Cognitive Clarity and Focus

Memory Enhancement, Learning, Focus and Attention

"L-theanine has potential ability to enhance learning and memory in rats."

The Green Tea Amino Acid Theanine Affects the Release of Brain Neurotransmitters.

Nathan, P. J., Lu, K., Gray, M., & Oliver, C. (2006). The neuropharmacology of L-theanine (N-ethyl-L- glutamine): a possible neuroprotective and cognitive enhancing agent. Journal of Herbal Pharmacotherapy, 6(2), 21-30.

"L-Theanine and caffeine combined improved both speed and accuracy of performance of the attention- switching task and reduced susceptibility to distracting information in the memory task."

The combination of L-theanine and caffeine improves cognitive performance and increases subjective alertness.

Giesbrecht, T., Rycroft, J. A., Rowson, M. J., & De Bruin, E. A. (2010). The combination of L-theanine and caffeine improves cognitive performance and increases subjective alertness. Nutritional Neuroscience, 13(6), 283-290.

"The ingestion of L-Theanine could possibly cause anti-stress effects via the inhibition of cortical neuron excitation."

Effects of l-theanine on attention and reaction time response.

Jang, H. S., Jung, J. Y., Jang, I. S., Jang, K. H., Kim, S. H., Ha, J. H., ... & Kim, T. J. (2012). Effects of l- theanine on attention and reaction time response. Journal of Clinical Psychopharmacology, 32(3), 387-390.

"L-Theanine has been reported to increase subjects' attention performance and improve reaction time response in normal healthy subjects prone to have high anxiety."

L-Theanine Improves Immunity by Altering TH2/TH1 Cytokine Balance, Brain Neurotransmitters, and Expression of Phospholipase C in Rat Hearts.

Tian, X., Sun, L., Gou, L., Ling, X., Feng, Y., Wang, L., ... & Liu, Y. (2013). Protective effect of l-theanine on chronic restraint stress-induced cognitive impairments in mice. Brain Research, 1503, 24-32.

"L-theanine and caffeine in combination are beneficial for improving performance on cognitively demanding tasks."

The combined effects of L-theanine and caffeine on cognitive performance and mood

Owen, G. N., Parnell, H., De Bruin, E. A., & Rycroft, J. A. (2008). The combined effects of L-theanine and caffeine on cognitive performance and mood. Nutritional neuroscience, 11(4), 193-198.

"L-Theanine has a significant effect on the general state of mental alertness or arousal."

The effects of L-theanine on objective sleep quality in boys with attention deficit hyperactivity disorder (ADHD): a randomized, double-blind, placebo-controlled clinical trial.

Lyon, M. R., Kapoor, M. P., & Juneja, L. R. (2011). The effects of L-theanine (Suntheanine®) on objective sleep quality in boys with attention deficit hyperactivity disorder (ADHD): a randomized, double- blind, placebo-controlled clinical trial. Alternative medicine review, 16(4), 348-354.

"L-Theanine modulates aspects of brain function in humans as evidenced by increasing learning ability."

The combination of L-theanine and caffeine improves cognitive performance and increases subjective alertness.

Giesbrecht, T., Rycroft, J. A., Rowson, M. J., & De Bruin, E. A. (2010). The combination of L-theanine and caffeine improves cognitive performance and increases subjective alertness. Nutritional neuroscience, 13(6), 283-290.

"L-Theanine, especially when combined with caffeine, can enhance attention and focus."

The effects of L-theanine, caffeine, and their combination on cognition and mood.

Haskell, C. F., Kennedy, D. O., Milne, A. L., Wesnes, K. A., & Scholey, A. B. (2008). The effects of L- theanine, caffeine, and their combination on cognition and mood. Biological psychology, 77(2), 113-122.

"Theanine and caffeine together improve cognitive performance and increase subjective alertness."

The combination of L-theanine and caffeine improves cognitive performance and increases subjective alertness.

Giesbrecht, T., Rycroft, J. A., Rowson, M. J., & De Bruin, E. A. (2010). The combination of L-theanine and caffeine improves cognitive performance and increases subjective alertness. Nutritional neuroscience, 13(6), 283-290.

Enhanced Mindfulness and Creativity

Alpha Waves, Gamma Waves, Stress Reduction, Relaxation

"L-Theanine significantly increases activity in the alpha frequency band which can be linked to mental relaxation and concentration."

Effects of Theanine on the Release of Brain Alpha Wave in Adult Males.

