

Ester-C[®] Premium

Recommended Use:

- ▶ Vitamin C
- ▶ Potent antioxidant
- ▶ Upper respiratory infection (rhinovirus)
- ▶ Allergies & allergic responses
- ▶ Immune support

Ester-C[®] Premium

Ester-C[®] Premium is a unique combination of Ester-C[®] calcium ascorbate, two well known herbal antioxidants: green tea (*Camilla sinensis*) extract and grape seed (*Vitis vinifera* L.) extract and Bioferine[®] (a natural bioavailability enhancer).

Ester-C[®]

In addition to its high degree of absorption and retention, Ester-C[®] calcium ascorbate may also prevent infection and ameliorate symptoms associated with the common cold. In one study, 168 volunteers agreed to take 1 gram of Ester-C[®] or placebo daily during the winter months of November, December, and January. Compared to placebo, those employing the Ester-C[®] had significantly fewer colds (37 vs 50, p<0.05) and experienced a shorter duration of severe symptoms (1.8 vs 3.1 days, p<0.03) when they were infected.¹ (Note: refer to monograph on Ester-C for additional details on vitamin C and Ester-C[®].)

Green Tea

Green tea (*Camellia sinensis*) is a rich source of flavonoids known as polyphenols. The most significant flavonoid is known as epigallocatechin gallate (EGCG). Green tea polyphenols are potent antioxidants.² Green tea also enhances the liver's enzyme detoxification system. This important mechanism rids the body of free radicals and other foreign chemicals that cause cell damage.

In vitro experiments show that green tea polyphenols inhibit cancer by blocking the formation of cancer-causing compounds such as nitrosamines, suppressing the activation of carcinogens, suppressing the activation of carcinogens and detoxifying or trapping cancer-causing agents.^{3,4} Several recent studies suggest that green tea polyphenols may promote health and reduce disease occurrence, and possibly protect against Parkinson's disease and other neurodegenerative diseases.^{5,6}

Grape Seed Extract

The grape seed extract used in Ester-C[®] Premium is standardized to contain 12% catechins. Catechins are flavonoid phytochemical compounds that have a wide range of protective effects, including cardioprotective, chemoprotective, and antimicrobial properties. Grape seed extract is a rich source of bioflavonoids high in Oligomeric Proanthocyanidins. The specific type of proanthocyanidins that are found in grape seeds are called "leucoanthocyanins", which are a powerful antioxidant that provides better protection against free radicals than other antioxidants such as vitamins C and E.⁷ Leucoanthocyanins and catechins from grape seeds can reduce the damage done by free radicals, strengthen and repair connective tissue, promote enzyme activity and help to moderate allergic and inflammatory responses by reducing histamine production.



Medicinal ingredients:

Each vegetarian capsule contains:	
Vitamin C (Calcium ascorbate Ester-C [®])	600 mg
Green tea (<i>Camilla sinensis</i> ; 20:1 DHE 1000 mg, 60% Polyphenol, leaves)	50 mg
Grapeseed (<i>Vitis vinifera</i> ; 50-60:1 DHE 750 - 900 mg, 12% Catechins, seeds)	15 mg
Bioferine (Piperine, fruits)	3 mg

Non-medicinal ingredients: Microcrystalline cellulose, magnesium stearate, silicon dioxide, hydroxypropyl methylcellulose.

Recommended dose (adult): Take one capsule a day with food, or as directed by a health care practitioner.

Recommended duration of use: Consult a health care practitioner for use beyond 12 weeks.

Caution/warnings: If you have a liver disorder, consult a health care practitioner prior to use. Stop use if you develop symptoms of liver trouble such as yellowing of the skin/eyes (jaundice), stomach pain, dark urine, sweating, nausea, unusual tiredness and/or loss of appetite and consult a health care practitioner. Consult a health care practitioner prior to use if you are pregnant or breastfeeding, have an iron-deficiency, or are taking any prescription medications. Rare, unpredictable cases of liver injury associated with green tea extract-containing products have been reported in Canada and internationally.

NPN 80011065 • 120 capsules



Leucoanthocyanins have been shown to have an antimutagenic effect. This means they can help to prevent diseases such as cancer, by stopping cell structures from changing (mutating) due to toxins in the environment. Whereas, other studies have shown that grape seed proanthocyanidins can protect multiple target organs from structurally diverse drug and chemical-induced toxicity.⁸

Bioperine®

Bioperine's® addition to Ester-C® Premium increase the bioavailability of the micronutrients in Ester-C and the two herbal extracts. Bioperine® is a standardized extract from the fruits of black pepper, which studies have shown enhances the bioavailability of other compounds, by improving absorption by the intestine, promoting better retention in cells, and preventing metabolized in the liver - thereby increasing overall effectiveness.

References:

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3. Brown MD., Green tea (*Camellia sinensis*) extract and its possible role in the prevention of cancer., *Altern Med Rev.* 1999 Oct;4(5):360-70.
4. Lambert JD, Yang CS., Cancer chemopreventive activity and bioavailability of tea and tea polyphenols., *Mutat Res.* 2003 Feb- Mar;523-524:201-8
5. Pan T, Jankovic J, Le W., Potential therapeutic properties of green tea polyphenols in Parkinson's disease., *Drugs Aging.* 2003;20(10):711-21
6. Nie G, Cao Y, Zhao B., Protective effects of green tea polyphenols and their major component, (-)-epigallocatechin-3-gallate (EGCG), on 6-hydroxydopamine-induced apoptosis in PC12 cells., *Redox Rep.* 2002;7(3):171-7.
7. Bagchi D, Garg A, Krohn RL, Bagchi M, Tran MX, Stohs SJ., Oxygen free radical scavenging abilities of vitamins C and E, and a grape seed proanthocyanidin extract in vitro., *Res Commun Mol Pathol Pharmacol.* 1997 Feb;95(2):179-89.
8. Bagchi D, Bagchi M, Stohs S, Ray SD, Sen CK, Preuss HG., Cellular protection with proanthocyanidins derived from grape seeds., *Ann N Y Acad Sci.* 2002 May;957:260-70.