



# STRESS-RELAX<sup>®</sup> MENTAL CALMNESS

Promotes deep relaxation and mental clarity

## THE CHALLENGE OF COPING WITH STRESS

Temporary, minor stress is not harmful and most of us are able to deal with it well. In contrast, prolonged daily minor stresses accumulate to become as damaging as severe stressful events, even compromising physical, emotional and mental health.

Anxiety, being over-committed, and having too much to do in too little time, with no time to relax, can contribute to stress. In our "24/7" world, it is easy to feel overwhelmed by our obligations to work, family, finances, and relationships. And in the uncertainty left in the wake of 9/11, we experience higher levels of anxiety and depression than ever before. Finding balance is not easy.

Daily use of Stress-Relax Mental Calmness is one very effective strategy to reduce feelings of anxiety and produce a sense of calm and mental clarity, helping anyone feeling "stressed-out" to regain control.

## MOOD-ALTERING DRUGS VS. L-THEANINE

The traditional approach to coping with debilitating stress and anxiety is mood-altering medication. While such drugs may sometimes be necessary, they mask symptoms rather than eliminate them. Further, these drugs are very poor candidates for long-term use and they do have their downside: unwelcome side effects, such as drowsiness, loss of libido, and weight gain, and perhaps even addiction in vulnerable persons.

In contrast, the Mental Calmness formula, containing 100% Suntheanine<sup>®</sup> L-Theanine in a chewable tablet, exerts a profoundly relaxing yet non-drowsy action, with noticeable effects within 30 to 40 minutes of ingestion (sometimes within as little as 15 minutes). It helps with stress, calms the nerves, improves mood and even helps with learning and concentration. L-Theanine may even reduce the jitters brought on by too much caffeine in coffee or cola. Best of all, it is very safe and can be taken long-term by everyone, from children to seniors.

## WHAT IS L-THEANINE AND HOW DOES IT WORK?

L-Theanine is an amino acid found in tea leaves, particularly green tea (*Camellia sinensis*). In fact, L-Theanine constitutes between 1-2% of the dry weight of tea leaves, and accounts for more than 50% of all amino acids found in tea. It exists only in the free amino acid form that allows for quick absorption. At this time, tea is the most-consumed beverage after water. Therefore, L-Theanine has a long history of use, since it has been consumed in tea for thousands of years by literally billions of people.

L-Theanine works in two important ways. First, it generates alpha brain waves. The brain transmits four different types of brain waves that are determined by frequency: gamma, theta, alpha and beta. Gamma waves are present during sound sleep. Theta waves indicate dozing or light sleeping. In contrast, beta waves are present during an awake, excited state, whereas alpha waves indicate an awake, yet relaxed state. L-Theanine is absorbed quickly through the small intestine and transported directly to the brain, where it stimulates the generation of alpha brain waves. Although effective doses can range from 50-200 mg, it only takes 30 to 40 minutes after ingesting L-Theanine to achieve an alert, awake yet relaxed mental and emotional state that can last from 8 to 12 hours.

Secondly, researchers also suggest that L-Theanine plays a role in increasing the formation of GABA (gamma amino butyric acid), a neurotransmitter that is key to relaxation and memory.

## SUNTHEANINE, 100% PURE L-THEANINE

A recent study showed that many Theanine products actually contain a mixture of D- and L-Theanine. These mixtures are called racemates and may be inferior in terms of efficacy and safety. Only Suntheanine contains 100% L-Theanine. In the February 15th, 2004 issue of *Rapid Communications in Mass Spectrometry*, Dr. Daniel Armstrong stated: "Our analysis reveals that several Theanine ingredients marketed for use in dietary supplements are not what they claim to be... Theanine extracted from tea is present predominantly in the L-form. Five of the six ingredients we tested were racemates, suggesting they were chemically synthesized. Only Suntheanine, which is produced via an enzymatic process, appeared to be essentially pure L-Theanine."

## THE MANY BENEFITS OF L-THEANINE

The effects of L-Theanine are truly amazing (Kimura, Ozeki). Some of its many benefits are:

- Reduces feelings of stress and anxiety, restoring mental calmness
- Promotes mental clarity and relaxation without drowsiness
- Improves learning performance, concentration and memory
- Helps with weight loss as it reduces stress-related eating
- Improves the ability to fall asleep and the quality of sleep
- Diminishes typical symptoms of PMS (and menopause), particularly mood swings, anxiety, irritability, and weepiness
- May reduce the negative effects of caffeine consumption
- Current research indicates that L-Theanine may also have potential in lowering blood pressure; supporting the immune system; helping with ADD/ADHD in children and adults; and helping with smoking cessation

**STRESS-BUSTING BENEFITS**

Clinical studies have demonstrated that L-Theanine is an effective nutrient to help manage stress and promote mental calmness and relaxation. These clinical effects are directly related to L-Theanine's ability to stimulate the production of alpha brain waves, as well as reduce beta waves (which are associated with nervousness, scattered thoughts and hyperactivity).