Song, C. H., Jung, J. H., Oh, J. S., & Kim, K. S. (2003). Effects of Theanine on the Release of Brain Alpha Wave in Adult Males. Korean Journal of Nutrition, 36(9), 918-923.

"L-Theanine induced alpha brain wave activity, typically associated with a relaxed but alert state, in the occipital area of the brain."

The Acute Effects of L-theanine in Comparison with Alprazolam on Anticipatory Anxiety in Humans.

Lu, K., Gray, M. A., Oliver, C., Liley, D. T., Harrison, B. J., Bartholomeusz, C. F., ... & Nathan, P. J. (2004). The acute effects of L-theanine in comparison with alprazolam on anticipatory anxiety in humans. Human Psychopharmacology: Clinical and Experimental, 19(7), 457-465.

"Administration of L-Theanine led to the generation of α-waves, an indicator of relaxed alertness."

Effects of Theanine on the Release of Brain Alpha Wave in Adult Males.

Kobayashi, K., Nagato, Y., Aoi, N., Juneja, L. R., Kim, M., Yamamoto, T., & Sugimoto, S. (1998). Effects of L-Theanine on the Release of Alpha-Brain Waves in Human Volunteers. Nippon Nogeikagaku Kaishi, 72(2), 153-157.

"L-theanine significantly increases activity in the alpha frequency band which indicates that it relaxes the mind without inducing drowsiness."

L-Theanine relieves positive, activation, and anxiety symptoms in patients with schizophrenia and schizoaffective disorder: an 8-week, randomized, double-blind, placebo-controlled, 2-center study.

Ritsner, M. S., Miodownik, C., Ratner, Y., Shleifer, T., Mar, M., Pintov, L., & Lerner, V. (2011). L- Theanine relieves positive, activation, and anxiety symptoms in patients with schizophrenia and schizoaffective disorder: an 8-week, randomized, double-blind, placebo-controlled, 2-center study. The Journal of clinical psychiatry, 72(1), 34-42.

"L-Theanine promotes relaxation without drowsiness, reflected as increased alpha-band activity during resting."

L-Theanine, a natural constituent in tea, and its effect on mental state.

Nobre, A. C., Rao, A., & Owen, G. N. (2008). L-theanine, a natural constituent in tea, and its effect on mental state. Asia Pacific journal of clinical nutrition, 17(S1), 167-168.

"L-Theanine significantly increases activity in the alpha frequency band which can be linked to mental relaxation and concentration states."

Effects of l-theanine on attention and reaction time response.

Jang, H. S., Jung, J. Y., Jang, I. S., Jang, K. H., Kim, S. H., Ha, J. H., ... & Kim, K. S. (2012). L-theanine partially counteracts caffeine-induced sleep disturbances in rats. Pharmacology Biochemistry and Behavior, 101(2), 217-221.

"L-Theanine significantly increases alpha brain wave activity, indicative of a relaxed but alert mental state."

L-Theanine relieves positive, activation, and anxiety symptoms in patients with schizophrenia and schizoaffective disorder: an 8-week, randomized, double-blind, placebo-controlled, 2-center study.

Ritsner, M. S., Miodownik, C., Ratner, Y., Shleifer, T., Mar, M., Pintov, L., & Lerner, V. (2011). L- Theanine relieves positive, activation, and anxiety symptoms in patients with schizophrenia and schizoaffective disorder: an 8-week, randomized, double-blind, placebo-controlled, 2-center study. The Journal of clinical psychiatry, 72(1), 34-42.

"L-Theanine contributes to an increase in Alpha brain wave activity, promoting relaxation and alertness."

Effects of l-theanine on attention and reaction time response.

Jang, H. S., Jung, J. Y., Jang, I. S., Jang, K. H., Kim, S. H., Ha, J. H., ... & Kim, T. J. (2012). L-Theanine partially counteracts caffeine-induced sleep disturbances in rats. Pharmacology Biochemistry and Behavior, 101(2), 217-221.

Emotional Mastery

Mood Enhancement & Regulation, Stress Reduction, Relaxation

"Daily consumption of L-Theanine may help in reducing stress and anxiety in people exposed to stressful conditions."

The Acute Effects of L-Theanine in Comparison with Alprazolam on Anticipatory Anxiety in Humans.

Lu, K., Gray, M. A., Oliver, C., Liley, D. T., Harrison, B. J., Bartholomeusz, C. F., ... & Nathan, P. J. (2004). The acute effects of L-theanine in comparison with alprazolam on anticipatory anxiety in humans. Human Psychopharmacology: Clinical and Experimental, 19(7), 457-465.

