

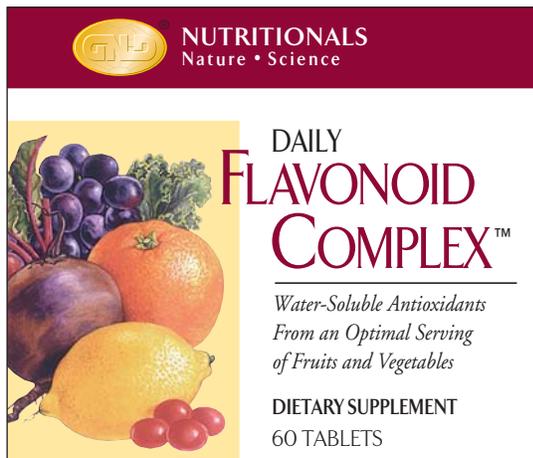


FAST FACTS ABOUT FLAVONOID COMPLEX™

Flavonoids are water-soluble antioxidants in fruits, vegetables, tea, and wine. Colorful pigments, they are responsible for brilliant blues, purples, and greens, as well as yellows, oranges, and reds which cannot be attributed to carotenoids. Research links them to reduced risks for cancer, heart disease, and other age-related degenerative diseases, as well as antioxidant protection of body fluids such as blood. GNLD's Flavonoid Complex provides diverse phytonutrients from an optimal serving of fruits and vegetables, plus catechins from green tea and ellagic acid from grapes, and cranberries.

WHY FLAVONOID PHYTONUTRIENTS?

- Research links diets abundant in flavonoid-rich fruits, vegetables, tea, and wine with reduced risks for cancer, heart disease, and other age-related degenerative diseases.
- As water-soluble antioxidants, flavonoids help protect body fluids such as blood from oxidation.
- Flavonoids promote health in ways distinct from the actions of other dietary factors.



WHY GNLD FLAVONOID COMPLEX™?

- **Broad-spectrum, water-soluble nutrient supplementation.** Flavonoid Complex contains flavonoid representative of all flavonoid classes — flavones, flavanols, flavanones, anthocyanins, and catechins — as they naturally occur in human-food-chain fruits and vegetables.
- **Whole-food ingredients.** Our exclusive blend of flavonoid-rich extracts and concentrates is derived from whole cranberries, kale, green tea (decaffeinated), beets, elderberries, red and black grapes, oranges, lemons, and grapefruit. Added natural vitamin C enhances absorption.
- **Laboratory-specified amounts of key flavonoids.** Flavonoid Complex has been tested to confirm the presence of specific flavonoids for which substantial research demonstrates benefits.
- **Delivers ellagic acid.** Closely related to the flavonoid “family,” ellagic acid is an antioxidant phytonutrient found in cranberries, grapes, etc.
- **Green tea extract.** Hundreds of clinical studies show green tea flavonoids — missing in many diets — may benefit health.
- **No artificial colors, flavors, preservatives, or sweeteners.**
- **Convenient serving.** Each tablet provides the phytonutrient value of an optimal serving of flavonoid-rich fruits and vegetables — just one more way you can meet the recommended dietary intake of 5-9 servings of fruits and vegetables every day.

Supplement Facts

Serving Size 2 Tablets
Servings Per Container 30

Amount Per Serving	% Daily Value
Calories	7
Total Carbohydrate	1 g 0.33%*
Vitamin C (as ascorbic acid)	100 mg 166%
Sodium	68 mg 2.8%
Flavonoid Complex™ Blend	654 mg †
Cranberry extract (<i>Vaccinium macrocarpus</i>) (fruit); Kale concentrate (<i>Brassica oleracea acephala</i>) (leaves); Green Tea extract (<i>Camellia sinensis</i>) (leaves); Beet concentrate (<i>Beta vulgaris</i>) (root); Elderberry extract (<i>Sambucus nigra</i>) (fruit); Red Grape Skin extract (<i>Vitis vinifera</i>) (fruit); Black Grape Skin extract (<i>Vitis vinifera</i>) (fruit); Orange extract (<i>Citrus aurantium</i>) (fruit); Lemon extract (<i>Citrus limon</i>) (fruit); Grapefruit extract (<i>Citrus paradisi</i>) (fruit).	

