



# QUERCETIN COMPLEX

Combats aging and inflammation

The development of acute and chronic diseases, such as allergies, inflammation, diabetes, and heart disease affects millions of people daily. The appearance and onset of disease is often a complex process characterized by a number of events, including free radical damage and inflammatory processes. The inflammatory cascade is a complex process that has been shown to play a key role in the development of cancer and most chronic illnesses, including pulmonary, cardiovascular, neurological, neurodegenerative, metabolic, autoimmune, and even psychological disorders. Lifestyle measures that can counteract the development of inflammation, include weight reduction, physical exercise, and dietary measures such as increased fruit and vegetable intake. Specialized diets and the use of dietary supplements high in antioxidants and other nutrients may play a significant role in the prevention and management of diseases and provide protection from the accelerated aging that results from free radical damage, inflammation, and other damaging processes.

Flavonoids, such as quercetin, grape seed extract, coenzyme Q10, and other antioxidant nutrients are found in high amounts in vegetables and fruits. Increased intake of these powerful nutrients can be helpful in the prevention and management of many conditions, including inflammation, cardiovascular disease, and diabetes, as well as helping to maintain optimal health and prevent accelerated aging. In addition to aging and disease, normal metabolic processes, exposure to environmental contaminants and ultraviolet light, and individual genetic and physiological make-up can increase oxidative stress and the need for specialized antioxidant nutrients.

Natural Factors Quercetin Complex is an exceptional antioxidant formula specially developed to maintain optimal health, combat disease, and prevent accelerated aging. It contains quercetin, grape seed extract, red orange extract, coenzyme Q10, and curcumin.

*Quercetin* is one of the most widely distributed and extensively studied flavonoids and possesses wide-ranging benefits, including anti-allergenic, anti-inflammatory, antioxidant, antiviral, and antimicrobial effects.

*Coenzyme Q10*, or CoQ10, is also known as ubiquinone because it is ubiquitous – present in all plant, animal, and human cells. This antioxidant is known for its heart-healthy benefits.

*Grape seed extract*, containing high amounts of proanthocyanidins, exhibits a broad range of therapeutic benefits, including antioxidant, anti-inflammatory, cardioprotective, hepatoprotective, and neuroprotective effects. Proanthocyanidins are the bioflavonoid components in red wine thought to be responsible for red wine's beneficial cardiovascular effects.

*Red orange extract* is obtained from three red orange varieties that are used traditionally for their many health-protective properties.

*Curcumin*, the primary active constituent of turmeric, is known to possess anti-inflammatory, antioxidant, and antimicrobial properties.

## THE HEALTH BENEFITS OF QUERCETIN COMPLEX

- Supports optimal health by preventing accelerated aging
- Helps combat free radical formation from normal metabolic processes and during the development of disease
- Helps prevent the development of allergies, inflammation, diabetes, circulatory disorders, and heart disease

## COMBATS ALLERGIES AND INFLAMMATION

Quercetin stabilizes membranes of mast cells and reduces the release of histamine, which plays a key role in allergic inflammatory responses and helps control allergy symptoms. Red oranges are an important component of the Mediterranean diet and extracts of red orange contain high levels of antioxidants including flavanoids and ascorbic acid. Red orange extract has been found to exhibit antihistamine and anti-inflammatory properties and may decrease oxidative damage occurring in populations exposed to a high level of oxidative insults, such as air pollution and smoking. The protective effects of red orange extract were studied in a group of 20 traffic police officers where physiological markers indicating oxidative damage induced by pollution was decreased (Bonina, *et al*). Curcumin decreases inflammation through a number of mechanisms, including decreasing the production of key inflammatory factors, such as cytokines and tumour necrosis factor. Human clinical trials have found curcumin to be effective in a wide range of inflammatory conditions, including rheumatoid arthritis, colitis, and irritable bowel disease. Curcumin has been shown to increase antioxidant levels and reduce airway constriction as well as improve allergic mediators in asthmatic patients exposed to house dust mites.

