Quercetin & Nettles



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



Clinical Applications

- Supports a Balanced Inflammatory Response*
- May Support Immune System*
- Supports Antioxidant Protection*
- May Act as a Natural Antihistamine without Drowsiness*



Quercetin & Nettles contains 600 mg quercetin and 600 mg nettles. Research suggests that nettle's actions, which support a balanced inflammatory response, are attributed to its ability to interrupt the production and actions or inflammation-producing cytokines, prostaglandins, and leukotrienes.

All Absolute Health Formulas Meet or Exceed cGMP Quality Standards

Discussion

Quercetin & Nettles provides 600 mg quercetin and 600 mg nettles per three-capsule serving. This targeted and highly impactful combination of ingredients helps modulate inflammatory and immune responses in conditions that have an inflammatory etiopathology such as allergic rhinitis, asthma, eosinophilia, inflammatory bowel diseases, osteoarthritis, obesity, type II diabetes, and even certain cancers. 1-5 Research suggests that both nettle's and quercetin's anti-inflammatory, antioxidant, antiviral, and anticancer properties are attributed to their ability to interrupt the production and actions of pro-inflammatory mediators such as cytokines, leukotrienes, prostaglandins, and interleukins. 5-9

Quercetin Quercetin, also known as the "king of the flavonoids", is among the top plant-based polyphenolic compounds due to its powerful antioxidant properties and its ability to support a healthy inflammatory response in the body. Quercetin is a potent flavanol found in many foods that are recognized for their health benefits, such as red onions, apples, olive oil, dark berries and grapes, capers, broccoli, salad greens and culinary herbs such as dill, cilantro, watercress, and radicchio.⁶ (This phytochemical contributes to the richly colored pigments in these foods.) Novel genome research has found that upon binding to DNA or other genomeassociated proteins, quercetin assumes the role of a cis-regulatory transcription factor for genetic expressions that are involved in the cell cycle, differentiation, and development. 10 Moreover, this polyphenolic compound also demonstrates an ability to aid in the attenuation of lipid peroxidation, capillary permeability, and platelet aggregation.4

Nettles The stinging nettle plant (Urtica dioica L.) has traditionally been used as a folk medicine remedy for supporting respiratory and joint health and various other applications, such as with hypertension, throughout the world. 11 Documentation points to its use in ancient Egypt, ancient Greece, and among indigenous peoples of North America, and can be consumed directly or made into soups, tea, and even brewed into beer. Nettle has a very high content of vitamin C and iron which underlies its role in the immune response as a potent antioxidant, anti-inflammatory, and anti-histaminic agent. 12 Like quercetin, nettle is also a natural antihistamine. However, unlike many over-the-counter choices that regulate histamine, nettle does not cross the blood-brainbarrier, which means it is unlikely to cause the drowsiness associated with common OTC products that promote upper respiratory

Support for Seasonal Allergies & Respiration Health These two plant extracts are significant for supporting the immune system and the body's natural inflammatory response upon exposure to environmental allergens. When exposed to these allergens, quercetin is known to inhibit histamine release from basophils and mast cell (MC) degranulation.⁵ Similar to quercetin, nettle also has natural antihistamine effects. However, unlike many over-the-counter choices to regulate histamine levels, the phytoconstituents of these plant extracts do not cross the blood-brain-barrier, thus it is unlikely to cause the drowsiness or other adverse events associated with common OTC medications and can be taken at any time during the day. 13

