ZenPlus

Code: FE1763 – 60 vegetable capsules, code : FE1163 – 30 vegetable capsules

ZEN-PLUS is a formula elaborated with ingredients which are attributed adaptogenic properties, increasing the body's resistance to multiple forms of stress. It regulates the main mediators involved in stress response and contributes to better physical resistance and cognitive performance, strengthening concentration and critical ability. ZENPLUS reduces nervous irritability and anxiety while favouring emotional and mental well-being.

Ingredients: L-Theanine, ashwagandha root extract (*Withania somnifera*), holy basil leaf extract (*Ocimum tenuiflorum*), passionflower extract (*Passiflora incarnata*), **oat** extract (*Avena sativa*), choline bitartrate, D-pantothenate calcium (vit. B_5), inositol, *para*-aminobenzoic acid (PABA), thiamin hydrochloride (vit. B_1), riboflavin (vit. B_2), pyridoxine hydrochloride (vit. B_6), D-ribose, astragalus root extract (*Astragalus membranaceus*), inositol hexanicotinate (vit. B_3), phellodendron bark extract (*Phellodendron amurense*), red jujube fruit (*Ziziphus jujuba*), nicotinamide (vit. B_3), magnolia bark extract (*Magnolia officinalis*), anticaking agents: magnesium salts of fatty acids and silicon dioxide, calcium-L-methylfolate, D-biotin, riboflavin-5′-phosphate sodium (vit. B_2), pyridoxal-5′-phosphate (vit. B_6), methylcobalamin (vit. B_{12}), vegetable capsule (glacing agent: hydroxypropylmethylcellulose; purified water).

Nutritional information:	**1 capsule (807 mg)**
Ashwagandha (2,5% withanolides)	125 mg
L-Theanine	100 mg
Holy basil (10% ursolic acids)	50 mg
Passionflower (4% flavonoids)	50 mg
Oat (10:1)	50 mg
Astragalus (3% astragalosides)	25 mg
D-Ribose	25 mg
Phellodendron (0,1% berberine)	15 mg
Red jujube	12,5 mg
Magnolia (50:1; 80%magnolol+honokiol)	7,5 mg
Thiamin (vitamin B_1 (from 25 mg thiamin hcl)	22,3 mg (2 027%*)
Riboflavin (vit. B_2) (from 25 mg riboflavin + 2,5 mg riboflavin-5'-phosphate sodium)	26,9 mg (1 921%*)
Niacin (vit. B_3) (from 7,5 mg nicotinamide + 17,5 mg inositol hexanicotinate)	23,4 mg NE (146%*)
D-Pantothenic acid (vit. B_5) (from 25 mg D-pantothenate calcium)	22,9 mg (382%*)
Vitamin B_6 (from 25 mg pyridoxine hcl + 2,5 mg pyridoxal-5'-phosphate)	22,3 mg (1 593%*)
Inositol	25 mg
Biotin	37,5 µg (75%*)
Folate (calcium-L-methylfolate)	500 µg (250%*)
Vitamin B_{12} (methylcobalamin)	75 µg (3 000%*)
Choline (bitartrate)	25 mg
PABA (*para*-Aminobenzoic acid	25 mg

*NRV: Nutrient Reference Value in %

Size and format:

30 and 60 vegetable capsules

Recommended daily dose:
1-2 capsules daily with food.

Do not exceed the stated recommended daily dose.

Contains no:
Preservatives, artificial flavour or colour, sugar, milk or milk products, starch, wheat, soy, or yeast.

Indications and uses: Different studies have shown that the ingredients in ZEN-PLUS can be of help for:
People in situations of physical or mental stress, those who need to reinforce physical and/or intellectual performance, stress-related anxiety disorders, nervousness, irritability, feeling run-down and mental fatigue.
ZEN-PLUS should not be administered while taking tricyclic antidepressants (like Melitracene). A minimum of 14 days should pass, or as indicated by your doctor, before starting treatment with ZENPLUS after the administration of this type of medication.