* Percentage Daily Values are based on 2,000 calorie diet
† Daily Value not established

Other ingredients: Microcrystalline cellulose, sodium croscarmellose, stearic acid, silicon dioxide, hydroxypropyl methylcellulose, triacetin and natural color.

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907

SUGGESTED USE: 1 to 2 tablets daily.

Flavonoids promote antioxidant activity, cellular health, and normal tissue growth and renewal throughout the body.*

* This statement has not been evaluated by the Food & Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

Flavonoid Complex™ contains a broad spectrum of catechins, anthocyanins, proanthocyanins, flavones, flavanones, flavanols, and ellagic acid.

Store in a cool, dry place, away from direct sunlight. Packaged with safety seal.

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THE FLAVONOID STORY

FLAVONOIDS: WATER-SOLUBLE “COUSINS” OF LIPID-SOLUBLE CAROTENOIDS

If carotenoids are nature’s “crayons,” creating many of the red, orange, yellow, and deep green colors in fruits and vegetables, then flavonoids can be thought of as a vivid layer in the jumbo assortment! Flavonoids are plant pigments that provide the more vibrant, brilliant colors in nature, including most of the blue, purple, and emerald green hues found in flowers, leaves, fruits, and vegetables. In addition, most of the yellow, orange, and red colors that are NOT carotenoids belong to the flavonoid family. Another distinction: carotenoids are LIPID-soluble, while flavonoids are predominantly WATER-soluble.

Flavonoids represent a large family of phytonutrients (plant nutrients). More than 4,000 unique flavonoids have been identified so far — and the number is growing! Because of their chemical structure, flavonoids are part of a broader family of compounds known as *polyphenols*.

In our diet, flavonoids are found primarily in fruits and vegetables; significant amounts of flavonoids are also found in teas and wines. Citrus fruits and berries are particularly high in flavonoids. In plants, flavonoids appear to act as a natural sunscreen, protecting against ultraviolet damage. In people, flavonoids appear to interfere with the complex and multiple processes that lead to chronic diseases such as cancer, heart disease, and other degenerative diseases associated with aging.

One of the primary functions of dietary flavonoids is to act as antioxidant protectors of the watery areas in and around cells and in body fluids such as blood.

FRUITS AND VEGETABLES RICH IN FLAVONOIDS

The ideal dietary goal is to consume 5 to 9 servings of fruits and vegetables every day. To help you include flavonoid-rich choices, refer to this list. *The richest sources appear in italics.*

Rich in Flavanones (e.g. hesperidin, naringenin)

- Citrus (*grapefruit, oranges, lemons*)

Rich in Anthocyanins

- *Berries!* (*elderberries, cranberries, currants, hawthorn berries, blackberries*)
- *Red wine*
- Grapes and grape juice
- Beets
- Red Onions
- Cherries

Rich in Catechins

- *Green Tea (by far the richest source)*
- Apples
- Pears
- Cherries
- Some Wines

Rich in Flavonols

- *Onions*
- *Kale*
- *Parsley*
- French Beans
- Endive
- Apples

Rich in Ellagic Acid

- *Walnuts*
- *Red Raspberries*
- *Cranberries*
- *Blackberries*
- *Strawberries*

FLAVONOIDS AND YOUR HEALTH

In the past decade, world-wide population studies have firmly established that diets high in fruits and vegetables are linked with a lower risk of developing heart disease, a wide range of cancers, and other age-related diseases. Enormous efforts have been launched to identify the compounds in fruits and vegetables that may help provide protection. Because they are potent antioxidants and because they represent the majority of the plant polyphenols, flavonoids were quickly singled out as promising candidates. To date, literally hundreds of published articles report the broad protective health benefits of flavonoids. Flavonoids have clearly emerged as “hero” phytonutrients, and current research focuses on their role in helping to prevent disease.

Whole foods containing flavonoids have a healthy reputation that dates back several centuries or more. In fact, many beneficial effects of traditional herbal remedies can be attributed to the flavonoid constituents of the plants. The first clinical use of flavonoids was in 1936 when a Hungarian scientist showed that extract of citrus rinds, combined with vitamin C, was effective in strengthening capillaries, the body’s smallest blood vessels. Subsequent research also established flavonoids as anti-inflammatory, anti-allergic, and anti-infectious agents.