Nettle leaf extract was shown in vitro to reduce allergic and inflammatory responses via its antagonistic effect against the key receptors and enzymes involved in pro-inflammatory pathways: histamine-1 (H1) receptor, mast cell tryptase, COX-1, COX-2, and hematopoietic prostaglandin D(2) synthase, preventing the degranulation and release of proinflammatory mediators, such as prostaglandins, that cause hay fever symptoms and are associated with allergic rhinitis. 8 In a randomized controlled trial of patients diagnosed with allergic rhinitis, Urtica dioica root extract supplementation for one month significantly improved clinical symptom severity, significantly reduced nasal eosinophil count, as well as reduced IFN-gamma levels compared to controls. 15 Quercetin can help improve T-regulatory helper cell (i.e., Th1/Th2) balance and arrest antigen-specific IgE antibody formation.⁶ In an animal model, quercetin significantly reduced epithelial thickness, goblet, and mast cell numbers, IgE levels, and immunohistochemical markers compared to untreated mice with allergic airway inflammation. 16 Quercetin has an inhibitory effect on histidine decarboxylase (HDC) mRNA transcription, which is the enzymes responsible for catalyzing the synthesis of histamine from histidine and suppresses IL-6 release by human mast cells, which may help resolve in part inflammatory conditions. 5 Furthermore, quercetin interacts with several of the protein kinase enzymatic reactions (e.g., displacing ATP binding from PI3K and activating AMPactivated protein kinase), which is shown to exert anti-cancer and anti-inflammatory effects. A review elucidates how the properties of quercetin are effective for late-phase bronchial asthma responses, allergic rhinitis, and peanut-induced anaphylaxis, and that quercetin is more efficient in inhibiting interleukins 6 and 8 than antiallergy drugs.6



Supplement Facts

Serving Size 3 capsules Servings Per Container 30

Amount Per Serving	% Daily Value	
Quercetin	600 mg	*
Nettle Extract (<i>Urtica dioica</i>)(leaf)	600 mg	*

Other Ingredients: Microcrystalline cellulose, cellulose (capsule), silicon dioxide, vegetable stearate.

Directions

As a dietary supplement, take 3 capsules per day with meals, or as directed by your healthcare provider. As directed by your healthcare provider, this product can be scaled based on the intensity of symptoms and can be titrated up or down to match symptoms and can be used prophylactically.