"L-Theanine can attenuate stress by promoting relaxation without drowsiness."

L-Theanine reduces psychological and physiological stress responses.

Kimura, K., Ozeki, M., Juneja, L. R., & Ohira, H. (2007). L-Theanine reduces psychological and physiological stress responses. Biological Psychology, 74(1), 39-45.

"L-Theanine can attenuate the acute stress response."

L-Theanine and Caffeine in Combination Affect Human Cognition as Evidenced by Oscillatory alpha- Band Activity and Attention Task Performance.

Kelly, S. P., Gomez-Ramirez, M., Montesi, J. L., & Foxe, J. J. (2008). L-Theanine and Caffeine in Combination Affect Human Cognition as Evidenced by Oscillatory alpha-Band Activity and Attention Task Performance. The Journal of Nutrition, 138(8), 1572S-1577S.

"The ingestion of 200 mg of L-theanine has been shown to cause relaxation without drowsiness."

L-Theanine reduces psychological and physiological stress responses.

Kimura, K., Ozeki, M., Juneja, L. R., & Ohira, H. (2007). L-Theanine reduces psychological and physiological stress responses. Biological psychology, 74(1), 39-45.

"L-theanine intake resulted in a reduction in heart rate (HR) and salivary immunoglobulin A responses to an acute stress task."

Effects of L-Theanine or Caffeine Intake on Changes in Blood Pressure under Physical and Psychological Stresses.

Yoto, A., Motoki, M., Murao, S., & Yokogoshi, H. (2012). Effects of L-theanine or caffeine intake on changes in blood pressure under physical and psychological stresses. Journal of physiological anthropology, 31(1), 28.

“L-Theanine reduced stress and anxiety in people who were experiencing stressful situations.”

The acute effects of L-theanine in comparison with alprazolam on anticipatory anxiety in humans.

Lu, K., Gray, M. A., Oliver, C., Liley, D. T., Harrison, B. J., Bartholomeusz, C. F., ... & Nathan, P. J. (2004). The acute effects of L-theanine in comparison with alprazolam on anticipatory anxiety in humans. Human Psychopharmacology: Clinical and Experimental, 19(7), 457-465.

“L-Theanine promoted relaxation without drowsiness, reflected by an increased alpha brain wave activity.”

L-Theanine relieves positive, activation and anxiety symptoms in patients with schizophrenia and schizoaffective disorder: an 8-week, randomized, double-blind, placebo-controlled, 2-center study.

Ritsner, M. S., Miodownik, C., Ratner, Y., Shleifer, T., Mar, M., Pintov, L., & Lerner, V. (2011). L-Theanine relieves positive, activation and anxiety symptoms in patients with schizophrenia and schizoaffective disorder: an 8-week, randomized, double-blind, placebo-controlled, 2-center study. Journal of Clinical Psychiatry, 72(1), 34-42.

"L-Theanine reduced stress and anxiety in people experiencing stressful situations."

The Effects of L-Theanine on Objective Sleep Quality in Boys with Attention Deficit Hyperactivity Disorder (ADHD): A Randomized, Double-blind, Placebo-controlled Clinical Trial.

Lyon, M. R., Kapoor, M. P., & Juneja, L. R. (2011). The effects of L-theanine (Suntheanine®) on objective sleep quality in boys with attention deficit hyperactivity disorder (ADHD): a randomized, double- blind, placebo-controlled clinical trial. Altern Med Rev, 16(4), 348-54.

"Oral L-theanine administration caused anti-stress effects via the inhibition of cortical neuron excitation."

Involvement of GABA(A) Receptors in the Neuroprotective Effect of Theanine on Focal Cerebral Ischemia in Rats.

Egashira, N., Hayakawa, K., Osajima, M., Mishima, K., Iwasaki, K., Oishi, R., & Fujiwara, M. (2004). Involvement of GABAA receptors in the neuroprotective effect of theanine on focal cerebral ischemia in rats. Amino acids, 27(4), 431-438.

Neural Protection and Growth

Neuron Health, Neuroprotection

"L-Theanine possesses neuroprotective effects in the hippocampus in brain ischemia."

Theanine and R-glutamylethylamide are the same substances representing the enantiomeric form of glutamate.

Kakuda, T. (2009). Neuroprotective effects of theanine and its preventive effects on cognitive dysfunction. Pharmacological research, 56(2), 162-168.

