

## MINDTONIC®

Work-related stress has become one of the major challenges of modern working life. There is a growing focus on elucidating how work can affect mental health and how it can be addressed through workplace-based mental health and well-being interventions. Some psychosocial working conditions have been recognized as primary sources of work-related stress, which, if not managed effectively, can adversely affect workers' or students' well-being and productivity.<sup>(13)</sup>

Prolonged exposure to stress has been associated with health implications, among which impaired cognitive function, and contributes to the development of anxiety, depression and insomnia. Stress can affect the health and calls for effective interventions addressing both stress management and health-promoting tactics.

The elderly may present Mild Cognitive Impairment (MCI), a common condition characterized by mild to moderate deterioration of working memory, deficit in attention and cognitive function learning, processing speed and executive functions that is beyond what is expected, based on age and educational level. The reduction of stress, prevention of somatic diseases, implementation of mental and physical exercises as well as the use of dietary compounds like antioxidants and supplements can be protective against MCI.

The synergy of antioxidant vitamins, including vitamin B and D, and Griffonia, source of tryptophan (precursor of serotonin), Melatonin and L-Acetyl carnitine contained in MINDTONIC® is a specific protection of cognitive functions due to oxidative damage.

MINDTONIC® is useful in periods in which finding the right concentration is difficult and efficiency and mental attention are required to approach normal daily life.

## SOLUBLE TECHNOLOGY

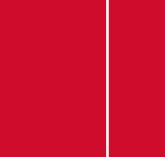
Soluble formulations are solid immediate release forms that need to be dissolved in water with rapid stirring at the time of administration. They yield an oral solution or suspension depending on active ingredients solubility.

- **Fast onset of action**
- **Large amount of active ingredients**
- **High bioavailability**
- **Easy to manage than conventional liquids**
- **User friendly**
- **Solvent and alcohol free**

via Provincia 2  
38123 Trento (TN) - Italy  
t. +39 0461 922818  
fax +39 0461 922820  
[info@e-pharma.com](mailto:info@e-pharma.com)  
[www.e-pharma.com](http://www.e-pharma.com)



**MINDTONIC®**  
FOOD SUPPLEMENT



# MINDTONIC®

## FOOD SUPPLEMENT

Food Supplement for the cognitive function based on Griffonia, Melatonin, L-Acetylcarnitine, Vitamin B2, Vitamin E and Vitamin D<sub>3</sub>.