Stress and anxiety are debilitating conditions that can lead to a loss of well-being and mental performance. If beta waves predominate as a result of stress and anxiety, then our ability to focus with a clear and relaxed mind becomes more of a challenge. Muscle tension and irritability can also ensue – both of which impair our ability to concentrate. The capacity to perform in our jobs and at home becomes compromised as a result. Although stressors are often beyond our control we can control how we deal with them. To create a relaxed yet clear state of mind, two processes need to happen; increase the production of alpha waves, and increase the levels of the neurotransmitters dopamine and serotonin. L-Theanine can effectively induce these two processes in a relatively short period of time. So when your work load suddenly multiplies or your list of things to do seems impossible, L-Theanine can help you tackle these responsibilities in a calm and relaxed manner.

It is also important to mention that L-Theanine reduces stress and anxiety without the tranquilizing effects found in many other calming supplements – an essential feature when you need to stay alert and focused.

**ENHANCED MEMORY AND LEARNING**

In a related benefit, by shutting down the “worry mode” and increasing the ability to concentrate and focus, as measured by increased alpha brain waves, L-Theanine can improve the ability to learn and enhance memory. Although studies referencing these two benefits have been done on animals, ongoing research will most likely involve human clinical trials (Nathan).

**A GOOD NIGHT'S SLEEP, NATURALLY**

Both a lack of sleep or poor quality sleep can progressively increase stress. L-Theanine is ideal for people who have trouble sleeping and often wake up feeling grog-

gy. Researchers at the National Institute of Mental Health in Japan found that taking Suntheanine L-Theanine before bed produced a significant improvement in sleep quality in their young male subjects. This is the first human study to show that L-Theanine can profoundly enhance the quality of sleep experienced by young subjects (Shirakawa).

**CONTROLLING FOOD CRAVINGS**

How many of us compulsively eat when we're under stress? L-Theanine may help control the food cravings that lead to weight gain. One of the hormones secreted during times of stress is cortisol, which keeps blood sugar levels constant by triggering the formation of glucose from fats and proteins. Unfortunately constant stress equals constant cortisol secretion which can lead to symptoms such as depression, fatigue, insomnia and high blood sugar. These are key factors in keeping weight on and compulsive food cravings. L-Theanine, by managing the mechanisms that control stress, can have a profound effect on erratic and uncontrollable food cravings.

**DOSAGE**

Chew 1-2 tablets, 3 times daily or as directed by a health care practitioner, preferably as soon as stress levels start to rise. If experiencing high levels of stress, take the dose at upper end of the dosage spectrum, but no more than 600 mg within a 6-hour period and no more than 1,200 mg in a 24-hour period.

**SAFETY**

Data from human and animal studies show L-Theanine to be very safe. According to the Ames Salmonella/Microsome Assay, L-Theanine is non-mutagenic. In fact, the Japanese government gave L-Theanine food additive status as far back as 1964. Approval was given for unlimited use in foods with the exception of infant foods. In 1994, an Asian confectionary manufacturer introduced a chewing gum for relaxation that contained 25 mg of L-Theanine per piece of gum. Since then hundreds of products have been introduced to the Asian market, some with levels of L-Theanine up to 300 mg per serving, with no adverse events reported.

*Pregnancy and lactation:* Pregnant and lactating women in Asian countries have absorbed L-Theanine from teas for centuries with no reports of problems. However, this is yet to be corroborated by

safety studies. So for now we cannot recommend the Mental Calmness formula during pregnancy or lactation, especially in higher amounts, unless used under the care of a health care practitioner.

*Contraindications:* It is advisable to consult a health care practitioner prior to use if you are taking antihypertensive medications or stimulant drugs.

So, if you are weighed down by anxiety or overwhelmed by stress, regain control of your life by using the Stress-Relax Mental Calmness formula with Suntheanine.

**KEY REFERENCES**

Kimura K., “L-Theanine reduces psychological and physiological stress responses,” *Biol Psychol*, Aug 21; 2006

Nathan P., “The neuropharmacology of L-Theanine (N-Ethyl-L-Glutamine): A possible neuroprotective and cognitive enhancing agent,” *Journal of Herbal Pharmacotherapy*, Vol 6 (2) pp 21-30; 2006

Ozeki M., “Factors that Affect the Body's Nervous System: Relaxation Effects of L-Theanine”, *Nutraceutical Proteins and Peptides in Health and Disease*, CRC Press, pp 377-390; 2006

Shirakawa S., et al., *National Institute of Mental Health*, Tokyo, Japan, Released at Society of Physiological Anthropology Conference, Tokyo; 2003