Absolmmune



7350 SW 60th Ave., Suite 2 Ocala, FL 34476 www.AbsoluteHealthOcala.com







- Broad-Spectrum Support for Healthy Immune Function*
- Supports Healthy Respiratory Function*
- Maintains Normal Inflammatory Balance*

Absolmmune is a targeted blend of nutrients designed to provide a broad-spectrum support to the body's immune reserves. The formula includes quercetin, a powerful bioflavonoid that aids in supporting the immune system. Vitamin C and N-acetyl cysteine are potent antioxidants that promote respiratory function and support the function of quercetin. Vitamin D and zinc are important micronutrients needed to create a robust immune reserve. This powerful combination works to promote healthy respiratory and immune function.*

All Absolute Health Formulas Meet or Exceed cGMP Quality Standards

Discussion

Quercetin Quercetin is best known for its antioxidant activity in scavenging free radicals. Additionally, quercetin helps balance the level of cytokines and improve T-lymphocyte balance. Several mechanism studies highlight quercetin's ability to provide immune system support while also stimulating the ciliary beat frequency of the nasal epithelium, aiding the excretion of respiratory mucus. 1,2,3 Quercetin has been shown to block the mechanisms by which microbes enter the host cells and replicate within the body. 3 Additionally, a human clinical trial found quercetin supplementation supported healthy respiratory function following a stressor (i.e., intense bout of exercise), compared to placebo. 4

Vitamin C Vitamin C is a potent antioxidant that has been studied for many years for its immune-supporting effects. Through its antioxidant functions, vitamin C has been shown to protect important immune cells from oxidative damage.⁵ Data shows vitamin C is heavily concentrated in macrophages, supports lymphocyte activity, modulates cytokine release, improves endothelial function, restores mitochondrial function, and can directly support a challenged immune system.³ Of particular interest, vitamin C has been shown to recycle oxidized quercetin back to its parent compound, which supports a robust immune response while increasing the efficacy of quercetin.^{3,6}

N-Acetyl Cysteine N-acetyl cysteine (NAC) is the precursor of the master antioxidant, glutathione. NAC has been shown to support mucus clearance and normal respiratory function, through its ability to cleave disulfide bonds in mucus. The NAC is found to raise glutathione levels, which is important to protect the biologic activity and safe metabolism of quercetin. Along with protecting the activity of quercetin, NAC supports all detoxification pathways and helps maintain immune balance by supporting glutathione levels. 10,11

Zinc Zinc is essential for maintaining immune system integrity and healthy immune development. 12,13,14 Supplementation with zinc supports key immune functions such as natural killer cell activity and phagocytosis by macrophages and neutrophils. 15 Furthermore, studies show that zinc can directly support the body during immune system challenges and can help support healthy respiratory function. 15,16

Vitamin D3 It has been shown that low vitamin D levels have immunologic implications with a significant decrease in immune function, affecting respiratory health. 11,12,17 This is most likely because the vitamin D receptor is expressed by several immune cells including monocytes, macrophages, dendritic cells, B and T cells. 18 Supplementation with vitamin D has been shown to modulate NK cell activity to promote a healthy innate immune response. 15,19 Along with these immune-supporting benefits, vitamin D has also been shown to support the respiratory system and epithelial tight junction integrity. 15,19,20,21



Supplement Facts

Serving Size 2 Capsules

A	Amount Per Serving	% Daily Value
Vitamin C (as Ascorbic Acid USP)	600 mg	667%
Vitamin D (D3 as Cholecalciferol)	62.5 mcg (2,500 IU)	313%
Zinc (as TRAACS™ Zinc Bisglycinate	25 mg Chelate)	227%
N-Acetyl-L-Cysteine USP	600 mg	*
Quercetin Dihydrate	250 mg	*

Directions

Take 2 capsules per day or as recommended by your health care professional.

Caution

If you are pregnant or nursing, consult your physician before taking this product.

Does Not Contain

Gluten, yeast, soy, corn, artificial flavors and colors.