THE “FLAVONOID GAP”

Research continues to show that greater fruit and vegetable consumption is linked to a lower risk of developing disease. At the same time, it is evident that in many parts of the world, intake of fruits and vegetables is far from recommended levels. In the U.S., for instance, only 9% of Americans eat the recommended amount! Since fruits and vegetables supply most of the flavonoids in our diet, it is clear that our intake of flavonoids is far from optimal.



THE GNLD DIFFERENCE IN A FLAVONOID SUPPLEMENT

Fruits and vegetables in our diet are protective, and they are lacking in our diet. A part of the human food chain, they have a long history of safe use. **For these reasons, GNLD set out to identify those fruits and vegetables that would deliver significant amounts of the different members of the flavonoid family. The result is Flavonoid Complex.**

FLAVONOIDS AS NATURE INTENDED — FROM WHOLE FOODS

Like carotenoids, flavonoids do not appear in isolation in nature. Specific flavonoids appear in different foods; natural foods invariably contain many flavonoids in groups. It is the **DIVERSITY** of foods that we eat, and the **DENSITY** of nutrients in those foods, that contribute to protective health benefits. GNLD's Flavonoid Complex provides flavonoid diversity and density from a variety of nature's richest whole-food sources.

BROAD-SPECTRUM FORMULA

Using published analytical data, GNLD developed a profile of flavonoids and related compounds present in an optimal serving of flavonoid-rich fruits and vegetables including:

Beets	Elderberries
Grapefruit	Oranges
Kale	Green tea
Cranberries	Grapes (red and black)
Lemons	

Flavonoid Complex was then formulated so each tablet would match the profile of an optimal serving of these foods. **Raw materials were carefully selected to contribute representatives of all the members of the flavonoid family, including:**

■ Anthocyanins

These deep purple compounds are found in black grapes, beets, red onions, and berries.

■ Catechins

Catechins such as +catechin, epigallocatechin, epicatechin gallate, epicatechin, and epigallocatechin gallate are the main polyphenols in green tea. Fruits such as apples also contain catechins.

■ Ellagic Acid

Closely related to the flavonoid family, ellagic acid is abundant in berries (particularly cranberries) and nuts.

■ Flavones

Flavones include apigenin and luteolin. They are found in citrus fruits, red grapes, and green beans.

■ Flavanols

Flavanols such as quercetin, kaempferol, and myricetin are found in many fruits and vegetables such as kale, spinach, onions, and apples, as well as in black tea.

■ Flavanones

Flavanones include hesperidin, neo-hesperidin, and naringenin. Flavanones are usually found in citrus fruits such as grapefruit, oranges, and lemons.

FLAVONOIDS AND VITAMIN C ARE THE PERFECT COMBINATION

Historically, flavonoids have been associated with vitamin C. As early as 1939, flavonoids in citrus fruits, then referred to as "vitamin P," were known to enhance vitamin C activity. Today even more is known about the interactions of vitamin C and the large family of flavonoids represented in Flavonoid Complex™:

