

200 mg of Zen

*Natural Support for Awake Calmness**

(Hypoallergenic)

*plus***LIFE**

www.pluslife.com.sg

Item # 74700

Available in bottles of 60 vegetarian capsules

The Possible Benefits of 200 mg of Zen, a Dietary Supplement

- May help support healthy emotional status*
- May support a feeling of general relaxation without sedation*
- May promote healthy moods during times of hormonal change*

Description

200 mg of Zen contains a significant quantity of both gamma-aminobutyric acid (GABA) and theanine (glutamic acid gamma-ethylamide), an amino acid derivative found naturally in green tea (*Camellia sinensis*). These two dietary supplement ingredients may together support healthy moods and a feeling of alert relaxation.*

Research has shown that dietary components can modulate the body's levels of neurotransmitters, e.g. serotonin, dopamine, norepinephrine, and GABA. Alterations in the levels of these neurotransmitters, perhaps induced by metabolic stress or vitamin deficiencies, e.g. vitamin B6, can significantly influence mood and emotional status, as well as motor function.*

GABA is the major inhibitory neurotransmitter in the brain and is active at 20% of central nervous system (CNS) synapses. GABA, via its neuronal A receptor, inhibits neurons by causing an influx of chloride ions. This chloride influx initiated by GABA

is known to be part of the bodily mechanisms involved with mood, muscle relaxation and sedation.* A decrease in GABA's function as an inhibitory mediator or a dysregulated sensitivity of GABA receptors can lead to excessive neuronal activity.*

Theanine, an amino acid derivative found naturally in green tea (*Camellia sinensis*), is also recognized to have calming properties.* Human studies have demonstrated that dietary theanine supplementation increases alpha wave activity, fostering a state of alert relaxation.* Animal studies have also shown that administration of theanine regulates brain serotonin concentration by affecting either serotonin synthesis or degradation in the brain.* It has been hypothesized that serotonin facilitates general and conditioned anxiety at the level of medial temporal lobe structures.

The calming effect of this tea component may seem contradictory to the stimulatory properties of green tea's caffeine content, however research

*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.

suggests that theanine exerts an antagonistic effect on caffeine's stimulatory action.* Although L-

theanine is a component of green tea, 200 mg of Zen does not contain caffeine.

Each 2 capsules contain: GABA (gamma-aminobutyric acid) 550 mg
L-theanine 200 mg

Other ingredients: Silicon dioxide, Carbowax.

Suggested use: As a dietary supplement, 1 or 2 capsules daily between meals, or as directed by a healthcare practitioner.

Warning: Contraindicated with drugs or use only under the supervision of a healthcare practitioner.

References

- Anderson IM, Mortimore C. *Adv Exp Med Biol* 1999;467:43-55.
- Benton D, Donohoe RT. *Public Health Nutr* 1999;2:403-9.
- Eghbali M, Curmi JP, Birnir B, et al. *Nature* 1997;388:71-5.
- Goddard AW, Mason GF, Almai A, et al. *Arch Gen Psychiatry* 2001;58:556-61.
- He P, Wada S, Watanabe N, et al. *J of Food Sci*, 2000;65:30-33.
- Juneja L, Chu D, Okuba T. *Trends Food Sci Tech* 1999;10:199-204.
- Kakuda T, Nozawa A, Unno T, et al. *Biosci Biotechnol Biochem* 2000;64:287-93.
- Kakuda T, Yanase H, Utsunomiya K, et al. *Neurosci Lett* 2000;289:189-92.
- Kimura R, et al. *Chem Pharm Bull (Tokyo)* 1986;34:3053-7.
- Lombard CB. *Med J Aust* 2000;173 Suppl:S104-5.
- Markus CR, Panhuysen G, Tuiten A, et al. *Appetite* 1998;31:49-65.
- Moore P, Gillin C, et al. *Arch Gen Psychiatry* 1998;55:534-9.
- Paul SM, Marangos PJ, Skolnick P, et al. *Encephale* 1982;8:131-44.
- Paz A, Berry EM. *Ann Nutr Metab* 1997;41:291-8.
- Petty F, Trivedi MH, Fulton M, et al. *Biol Psychiatry* 1995;38:578-91.
- Prasad C. *Braz J Med Biol Res* 1998;31:1517-27.
- Sadzuka Y, Sugiyama T, Sonobe T. *Toxicol Lett* 2000;114:155-62.
- Shiah IS, Yatham LN. *Life Sci* 1998;63:1289-303.
- Sugiyama T, Sadzuka Y. *Cancer Lett* 1998;133:19-26.
- Sugiyama T, Sadzuka Y, Tanaka K, et al. *Toxicol Lett* 2001;121:89-96.
- Sundstrom I, Ashbrook D, Backstrom T. *Psychoneuroendocrinology* 1997;22:25-38.
- Unno T, Suzuki Y, Kakuda T, et al. *J Agric Food Chem* 1999;47:1593-6.
- Verger P, Lagarde D, Batejat D, et al. *Physiol Behav* 1998;64:317-22.
- Vescovi PP, Volpi R, Coiro V. *Alcohol* 1998;16:325-8.
- Wells AS, Read NW, Laugharne JD, et al. *Br J Nutr* 1998;79:23-30.
- Yokogoshi H, Kato Y, et al. *Biosci Biotechnol Biochem* 1995;59:615-8.
- Yokogoshi H, Kobayashi M. *Life Sci* 1998;62:1065-8.
- Yokogoshi H, Mochizuki M, Saitoh K. *Biosci Biotechnol Biochem* 1998;62:816.

plusLIFE
www.pluslife.com.sg

*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.