Warning: This product should not be administered to children under 12. There is a lack of data on its use during pregnancy and breastfeeding, so its use is not recommended during these stages. Special precaution is advised for patients taking anticoagulant (warfarin, heparin) and anti-platelet medication (clopidogrel, aspirin). Some cases of arterial hypertension after administration of Rhodiola have been described. The berberine in philodendron has been observed to increase cyclosporine A concentrations in patients with a kidney transplant. This product should be used with precaution by patients with autoimmune diseases, diabetes, gallbladder disorders, kidney disease, liver disease and peptic ulcer.

L-THEANINE: This amino acid is present almost exclusively in the green tea plant, synthesized in the root and concentrated in the leaves.
L-theanine has been widely studied for its health benefits. It has a relaxing effect in situations of stress because it increases the activity of alpha brain waves, a sign of induced relaxation. In the brain, L-theanine increases GABA, a neurotransmitter that participates in the regulation of the excitability balance, as well as increasing dopamine and serotonin levels which elevate mood. A study carried out in Japan suggests that oral ingestion of L-theanine could have anti-stress effects by inhibiting cortical excitement neurons [1,2].

ASHWAGANDHA: The root of *Withania somnifera* has been traditionally used for treating states of anxiety and nervous hyperexcitability, among other applications. It is made up of abundant withanolides and to a lesser extent, alkaloids and saponins[3]. In the monograph of the WHO, its anti-stress activity is explained in detail, it improves reaction time, has antioxidant power, is immune-stimulating and has a neuroprotective capacity. In ayurvedic medicine it has been used because of its adaptogenic ability to improve physical and mental health, increase resistance to disease and external pollutants, and increase longevity [4-6].

HOLY BASIL: This aromatic plant has a long trajectory in traditional ayurvedic medicine and is considered an adaptogen that balances different bodily processes and helps it adapt to stress. In India it is considered a holy plant. Also known as Tulsi, there is ample scientific evidence describing its therapeutic potential. Recent research has shown that eugenol, an active component of *Ocimum tenuiflorum*, is the active principle responsible for its activity. In a recent study, the anxiolytic activity of *Ocimum tenuiflorum* on patients with generalized anxiety disorder was revealed [7,8].

OAT: The EMEA approves the traditional use of the uppermost parts of the plant to relieve mild symptoms of stress and to help induce sleep. In fact, it is attributed a mild sedative action because of the presence of an indole alkaloid similar to the alkaloid contained in passionflower, so they surely act in synergy. The E Commission describes the use of oat for treating acute and chronic anxiety, as well as for stressful situations, states of excitement and neurasthenic syndrome [9,10].
PASSIONFLOWER: The active part of this plant is the outermost stamen. Flavonoids are abundant in its chemical composition as well as other phytochemical compounds that act synergically and justify its therapeutic use. Its monograph can be found in prestigious publications such as those by the ESCOP, WHO or EMEA, indicating that in addition to treating insomnia, it is useful for anxiety, nervousness, irritability and palpitations, among others. It is frequently combined with other plants to strengthen its effect or to treat different types of insomnia [11-13].

ASTRAGALUS: The part of this plant used for therapeutic purposes is the root. The main active components are triterpenoid saponins and polysaccharides. Numerous studies have confirmed the immune-stimulating effect of the root, which can exert a beneficial effect in situations in which the immune system is compromised, such as stress. The immune-stimulating activity seems to be associated with its polysaccharide fraction. In a recent study, the anti-stress effect of astragalus was assessed in a model of induced stress. The results were very conclusive, observing that the administration of astragalus readjusted the levels of certain neurochemical transmitters during stress. A significant reduction of tyrosine hydroxylase was detected in the neurons of the locus coeruleus, as well as an increase in cholinergic activity in the hypothalamus, improving spatial learning and memory, and reducing stress [14,15].

PHELLODENDRON**:** The part of this plant used for therapeutic purposes is the bark, whose main component is berberine. This compound has shown its anxiolytic activity in different experimental models. This activity has also been proven in a study carried out on stress-associated overweight women, in which a combination of philodendron and magnolia reduced cortisol levels as well as perceived stress, helping them maintain their weight [16-18].