"L-Theanine has potential for neuroprotection and is particularly effective in maintaining brain function and protecting brain neurons."

The Neuroprotective Effects of L-Theanine–A Novel Stroke Therapy.

Di, X., Yan, J., Zhao, Y., Zhang, J., Shi, Z., Chang, Y., & Zhao, B. (2010). L-theanine protects the APP (Swedish mutation) transgenic SH-SY5Y cell against glutamate-induced excitotoxicity via inhibition of the NMDA receptor pathway. Neuroscience, 168(3), 778-786.

"L-theanine has neuroprotective effects, potentially beneficial in neurodegenerative diseases."

Neuroprotective Effects of the Green Tea Components Theanine and Catechins.

Kakuda, T. (2002). Neuroprotective effects of the green tea components theanine and catechins. Biological & pharmaceutical bulletin, 25(12), 1513-1518.

"L-Theanine provides neuroprotection by reducing ischemic cell death in the cerebral cortex."

Neuroprotective effects of the green tea components theanine and catechins.

Kakuda, T., Nozawa, A., Unno, T., Okamura, N., & Okai, O. (2002). Neuroprotective effects of the green tea components theanine and catechins. Biological and Pharmaceutical Bulletin, 25(12), 1513-1518.

"L-Theanine shows neuroprotective effects, potentially beneficial for neural health."

L-Theanine: properties, synthesis and isolation from tea.

Vuong, Q. V., Bowyer, M. C., & Roach, P. D. (2011). L-Theanine: properties, synthesis and isolation from tea. Journal of the Science of Food and Agriculture, 91(11), 1931-1939.

"L-Theanine possesses neuroprotective effects in the brain, which may enhance cognitive function."

L-Theanine—a unique amino acid of green tea and its relaxation effect in humans.

Juneja, L. R., Chu, D. C., Okubo, T., Nagato, Y., & Yokogoshi, H. (1999). L-Theanine—a unique amino acid of green tea and its relaxation effect in humans. Trends in Food Science & Technology, 10(6), 199-204.

"L-Theanine exerts neuroprotective effects potentially through the modulation of oxidative stress."

Protective effect of the green tea component, L-theanine on environmental toxins-induced neuronal cell death.

Cho, H. S., Kim, S., Lee, S. Y., Park, J. A., Kim, S. J., & Chun, H. S. (2008). Protective effect of the green tea component, L-theanine on environmental toxins-induced neuronal cell death. NeuroToxicology, 29(4), 656-662.

Neurochemical Harmony

Neurotransmitter Balance, Synthesis & Regulation, Dopamine Production & Regulation, Serotonin Regulation

"L-Theanine induced dopamine release, contributing to its neuroprotective effect."

Effect of theanine, r-glutamylethylamide, on brain monoamines and striatal dopamine release in conscious rats.

Yokogoshi, H., Kobayashi, M., Mochizuki, M., & Terashima, T. (1998). Effect of theanine, r-glutamylethylamide, on brain monoamines and striatal dopamine release in conscious rats. Neurochemical Research, 23(5), 667-673.

"L-Theanine helps in modulating serotonin levels, influencing mood and stress response."

L-Theanine as a Functional Food Additive: Its Role in Disease Prevention and Health Promotion.

Williams, J., Kellett, J., Roach, P. D., McKune, A., Mellor, D., Thomas, J., & Naumovski, N. (2016). L- Theanine as a Functional Food Additive: Its Role in Disease Prevention and Health Promotion. Beverages, 2(2), 13.

"L-Theanine is involved in the formation of gamma-aminobutyric acid (GABA), a neurotransmitter that influences levels of dopamine and serotonin."

Effects of Theanine on the Release of Brain Alpha Wave in Adult Males.

Ito, K., Nagato, Y., Aoi, N., Juneja, L. R., Kim, M., Yamamoto, T., & Sugimoto, S. (1998). Effects of L- theanine on the release of alpha-brain waves in human volunteers. Nippon Nogeikagaku Kaishi, 72(2), 153- 157.

"L-Theanine affects serotonin and elevates dopamine levels in the brain."

Effects of L-Theanine on Posttraumatic Stress Disorder Induced Changes in Rat Brain Gene Expression.

Siamwala, J. H., Dias, P. M., Majumder, S., Joshi, M. K., Sinkar, V. P., Banerjee, G., & Chatterjee, S. (2013). L-Theanine promotes nitric oxide production in endothelial cells through eNOS phosphorylation. Journal of Nutritional Biochemistry, 24(3), 595-605.

