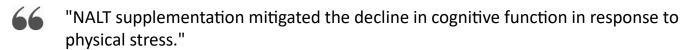


### Cognitive Clarity and Focus

Memory Enhancement, Learning, Focus and Attention



Tyrosine improves cognitive performance and reduces blood pressure in cadets after one week of a combat training course."

Deijen, J.B., Wientjes, C.J., Vullinghs, H.F., Cloin, P.A., & Langefeld, J.J. (1999). Brain Research Bulletin, 48(2), 203-209.

66 "Tyrosine supplementation appears to effectively improve cognitive performance in conditions of sleep deprivation."

The effects of tyrosine on cognitive performance during extended wakefulness."

Thomas, J.R., Lockwood, P.A., Singh, A., & Deuster, P.A. (1999). Military Psychology, 11(3), 203-213.

"Tyrosine supplementation helped in maintaining working memory performance under multitasking situations."

Tyrosine improves cognitive performance and reduces blood pressure in cadets after one week of a combat training course."

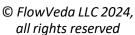
Deijen, J.B., Wientjes, C.J.E., Vullinghs, H.F.M., Cloin, P.A., & Langefeld, J.J. (1999). Brain Research Bulletin, 48(2), 203-209.















#### **Emotional Mastery**

Mood Enhancement & Regulation, Stress Reduction, Relaxation



"N-Acetyl-L-Tyrosine may play a role in alleviating stress symptoms and mood regulation."



Dietary tyrosine/phenylalanine depletion effects on behavioral and brain signatures of human motivational processing."



Bjork, J.M., Grant, S.J., Chen, G., & Hommer, D.W. (2014). Neuropsychopharmacology, 39(3), 595-604.



"Tyrosine can potentially act as a mood stabilizer and could be beneficial in managing stress and anxiety."



Effects of dietary neurotransmitter precursors on depressive symptoms."



Marx, W., Lane, M., Rocks, T., Ruusunen, A., Loughman, A., Lopresti, A., & Jacka, F. (2021). Psychological Medicine, 51(1), 22-32.



"NALT may aid in reducing symptoms of stress and anxiety, potentially due to its role in neurotransmitter synthesis."



Effect of tyrosine supplementation on clinical and healthy populations under stress or cognitive demands—A review."



Jongkees, B.J., Hommel, B., Kühn, S., & Colzato, L.S. (2015). Journal of Psychiatric Research, 70, 50-57.













#### Neurochemical Harmony

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



"Tyrosine supplements could play a role in improving mood by modulating the synthesis of dopamine and norepinephrine."



Tyrosine, phenylalanine, and catecholamine synthesis and function in the brain."



Fernstrom, J.D. (2007). The Journal of Nutrition, 137(6), 1539S-1547S.



"Tyrosine supplementation may help in maintaining neurotransmitter balance under conditions of environmental stress."



Effects of tyrosine on cognitive function and blood pressure under stress."

Deijen, J.B., & Orlebeke, J.F. (1994). Behavioral and Neural Biology, 61(3), 213-219.



"Tyrosine's role in dopamine synthesis may help alleviate symptoms of depression and improve mood under stressful conditions."



Tyrosine for depression: a systematic review."

Miodownik, C., Lerner, V., Vishne, T., Sela, B.A., & Levine, J. (2011). Journal of Affective Disorders, 130(1-2), 1-9.



## Cellular Strength

Anti-Inflammatory Effects, Antioxidant Effects



"NALT demonstrates antioxidant properties which might play a role in cellular protection."



L-tyrosine and its derivatives as multifunctional agents: a review."



Landucci, M.A., Antoni, D., & Godoi, S. (2019). Amino Acids, 51(8), 1167-1183.



**66** = Study Result or Quote





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"Tyrosine could potentially protect cells against toxins and might play a role in preventing neurodegenerative diseases."



Tyrosine hydroxylase: human isoforms, structure and regulation in physiology and pathology."



Daubner, S.C., Le, T., & Wang, S. (2011). The FEBS journal, 278(11), 1866-1879.

"Tyrosine's antioxidant properties may confer protective effects against cellular damage."



The role of tyrosine in antioxidant protection and its possible implications in redox regulation of muscle cells."

Siques, P., Brito, J., Naveas, N., Pulido, R., De la Cruz, J.J., & León-Velarde, F. (2014). Current Medicinal Chemistry, 21(31), 3581-3587.



# **Energy Balance and Vitality**

Metabolism, Energy Production

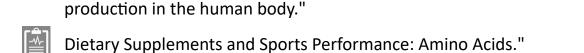
"NALT may aid in the production of energy and has potential effects on metabolism regulation."



The effects of tyrosine on cognitive performance during extended wakefulness."

Neri, D.F., Wiegmann, D., Stanny, R.R., Shappell, S.A., McCardie, A., & McKay, D.L. (1995). Aviation, Space, and Environmental Medicine, 66(4), 313-319.

66 "NALT supplementation has the potential to modulate metabolic processes and energy



Williams, M.H. (2005). Journal of the International Society of Sports Nutrition, 2(2), 63-67.



**66** = Study Result or Quote





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"Tyrosine supplementation may have a role in modulating metabolic rate and energy production."



Tyrosine supplementation mitigates working memory decrements during cold exposure."



Mahoney, C.R., Castellani, J., Kramer, F.M., Young, A., & Lieberman, H.R. (2007). Physiology & Behavior, 92(4), 575-582.





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