## IMPROVES CIRCULATION AND HEART HEALTH

Cardiovascular disease is the world's largest killer claiming millions of lives each year. The development of cardiovascular disease is characterized by vascular inflammation and the build-up of lipids and other particles within the vessel wall. The inflammatory cascade and release of large amounts of reactive oxygen species can lead to obstructions in blood flow, plaque formation and rupture, thrombus (blood clot) formation and reduced oxygen supply to organs. Excessive production of free radicals is a factor in the development of high blood pressure and heart disease. Clinical manifestations include high blood pressure, atherosclerosis (hardening of the arteries), angina, heart failure, and stroke. High blood pressure, heart attacks, and strokes are major, but preventable, killers. Lifestyle measures which can lower blood pressure, improve circulation, reduce inflammation, and decrease cardiovascular risk include increased dietary intake of flavonoid-rich foods. A randomized, double-blind, placebo-controlled crossover study demonstrated the effectiveness of daily quercetin supplementation over four weeks to significantly reduce blood pressure in hypertensive patients (Edwards). Quercetin's potent effect in reducing blood pressure could be an important factor to reduce the risk of heart attack and stroke. CoQ10 is a heart-healthy nutrient that helps lower blood pressure, improves congestive heart failure and protects the brain in degenerative conditions. The heart is highly sensitive to deficiencies of CoQ10, and heart conditions such as cardiomyopathy are often accompanied by CoQ10 deficiencies. The cardioprotective effects of grape seed extract may be mediated through antioxidant effects, improved vasodilation and blood flow, and positive effects on platelet function. Curcumin treatment in cultured human cells and animals improves lipid profiles, demonstrates antithrombotic and antiplatelet effects, reduces the generation of reactive oxygen species, and preserves myocardial function following insult or stress to the heart (Srivastava, Mehta). In healthy individuals, curcumin has been shown

to decrease "bad" LDL cholesterol and increase "good" HDL cholesterol. The cardioprotective effects of curcumin may be due to the potent antioxidant activity and improvement of the lipid profile demonstrated with this beneficial nutrient.

## SLOWS AGING

The generation of reactive oxygen species and increased oxidative stress along with inflammation are key factors in chronic disease and aging. The aging process may be accelerated as a result of chronic inflammation, exposure to environmental toxins, and free radical formation. The brain is a highly oxidative organ that consumes a lot of oxygen despite its small weight. Cognitive decline due to age-related neurodegeneration is common with increased age. Disease and aging lead to physiological changes that can be slowed down and even reversed through the use of antioxidants. Quercetin has been shown to decrease oxidative stress in brain tissue and improve cognitive function in animal studies (Ossola). CoQ10 and other antioxidants promote health and longevity.

## COMBATS OXIDATIVE STRESS IN DIABETICS

Oxidative stress has been associated with the development of chronic diabetic complications, including cardiomyopathy (which eventually leads to heart failure) and retinopathy. Curcumin has been found to prevent a diabetes-induced decrease in antioxidant capacity and have a protective effect on the heart tissue of diabetic rats. Red orange extract was studied in patients with diabetes, a disease known to be associated with a high oxidative stress level. Antioxidant status improved in a group of 33 patients with Type 2 diabetes, compared with a group of 28 healthy volunteers. Improving oxidative stress status may protect against diabetes complications that are partially due to uncontrolled oxidative stress. Grape seed extract has also been found to reduce oxidative stress in a randomized double blind crossover study in 24 healthy male heavy smokers, where smoking was considered the model for oxidative stress.

## DOSAGE

1 capsule 3 times daily or as directed by a health care practitioner.

## SAFETY

Quercetin Complex is considered safe and suitable for long-term use by adults. As with any supplement, individuals should consult a health care practitioner before consuming.

*Pregnancy and lactation:* Considered safe during pregnancy and lactation. As with any supplement, pregnant or lactating women should consult a health care practitioner before consuming.

*Children:* Suitable for children at half the adult dose, or as directed by a health care practitioner.

*Drug interactions:* None known.

*Contraindications:* None known.

## KEY REFERENCES

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