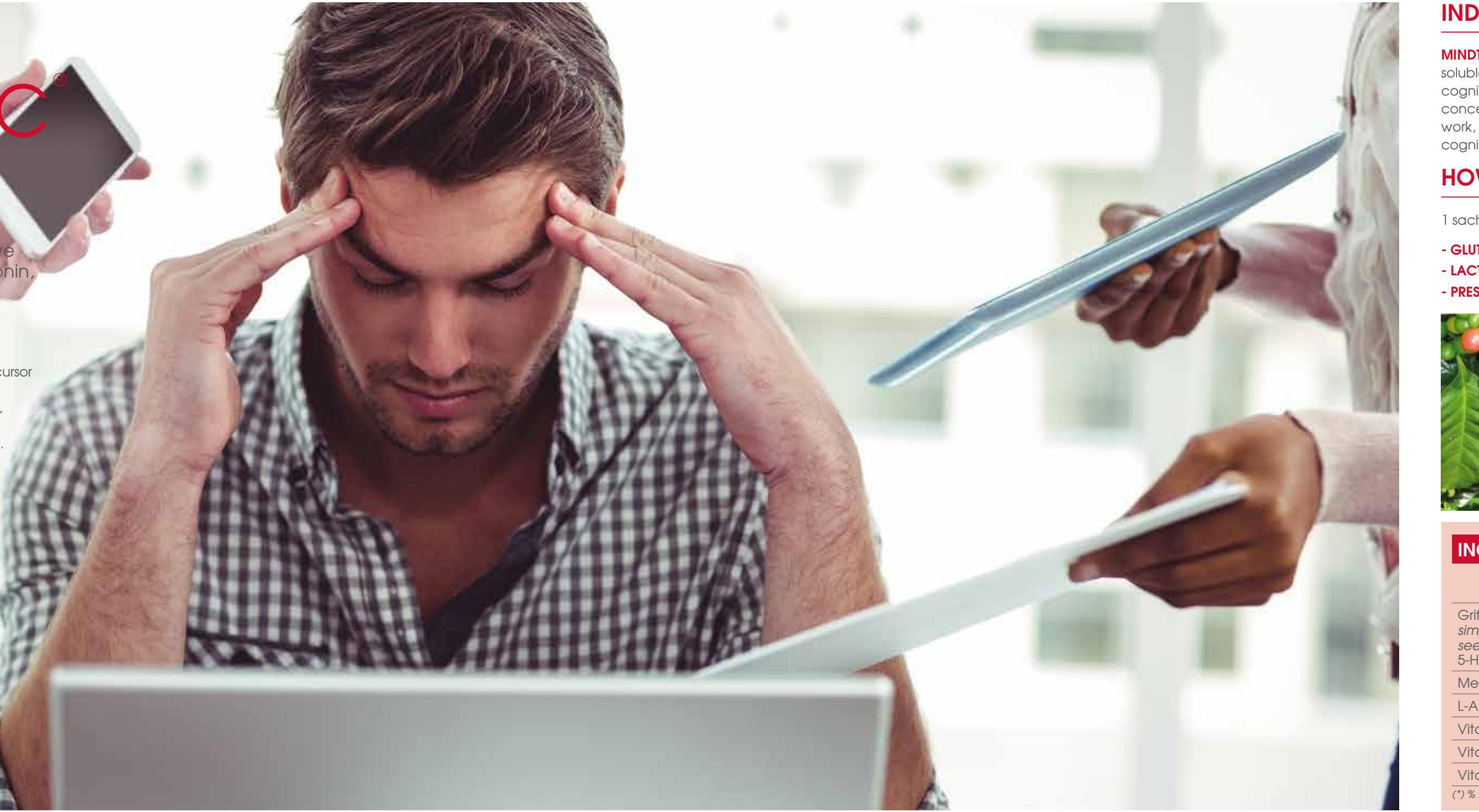
***Griffonia simplicifolia*** is a source of tryptophan, a precursor of serotonin, neurotransmitter involved in various physiological functions modulating cognitive function, mood, sleep, appetite and can be useful in cognitive dysfunction<sup>(1,2)</sup>, depressed mood<sup>(3)</sup> and sleep troubles<sup>(4)</sup>.

**Melatonin** is a hormone released exclusively during darkness at night and play a key role in various physiological responses including regulation of circadian rhythms and sleep.

Sleep disorders, low quality or lack of sleep can negatively affect cognitive function, concentration and decision making process (5, 6).

**L-AcetylLcarnitine** is an aminoacid mainly used for cells energy production and exerts a protective, nutrient and anti-oxidant action versus the cells of brain, spinal cord and peripheral nerves<sup>(7,8)</sup>.

**Vitamin B2, Vitamin E and Vitamin D<sub>3</sub>** have a key role on protection from cognitive impairment thanks to their antioxidant effect<sup>(9-12)</sup>.



## CATIONS

**ONIC®** is a food supplement in granules in sachet, useful in all functions, in favouring metabolism especially in case of work related stress and in case of tooth decay.

## HOW TO USE

t per day to be dissolved

FREE  
FREE  
FREE



## REDIENTS

	Content sachet/s
Griffonia, ( <i>Griffonia</i> <i>aplicifolia</i> (DC.) Baill., eds) extract, min. 95% TP	300 mg
latonin	1 mg
cetyl carnitine	250 mg
amin B2 - riboflavin	1.4 mg
amin E	12 mg
amin D <sub>3</sub>	10 µg

### ference Nutrient Values

BIBLIO

Y and  
mental  
ge-related  
water

*a simplicifolia*

**% RNV\***

-

-

-

100%

100%

200%

(1) Yamashita M, Yamamoto T. *Tryptophan circuit in fatigue: From blood to brain and cognition*. Brain Res. 2017;1675:116-126. Epub 2017 Sep 8.