References

- 1. Li, Y., Yao, J., Han, C., Yang, J., Chaudhry, M. T., Wang, S., ... Yin, Y. (2016). Quercetin, inflammation, and immunity. Nutrients, 8(3), 167. DOI:10.3390/nu8030167
- 2. Lin, R., Piao, M., & Song, Y. (2019). Dietary quercetin increases colonic microbial diversity and attenuates colitis severity in Citrobacter rodentium-infected Mice. Frontiers in microbiology, 10, 1092. DOI:10.3389/fmicb.2019.01092
- 3. Britti, D., Crupi, R., Impellizzeri, D., Gugliandolo, E., Fusco, R., Schievano, C., ... Cuzzocrea, S. (2017). A novel composite formulation of palmitoylethanolamide and quercetin decreases inflammation and relieves pain in inflammatory and osteoarthritic pain models. BMC veterinary Research, 13(1), 229. DOI:10.1186/s12917-017-1151-z
- 4. Chen, S., Jiang, H., Wu, X., & Fang, J. (2016). Therapeutic effects of quercetin on inflammation, obesity, and type 2 diabetes. Mediators of Inflammation, 2016, 9340637. DOI:10.1155/2016/9340637
- 5. Shaik, Y., Caraffa, A., Ronconi, G., Lessiani, G., & Conti, P. (2018). Impact of polyphenols on mast cells with special emphasis on the effect of quercetin and luteolin. Central-European Journal of Immunology, 43(4), 476–481. DOI:10.5114/ceji.2018.81347
- 6. Mlcek, J., Jurikova, T., Skrovankova, S., & Sochor, J. (2016). Quercetin and its anti-allergic immune response. Molecules (Basel, Switzerland), 21(5), 623. DOI:10.3390/molecules21050623
- 7. Francišković, M., Gonzalez-Pérez, R., Orčić, D., Medina, F. S. D., Martínez-Augustin, O., Svirčev, E., ... Mimica-Dukić, N. (2017). Chemical composition and immuno-modulatory effects of Urtica dioica L. (stinging nettle) extracts. Phytotherapy Research, 31(8), 1183–1191. DOI: 10.1002/ptr.5836
- Roschek, B., Fink, R. C., Mcmichael, M., & Alberte, R. S. (2009). Nettle extract (Urtica dioica) affects key receptors and enzymes associated with allergic rhinitis. Phytotherapy Research, 23(7), 920–926. DOI: 10.1002/ptr.2763
 Jasso-Miranda, C., Herrera-Camacho, I., Flores-Mendoza, L. K., Dominguez, F., Vallejo-Ruiz, V., Sanchez-Burgos, G. G.,Reyes-
- Jasso-Miranda, C., Herrera-Camacho, I., Flores-Mendoza, L. K., Dominguez, F., Vallejo-Ruiz, V., Sanchez-Burgos, G. G., Reyes-Leyva, J. (2019). Antiviral and immunomodulatory effects of polyphenols on macrophages infected with dengue virus serotype 2 and 3 enhanced or not with antibodies. Infection and drug resistance, 12, 1833–1852. DOI:10.2147/IDR.S210890
- 10. Atrahimovich, D., Samson, A. O., Barsheshet, Y., Vaya, J., Khatib, S., & Reuveni, E. (2019). Genome-wide localization of the polyphenol quercetin in human monocytes. BMC Genomics, 20(1), 606. DOI:10.1186/s12864-019-5966-9
- Dhouibi, R., Affes, H., Salem, M. B., Hammami, S., Sahnoun, Z., Zeghal, K. M., & Ksouda, K. (2019). Screening of pharmacological uses of Urtica dioica and other benefits. Progress in Biophysics and Molecular Biology. DOI: 10.1016/j.pbjomolbjo.2019.05.008
- 12. Said, A. A. H., Otmani, I. S. E., Derfoufi, S., & Benoussa, A. (2015). Highlights on nutritional and therapeutic value of stinging nettle (Urtica dioica). International Journal of Pharmacy and Pharmaceutical Sciences, 7(10), 8-14. Retrieved from https://www.researchgate.net/profile/Amal_Ait_Haj_Said/publication/283675999_Highlights_on_nutritional_and_therapeutic_value_of_stinging_nettle_Urtica_Dioica/links/5852f6bd08ae7d33e01ab3a2.pdf
- 13. Yatoo, M. I., Gopalakrishnan, A., Saxena, A., Parray, O. R., Tufani, N. A., Chakraborty, S., ... Iqbal, H. M. (2018).

 Antiinflammatory drugs and herbs with special emphasis on herbal medicines for countering inflammatory diseases and disorders A review. Recent Patents on Inflammation & Allergy Drug Discovery, 12(1), 39–58. DOI: 10.2174/1872213x12666180115153635
- 14. Zemmouri, H., Sekiou, O., Ammar, S., El Feki, A., Bouaziz, M., Messarah, M., & Boumendjel, A. (2017). Urtica dioica attenuates ovalbumin-induced inflammation and lipid peroxidation of lung tissues in a rat asthma model. Pharmaceutical Biology, 55(1), 1561–1568. DOI:10.1080/13880209.2017.1310905
- 15. Bakhshaee, M., Mohammad Pour, A. H., Esmaeili, M., Jabbari Azad, F., Alipour Talesh, G., Salehi, M., & Noorollahian Mohajer, M. (2017). Efficacy of supportive therapy of allergic rhinitis by stinging nettle (Urtica dioica) root extract: a randomized, double-blind, Placebo-controlled, clinical trial. Iranian Journal of Pharmaceutical Research: IJPR, 16(Suppl),112–118.
- 16. Caglayan Sozmen, S., Karaman, M., Cilaker Micili, S., Isik, S., Bagriyanik, A., Arikan Ayyildiz, Z., Uzuner, N., Anal, O., & Karaman, O. (2017). Effects of quercetin treatment on epithelium-derived cytokines and epithelial cell apoptosis in allergic airway inflammation mice model. Iranian Journal of Allergy, Asthma, and Immunology, 15(6), 487-497. Retrieved from http://ijaai.tums.ac.ir/index.php/ijaai/article/view/781

*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.