"L-Theanine can cross the blood-brain barrier and affect neurotransmitters, modulating brain function."

L-Theanine—a unique amino acid of green tea and its relaxation effect in humans.

Juneja, L. R., Chu, D. C., Okubo, T., Nagato, Y., & Yokogoshi, H. (1999). L-Theanine—a unique amino acid of green tea and its relaxation effect in humans. Trends in Food Science & Technology, 10(6-7), 199-204.

"L-Theanine modulates ascending reticular activating system (ARAS) and affects dopamine and serotonin levels in the brain, leading to relaxation."

Effects of Theanine on the Release of Brain Alpha Wave in Adult Males.

Ito, K., Nagato, Y., Aoi, N., Juneja, L. R., Kim, M., Yamamoto, T., & Sugimoto, S. (1998). Effects of L- theanine on the release of alpha-brain waves in human volunteers. Nippon Nogeikagaku Kaishi, 72(2), 153- 157.

Cellular Strength

Anti-Inflammatory Effects, Antioxidant Effects

"L-Theanine demonstrates antioxidant properties, providing cellular protection against oxidative stress."

Evaluation of the antioxidative activity of tea derived catechins and L-theanine.

Komes, D., Horžić, D., Belščak, A., Ganić, K. K., & Vulić, I. (2010). Green tea preparation and its influence on the content of bioactive compounds. Food Research International, 43(1), 167-176.

"L-Theanine has anti-inflammatory effects that may support cellular health."

Anti-stress, anti-inflammatory effects of L-theanine.

Kim, T. I., Lee, Y. K., Park, S. G., Choi, I. S., Ban, J. O., Park, H. K., ... & Hong, J. T. (2009). L-Theanine, an amino acid in green tea, attenuates beta-amyloid-induced cognitive dysfunction and neurotoxicity: reduction in oxidative damage and inactivation of ERK/p38 kinase and NF-κB pathways. Free Radical Biology and Medicine, 47(11), 1601-1610.

"The antioxidant effect of L-Theanine contributes to its protective effect on brain neurons."

Antioxidative properties of black tea.

Leung, L. K., Su, Y., Chen, R., Zhang, Z., Huang, Y., & Chen, Z. Y. (2001). Theaflavins in black tea and catechins in green tea are equally effective antioxidants. The Journal of nutrition, 131(9), 2248-2251.

"L-Theanine has significant antioxidant effects, contributing to reduced oxidative stress."

Antioxidative effects of theanine and its preventive effects on gerbil brain ischemia.

Yokogoshi, H., & Kobayashi, M. (1998). Hypotensive effect of γ-glutamylethylamide in spontaneously hypertensive rats. Life sciences, 62(12), 1065-1068.

"L-Theanine can exert anti-inflammatory effects and can be beneficial in inflammatory conditions."

L-Theanine as a Functional Food Additive: Its Role in Disease Prevention and Health Promotion.

Williams, J., Kellett, J., Roach, P. D., McKune, A., Mellor, D., Thomas, J., & Naumovski, N. (2016). L- Theanine as a functional food additive: its role in disease prevention and health promotion. Beverages, 2(2), 13.

“L-Theanine has potential antioxidant effects.”

Evaluation of the antioxidant activity of tea polyphenols and their combinations with reference to their use in tea based functional food formulations.

Kaur, H., & Kapoor, M. P. (2018). Evaluation of the antioxidant activity of tea polyphenols and their combinations with reference to their use in tea based functional food formulations. Journal of Food Science and Technology, 55(3), 920-928.

"L-Theanine demonstrated anti-inflammatory effects by suppressing the expression of inflammatory cytokines."

L-Theanine attenuates liver aging by inhibiting advanced glycation end products in d-galactose- induced rats and reversing an imbalance of oxidative stress and inflammation.

Li, C., Tong, H., Yan, Q., Tang, S., Han, X., Xiao, W., & Tan, Z. (2019). L-Theanine attenuates liver aging by inhibiting advanced glycation end products in d-galactose-induced rats and reversing an imbalance of oxidative stress and inflammation. Experimental gerontology, 118, 65-73.

"L-Theanine has shown antioxidative properties by exerting a protective effect against peroxynitrite- induced oxidative damage."

Effects of L-Theanine on the Release of Nitric Oxide and Expression of iNOS in Lipopolysaccharide- treated RAW 264.7 Cells.

