C EXTRA + QUERCETIN BIOFLAVONOIDS

500 mg / 500 mg & 500 mg / 250 mg

NPN 02240293
NPN 00523224

RESEARCH INFORMATION

Feature summary

Natural Factors C Extra + Quercetin Bioflavonoids is an immune-support formula that combines the antioxidant benefits of vitamin C with the bioflavonoid quercetin for enhanced support. Vitamin C is not stored by the body and needs to be consumed daily in order to maintain the levels recommended for overall health. Additionally, the body's need for vitamin C increases during times of stress, such as intense physical activity, illness, antibiotic use, and exposure to pollutants.

Vitamin C is an essential nutrient that helps in collagen formation, which is needed for the normal development and maintenance of bones, cartilage, teeth, and gums. It also helps maintain the body's ability to metabolize nutrients. Quercetin is a bioflavonoid found in many fruits, vegetables, and herbs. It has a wide range of benefits, including allergy relief, cardiovascular support, and enhancing the body's absorption and use of vitamin C. Both vitamin C and quercetin also help protect tissues from free radical damage.

C Extra + Quercetin Bioflavonoids contains 500 mg of vitamin C blended with quercetin in each tablet or easy-to-swallow capsule. It contains no preservatives, sweeteners, gluten, or GMOs, and offers a convenient one-per-day formula for anyone looking for additional immune and antioxidant support.

How it works

Vitamin C, also called ascorbic acid, is an essential water-soluble vitamin that must be consumed daily through food or supplementation. Excess amounts are eliminated through the urine.

Vitamin C has multiple roles in supporting immune function. It is needed to maintain a healthy epithelial barrier to protect against pathogenic microorganisms (Carr & Maggini, 2017). It also increases the production and activity of various immune system cells, such as lymphocytes that help protect against infection and neutrophils that help heal infected tissue (Carr & Maggini, 2017).

Vitamin C scavenges and neutralizes the free radicals responsible for oxidative damage (Carr & Maggini, 2017). This activity supports immunity by helping regenerate the glutathione and vitamin E molecules needed for antioxidant defence within cells (Carr & Maggini, 2017).

Vitamin C is a cofactor in the synthesis of collagen that makes up the framework of bones, cartilage, teeth, gums, skin, joints, and other connective tissue in the body (DePhillipo et al., 2018). A deficiency in vitamin C leads to scurvy, where collagen is weakened and wounds are unable to heal (Carr & Maggini, 2017).

Quercetin is chemically recognized as a bioflavonoid. It is a potent antioxidant that works cooperatively with vitamin C to improve their antioxidant potential and effectiveness at scavenging and neutralizing the free radicals responsible for oxidative damage. When taken in combination with vitamin C, quercetin also reduces circulating levels of inflammatory biomarkers (Askari et al., 2012).

Research

Oxidative stress is an underlying factor in many forms of illness. Dietary antioxidants, such as vitamin C and quercetin, play important roles in immune function by protecting the body against the free radicals responsible for oxidative stress (Fondell et al., 2011). Multiple studies have correlated low vitamin C levels with higher rates of oxidative stress, impaired immunity, and increased susceptibility to infection (Carr et al., 2020; Paschalis et al., 2016). In addition to contributing to poor health, low vitamin C status can also be a consequence of illness driven by the body's increased need for vitamin C when under stress (Carr et al., 2020).

A medical assessment of 50 patients with community-acquired pneumonia classified 62% with hypovitaminosis C (plasma levels at 5–15 mg/L) and 22% as being vitamin C deficient. In comparison, healthy controls had a rate of 8% hypovitaminosis C and no deficiencies. Pneumonia patients were also found to have elevated levels of oxidative stress (Carr et al., 2020).

A similar correlation was identified through a placebo-controlled study where healthy, recreationally trained men with a low vitamin C intake (35 mg/day) were found to have significantly higher levels of oxidative stress markers than men with a high vitamin C intake (164 mg/day). Although all men were healthy, those with a low vitamin C intake did not perform as well as the other men on aerobic exercise tests (measured as VO2max) (Paschalis et al., 2016).

Due to its role in supporting immune function, vitamin C is commonly used to prevent colds. A population-based study of 1,509 participants associated an average intake of 135 mg of vitamin C per day from food and supplements with a 31% lower risk of upper respiratory tract infections (URTIs) in women aged 20–60, compared to women who consumed less vitamin C (Fondell et al., 2011). Vitamin C's antioxidant activity and its role in collagen formation help protect joint cartilage from degenerative conditions, such as osteoarthritis. A 21-year prospective cohort study assessed the use of vitamin C supplements in people aged 40 and older. Results showed that participants without baseline osteoarthritis who regularly took vitamin C had an 11% lower rate of degenerative knee cartilage than those who did not supplement with vitamin C (Peregoy & Wilder, 2011).

Similar to vitamin C, supplementing with the antioxidant bioflavonoid quercetin has been shown to lower circulating blood levels of inflammatory markers, such as C-reactive protein (CRP). A meta-analysis assessed the results of seven randomized controlled trials on healthy and obese patients supplemented with quercetin (ranging from 150–500 mg per day) for up to 10 weeks. Results showed that quercetin significantly reduced CRP levels, most significantly in doses at or above 500 mg per day, and in patients with baseline CRP levels below 3 mg/L (Mohammadi-Sartang et al., 2017).

Quercetin's antioxidant potential is improved when taken with vitamin C. In a randomized, placebo-controlled clinical trial, healthy, physically active participants were supplemented with either 500 mg of quercetin plus 250 mg of vitamin C, 500 mg of quercetin alone, 250 mg of vitamin C alone, or a placebo. After eight weeks, those who took quercetin and vitamin C together had the most significant reduction in inflammatory biomarkers, including CRP. Researchers concluded that quercetin and vitamin C work cooperatively to recycle quercetin back into its antioxidant state (Askari et al., 2012). Quercetin supplementation was especially beneficial for physically fit adults aged 40 and up participating in a double-blind, placebo-controlled study. A dose of 1000 mg of quercetin per day was found to lower URTI severity by 36% and related sick days by 31% compared to the placebo (Heinz et al., 2010).

Quercetin's role as an antioxidant has tremendous therapeutic potential and is being further investigated for a range of additional health benefits.

Ingredients

Each tablet contains:

Vitamin C (ascorbic acid)	500 mg
Quercetin (bioflavonoids)	500 mg

Each capsule contains:

Vitamin C (ascorbic acid)	500 mg
Quercetin (bioflavonoids)	250 mg

Dosage

Recommended adult dose: 1 tablet or capsule daily with food or as directed by a health care practitioner. Consult a health care practitioner for use beyond 12 weeks.

Cautions

Consult a health care practitioner prior to use if you are pregnant or breastfeeding. Keep out of the reach of children.

References

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