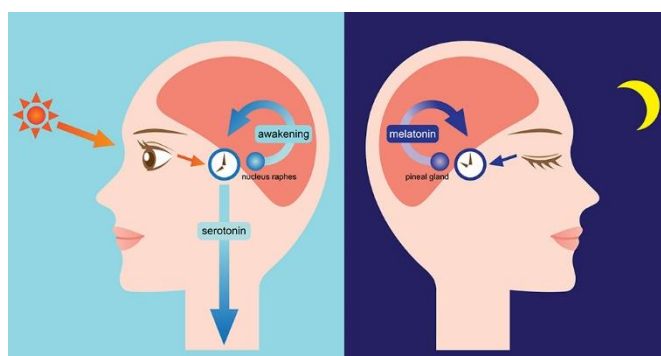
Figure 1. Production and inhibition of melatonin production due to light exposure
(source: www.medmix.at)

Melatonin is rapidly metabolized, almost reaching the bloodstream immediately after intake. Due to this, melatonin should be supplemented in accordance to circadian rhythms (approximately 30-60 minutes prior to bedtime).

Herbal melatonin:

Conventional melatonin supplements are either from animal origin (obtained from mammalian pineal glands - usually cows or pigs -) or are synthetic, being chemically produced.

On the other hand, plants are natural producers of herbal melatonin, also known as **phytomelatonin**. Melatonin acts as an antioxidant (a free radical scavenger) and growth promoter in plants, while recent evidences also suggest a key role in stress response, photoperiodic responses, plant reproductive physiology, plant defense in adverse conditions and prevention of senescent processes.

Phytomelatonin from plants can be easily absorbed in humans, as demonstrated in different studies. More than 40 melatonin plant sources have been described, and among them, rice (*Oryza sativa*), alfalfa (*Medicago sativa*) and chlorella (*Chlorella vulgaris*) are the most interesting sources. However, up to now the limiting factor yet remains in the difficulty to achieve a proper extraction yield.

Botanical source	*Oryza sativa* spp., *Medicago sativa*, *Chlorella vulgaris* **For organic grade**: *Medicago sativa*, *Chlorella vulgaris*
Part used	Leaves and arterial parts (vegetative stage)
Extraction solvent	Water
Description	Dark green-tan to dark brown powder, with characteristic odor
Assay (Melatonin HPLC)	10 mg/g (+/- 10%)
Solubility	Dispersible in water

Recommended for:
- People with poor sleep quality or problems to get sleep
- People who want to improve their sleep quality during periods of stress
- People travelling long distances (jet lag)

Daily Dose: 100 mg/day (equivalent to 1 mg/day melatonin)