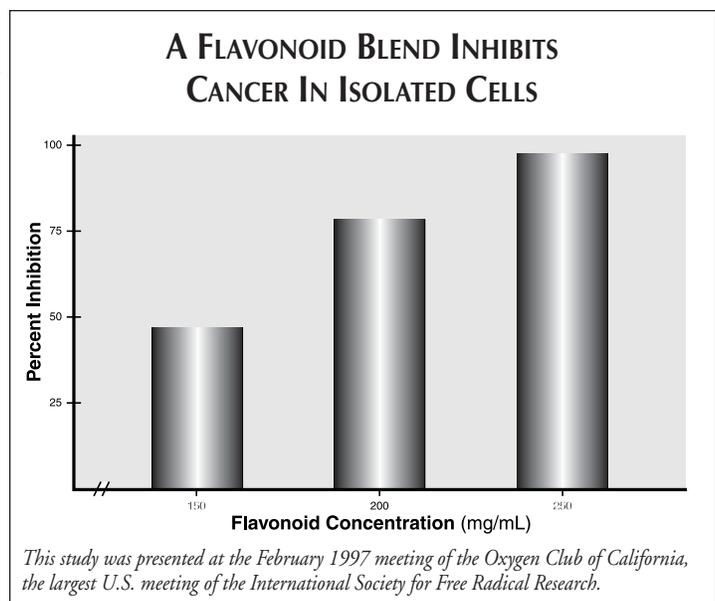
- Flavonoids possess vitamin C–stabilizing and antioxidant-dependent vitamin C-sparing activities.
- Both flavonoids and vitamin C have complementary roles in protecting the stomach and the intestine from food-borne substances which can cause cancer.¹
- Vitamin C has been shown to enhance the ability of flavonoids to inhibit tumor growth.²
- Flavonoids and vitamin C occur together in plants. Vitamin C can protect flavonoids from oxidation.
- Flavonoids enhance vitamin C absorption. Vitamin C may enhance flavonoid absorption.³

In 1972, GNLD introduced **Neo-Plex Concentrate**, an exclusive whole-food concentrate based on the understanding that vitamin C occurred in fruits, not in isolation, but together with a family of functionally related compounds: citrus bioflavonoids. Accordingly, GNLD's unique vitamin C supplements were formulated to include these whole-citrus compounds to assure maximum nutritional benefits.

GNLD's Flavonoid Complex is formulated with 50 mg of vitamin C in each tablet to contribute the nutritional benefits of vitamin C, maximize the absorption potential of the formula, and to protect the flavonoids from oxidation.

GNLD FLAVONOIDS INHIBITED CANCER IN ISOLATED CELLS

We sent Flavonoid Complex™ to an independent scientific laboratory where researchers tested the product according to experimental standards established by the National Cancer Institute. **The researchers found that the flavonoid-rich blend**





of fruit and vegetable extracts used in GNLD's Flavonoid Complex strongly inhibited the growth of human cancer cells cultured in test tubes. The researchers found a well-defined dose–response curve (that is, the greater the concentration of flavonoids, the greater the inhibition of cancer).

REFERENCES

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- [3] Kandaswami, C., Perkins, E. Ascorbic Acid Enhanced Antiproliferative Effect of Flavonoids on Squamous Cell Carcinoma in Vitro. *Anticancer Drugs* 4:91–96 (1993).
- [4] Green Tea Catechin Extract Symposium (video). Sponsored by Chemco Industries Inc.

FLAVONOID COMPLEX PROVIDES BENEFICIAL FLAVONOIDS FROM GREEN TEA

Tea (*Camellia sinensis*) is the world's most popular beverage. Safely consumed for thousands of years, the tea plant originated in parts of Tibet, China, and India. By the 9th century Chinese Buddhist monks had introduced it to Japan, and by the 16th century Dutch traders had introduced it to Europe. While tea is usually offered in friendship, it has also spawned war: A British tax on tea consumed by American colonists instigated the Boston Tea Party of 1773, an incident contributing to the Revolutionary War.

Beverage or medicine? Tea is both. Chinese herbalists thought it protected blood vessels, suppressed cancer, and increased the life span. Recently, green tea has been the subject of hundreds of clinical studies, the majority of which support folkloric claims.⁴ Green tea, which is less oxidized than black tea, is rich in many healthful substances — the essential amino acid threonine, potassium, calcium, magnesium, fluoride, and vitamin K. The compounds thought chiefly responsible for tea's benefits, however, are flavonoids, potent antioxidants with anti-viral, anti-bacterial, and anti-cancer properties. Flavonoids may help fight cancer, heart disease, stroke, flu, tooth decay, and other ailments.

Now GNLD makes it easier to reap the benefits of green tea! Our unique Flavonoid Complex features flavonoids from fruits, vegetables, and decaffeinated green tea extract! Each tablet provides flavonoids from green tea, as well as additional diverse flavonoids and ellagic acid from cranberries, kale, beets, elderberries, raspberries, blueberries, red and black grapes, oranges, lemons, and grapefruit. Natural vitamin C is added for enhanced absorption.