(2) Musumeci G, Castrogiovanni P, Szychlinska MA, Imbesi R, Loreto C, Castorina S, Giunta S. *Protective effects of high Tryptophan diet on aging-induced passive avoidance impairment and hippocampal apoptosis*. Brain Res Bull. 2017;128:76-82. Epub 2016 Nov 23.

(3) Muszyńska B, Łojewski M, Rojowski J, Opoka W, Sutkowska-Ziaja K. *Natural products of relevance in the prevention and supportive treatment of depression*. Psychiatr Pol. 2015;49(3):435-53.

(4) Emanuele E, Bertona M, Minoretti P, Geroldi D. *An open-label trial of L-5-hydroxytryptophan in subjects with romantic stress*. Neuroendocrinology letters. 2010;31(5):663-6.

(5) Xie Z, Chen F, Li WA, Geng X, Li C, Meng X, Feng Y, Liu W, Yu F. *A review of sleep disorders and melatonin*. Neurol Res. 2017;39(6):559-565. Epub 2017 May 1.

(6) Auld F, Maschauer EL, Morrison I, Skene DJ, Riha RL. *Evidence for the efficacy of melatonin in the treatment of primary adult sleep disorders*. Sleep Med Rev. 2017;34:10-22. Epub 2016 Jul 20.

(7) Montgomery SA, Thal LJ, Amrein R. *Meta-analysis of double blind randomized controlled clinical trials of acetyl-L-carnitine versus placebo in the treatment of mild cognitive impairment and mild Alzheimer's disease*. Int Clin Psychopharmacol 2003;18(2):61-71.

(8) Remington R, Bechtel C, Larsen D, Samar A, Page R, Morrell C, Shea TB. *Maintenance of Cognitive Performance and Mood for Individuals with Alzheimer's Disease Following Consumption of a Nutraceutical Formulation: A One-Year, Open-Label Study*. J Alzheimers Dis. 2016;51(4):991-5.

(9) Moore K, Hughes CF, Ward M, Hoey L, McNulty H. *Diet, nutrition and the ageing brain: current evidence and new directions*. Proc Nutr Soc. 2018:1-12. (Epub ahead of print)

(10) Araki A, Yoshimura Y, Sakurai T, Umegaki H, Kamada C, Iimuro S, Ohashi Y, Ito H; Japanese Elderly Diabetes Intervention Trial Research Group. *Low intakes of carotene, vitamin B2, pantothenate and calcium predict cognitive decline among elderly patients with diabetes mellitus: The Japanese Elderly Diabetes Intervention Trial*. Geriatr Gerontol Int. 2017;17(8):1168-1175. Epub 2016 Jul 18.

(11) Vercambre MN, Boutron-Ruault MC, Ritchie K, Clavel-Chapelon F, Berr C. *Long-term association of food and nutrient intakes with cognitive and functional decline: a 13-year follow-up study of elderly French women*. Br J Nutr. 2009;102(3):419-27. Epub 2009 Feb 10.

(12) Amarra MS, Bongga DC, Peñano-Ho L, Cruz FB, Solis JS, Barrios EB. *Effect of iodine status and other nutritional factors on psychomotor and cognitive performance of Filipino schoolchildren*. Food Nutr Bull. 2007;28(1):47-54.

(13) Gayed A, LaMontagne AD, Milner A, Deady M, Calvo RA, Christensen H, Mykletun A, Glozier N, Harvey SB. *A New Online Mental Health Training Program for Workplace Managers: Pre-Post Pilot Study Assessing Feasibility, Usability, and Possible Effectiveness*. JMIR Ment Health. 2018 3;5(3):e10517. doi: 10.2196/10517.