References

- 1. Wu W, Li R, Li X, et al. Quercetin as an Antiviral Agent Inhibits Influenza A Virus (IAV) Entry. Viruses. 2015;8(1).
- 2. Mehrbod P, Hudy D, Shyntum D, Markowski J, Łos MJ, Ghavami S. Quercetin as a Natural Therapeutic Candidate for the Treatment of Influenza Virus. Biomolecules. 2020;11(1).
- 3. Colunga Biancatelli RML, Berrill M, Catravas JD, Marik PE. Quercetin and Vitamin C: An Experimental, Synergistic Therapy for the Prevention and Treatment of SARS-CoV-2 Related Disease (COVID-19). Frontiers in immunology. 2020;11:1451.
- 4. Nieman DC, Henson DA, Gross SJ, et al. Quercetin reduces illness but not immune perturbations after intensive exercise. Med Sci Sports Exerc. 2007;39(9):1561-1569.
- 5. Carr AC, Maggini S. Vitamin C and Immune Function. Nutrients. 2017;9(11).
- 6. Boots AW, Haenen GR, Bast A. Health effects of quercetin: from antioxidant to nutraceutical. European journal of pharmacology. 2008:585(2-3):325-337.
- 7. De Rosa SC, Zaretsky MD, Dubs JG, et al. N-acetylcysteine replenishes glutathione in HIV infection. European journal of clinical investigation. 2000;30(10):915-929.
- 8. Aldini G, Altomare A, Baron G, et al. N-Acetylcysteine as an antioxidant and disulphide breaking agent: the reasons why. Free Radic Res. 2018;52(7):751-762.
- 9. Rushworth GF, Megson IL. Existing and potential therapeutic uses for N-acetylcysteine: the need for conversion to intracellular glutathione for antioxidant benefits. Pharmacology & therapeutics. 2014;141(2):150-159.
- 10. Grandjean EM, Berthet P, Ruffmann R, Leuenberger P. Efficacy of oral long-term N-acetylcysteine in chronic bronchopulmonary disease: a meta-analysis of published double-blind, placebo-controlled clinical trials. Clinical therapeutics. 2000;22(2):209-221.
- 11. Falluel-Morel A, Lin L, Sokolowski K, McCandlish E, Buckley B, DiCicco-Bloom E. N-acetyl cysteine treatment reduces mercury-induced neurotoxicity in the developing rat hippocampus. J Neurosci Res. 2012;90(4):743-750.
- 12. Linus Pauling Institute. Zinc. 2019; https://lpi.oregonstate. edu/mic/minerals/zinc#impaired-immune -function. Accessed January
- 13. Baum, M. K., Shor-Posner, G., & Campa, A. (2000). Zinc status in human immunodeficiency virus infection. The Journal of nutrition, 130(5S Suppl), 1421S–3S. https://doi. org/10.1093/jn/130.5.1421S
- 14. Maares, M., & Haase, H. (2016). Zinc and immunity: An essential interrelation. Archives of biochemistry and biophysics, 611, 58–65. https://doi.org/10.1016/j. abb.2016.03.022
- 15. Rondanelli M, Miccono A, Lamburghini S, et al. Self-Care for Common Colds: The Pivotal Role of Vitamin D, Vitamin C, Zinc, and Echinacea in Three Main Immune Interactive Clusters (Physical Barriers, Innate and Adaptive Immunity) Involved during an Episode of Common Colds-Practical Advice on Dosages and on the Time to Take These Nutrients/Botanicals in order to Prevent or Treat Common Colds. Evidence-based complementary and alternative medicine: eCAM. 2018;2018:5813095.
- 16. Hemilä H. Zinc lozenges and the common cold: a meta-analysis comparing zinc acetate and zinc gluconate, and the role of zinc dosage. JRSM open. 2017;8(5):2054270417694291.
- 17. Ginde AA, Sullivan AF, Mansbach JM, Camargo CA, Jr. Vitamin D insufficiency in pregnant and nonpregnant women of childbearing age in the United States. Am J Obstet Gynecol. 2010;202(5):436.e431-438.
- 18. Sassi F, Tamone C, D'Amelio P. Vitamin D: Nutrient, Hormone, and Immunomodulator. Nutrients. 2018;10(11).
- 19. Prietl B, Treiber G, Pieber TR, Amrein K. Vitamin D and immune function. Nutrients. 2013;5(7):2502-2521.
- 20. Martineau AR, Jolliffe DA, Hooper RL, et al. Vitamin D supplementation to prevent acute respiratory tract infections: systematic review and meta-analysis of individual participant data. BMJ. 2017;356:i6583.
- 21. Shi, Y. Y., Liu, T. J., Fu, J. H., Xu, W., Wu, L. L., Hou, A. N., & Xue, X. D. (2016). Vitamin D/VDR signaling attenuates lipopolysaccharide-induced acute lung injury by maintaining the integrity of the pulmonary epithelial barrier. Molecular medicine reports, 13(2), 1186–1194. https://doi.org/10.3892/mmr.2015.4685

*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.