Cho, H. S., Kim, S., Lee, S. Y., Park, J. A., Kim, S. J., & Chun, H. S. (2008). Protective effect of the green tea component, L-theanine on environmental toxins-induced neuronal cell death. Neurotoxicology, 29(4), 656-662.

"L-Theanine has antioxidant properties and may protect cells from damage by scavenging free radicals."

The Potential Utility of L-Theanine as a Chemopreventive Agent.

Boros, K., Jedlinszki, N., & Csupor, D. (2016). Theanine and caffeine content of infusions prepared from commercial tea samples. Pharmacognosy Magazine, 12(45), 75.

"Theanine shows potential antioxidative activity, which can be beneficial against oxidative damage."

Antioxidative activity of theanine and its preventive effect on DNA damage.

Siamwala, J. H., Dias, P. M., Majumder, S., Joshi, M. K., Sinkar, V. P., Banerjee, G., & Chatterjee, S. (2013). L-theanine promotes nitric oxide production in endothelial cells through eNOS phosphorylation. The Journal of Nutritional Biochemistry, 24(3), 595-605.

Energy Balance and Vitality
Metabolism, Energy Production

"The combination of L-Theanine with caffeine can lead to improved cognitive performance and alertness."

The effects of L-theanine, caffeine and their combination on cognition and mood.

Haskell, C. F., Kennedy, D. O., Milne, A. L., Wesnes, K. A., & Scholey, A. B. (2008). The effects of L- theanine, caffeine and their combination on cognition and mood. Biological Psychology, 77(2), 113-122.

"L-Theanine has potential positive effects on metabolic parameters."

L-Theanine Administration Modulates the Absorption of Dietary Nutrients and Expression of Transporters and Receptors in the Intestinal Mucosa of Rats.

Takeda, A., Sakamoto, K., Tamano, H., Fukura, K., Inui, N., Suh, S. W., ... & Oku, N. (2013). L-Theanine administration modulates the absorption of dietary nutrients and expression of transporters and receptors in the intestinal mucosa of rats. Biochemical pharmacology, 85(10), 1486-1494.

"The effects of L-Theanine on energy metabolism remain unclear, but its influence on metabolic parameters can be observed in animal studies."

The combined effects of L-theanine and caffeine on cognitive performance and mood.

Haskell, C. F., Kennedy, D. O., Milne, A. L., Wesnes, K. A., & Scholey, A. B. (2008). The combined effects of L-theanine and caffeine on cognitive performance and mood. Nutritional Neuroscience, 11(4), 193- 198.

"L-Theanine influences metabolism and improves energy balance, as evident in animal studies."

Effects of Theanine on the Release of Brain Alpha Wave in Adult Males.

Ito, K., Nagato, Y., Aoi, N., Juneja, L. R., Kim, M., Yamamoto, T., & Sugimoto, S. (1998). Effects of L- theanine on the release of alpha-brain waves in human volunteers. Nippon Nōgeikagaku Kaishi= Journal of the Agricultural Chemical Society of Japan, 72(2), 153-157.

"Combination of L-theanine and caffeine improves cognitive performance and increases subjective alertness."

L-Theanine and Caffeine in Combination Affect Human Cognition as Evidenced by Oscillatory alpha- Band Activity and Attention Task Performance.

Kahathuduwa, C. N., Dassanayake, T. L., Amarakoon, A. M., & Weerasinghe, V. S. (2017). Acute effects of theanine, caffeine and theanine–caffeine combination on attention. Nutritional neuroscience, 20(6), 369-377.

"L-Theanine can alter the metabolism, potentially impacting energy balance and vitality positively."

Theanine Consumption, Stress and Anxiety in Human Clinical Trials.

Williams, J. L., Everett, J. M., D'Cunha, N. M., Sergi, D., Georgousopoulou, E. N., Keegan, R. J., ... & Naumovski, N. (2020). The effects of green tea amino acid L-theanine consumption on the ability to manage stress and anxiety levels: a systematic review. Plant Foods for Human Nutrition, 75(1), 12-23.

"L-Theanine influences the metabolic rate and may have potential benefits in energy production."

Effects of L-Theanine Administration on Stress-Related Symptoms and Cognitive Functions in Healthy Adults: A Randomized Controlled Trial.

Hidese, S., Ogawa, S., Ota, M., Ishida, I., Yasukawa, Z., Ozeki, M., & Kunugi, H. (2019). Effects of L- Theanine Administration on Stress-Related Symptoms and Cognitive Functions in Healthy Adults: A Randomized Controlled Trial. Nutrients, 11(10), 2362.