RED JUJUBE: In traditional Chinese medicine, the fruit of this plant has been used for insomnia, fatigue, poor appetite and anxiety. Its main components are triterpenes and triterpenic saponins. There is scientific evidence of a hypnotic effect in jujubosides, influencing circadian rhythm and the serotonergic system. In the WHO monographs, its benefits are described for treating insomnia-associated irritability [19].

MAGNOLIA: The bark of this plant contains magnolol and honokiol as its main components, and these are attributed anxiolytic and anti-depressive action since both compounds have a certain selectivity for determined sub-types of the GABA-A receptor. In a study performed in 2008, the synergic effect of magnolia and phellodendron was shown, both of which help maintain cortisol and DHEA levels, which are hormones related with the symptoms of stress, providing relief for premenopausal women suffering from transitory anxiety [20-23].

D-RIBOSE: It's a simple carbohydrate molecule found in all cells of the human body. Physical stress can increase the loss of nucleotides (such as ATP, ADP and AMP) in the heart and skeletal muscles. D-ribose is fundamental for the continuous production of ATP, the molecule which gives the heart and muscles the energy they need to function. Ribose helps with energy production at the cellular level and improves muscle recovery time and resistance [24-26].

VITAMIN B COMPLEX: This consists of a set of vitamins that work together for good health. They generally maintain good nervous system conditions, care for mental health and strengthen the immune system, among other functions[27,28].

Vitamin B1 (Thiamine HCl): This is needed to transform food into energy so the brain can absorb the glucose it needs in order to function properly. When there is a deficiency of this vitamin, problems of depression, fatigue, disinterest, poor memory or low mental agility appear. It is necessary for adequate nourishment of the nervous system. Supplementation of this vitamin helps to reduce the negative symptoms of depression upon stabilizing thiamine levels. It is useful in cases of dementia and for overcoming stress[29].

Vitamin B2 (Riboflavin): Vitamin B_2 is necessary for proper nerve cell function. It positively influences determined nervous disorders such as stress, insomnia and anxiety[30].

Vitamin B3 (Inositol-hexanicotinate/niacinamide): A slight deficiency in this vitamin can cause alterations to the nervous system like nervousness, irritability, insomnia and depression. We've incorporated vitamin B_3 in the form of inositol-hexanicotinate and niacinamide (non-reddening) [31,32].

Vitamin B5 (calcium D pantothenate): This vitamin intervenes in adrenal gland function, which is responsible for releasing cortisol, a hormone related with vital tone and the state of alertness[33].

Vitamin B6 (Pyridoxine): Necessary for haemoglobin production in the blood, along with the rest of the B vitamins it participates in the maintenance of the nervous and immune systems. It favours improvement in depression since supplementation elevates serotonin levels and favours memory maintenance in the elderly[34,35].

Vitamin B7 (Biotin): This vitamin helps the body use pantothenic acid and folic acid. It participates in the metabolism of fat, protein and carbohydrates, and a deficiency of biotin can manifest in the form of nervous alterations.

Vitamin B9 (folate): Some of the symptoms related to a folic acid deficiency are weakness, depression, poor memory and bad mood, among others[36,42].

Vitamin B12 (Methylcobalamin): Vitamin B_{12} is involved in the activity of numerous organic enzymes and collaborates in maintaining a healthy nervous system[38].

CHOLINE BITARTRATE: This is necessary for the formation of acetylcholine, a brain neurotransmitter whose main function is the transmission of nerve impulses, so it is of capital importance for proper nerve conduction. [39]

INOSITOL: This is necessary for healthy nerve cells, and together with choline, is responsible for the creation of neurotransmitters. Inositol intervenes in the chemical balance between copper and zinc in nerve cells. A lack of this vitamin can lead to excess copper, which is responsible for the onset of numerous nervous system problems: anguish, insomnia, nervousness, stress and depression[40,41].

PABA (PARA-AMINOBENZOIC ACID): PABA (para-aminobenzoic acid) influences the efficacy and formation of folic acid by stimulating the formation of determined intestinal bacteria. It can increase vitality since it increases the oxygen supply to tissues and collaborates in red blood cell formation. A deficiency of this cofactor can cause fatigue, irritability, depression and nervousness.

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