



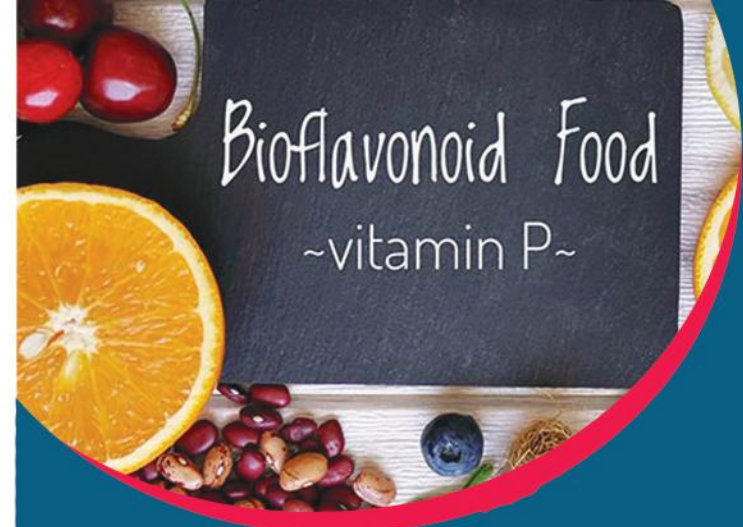
Flavonoids

Flavonoids

► Food Sources ◀

Dietary flavonoids are naturally occurring in fruit, vegetables, chocolate, and beverages like wine and tea. There has been much interest in the potential health benefits of flavonoids associated with fruit- and vegetable-rich diets.

- Flavones are widely present in leaves, flowers, and fruits as glucosides. Celery, parsley, red peppers, chamomile, mint, and ginkgo Biloba are among the significant sources of flavones.
- Onions, kale, lettuce, tomatoes, apples, grapes, and berries are rich sources of flavonols.
- Isoflavonoids enjoy only a limited distribution in the plant kingdom and are predominantly found in soybeans and other leguminous plants.
- Cranberries, black currants, red grapes, merlot grapes, raspberries, strawberries, blueberries, bilberries, and blackberries resources of anthocyanins.
- Chalcones occur in significant amounts in tomatoes, pears, strawberries, bearberries, and certain wheat products.



► Disease Prevention ◀

- Cardiovascular disease: exposure to high-dose anthocyanins could lower CVD risk in subjects with established CVD risk factors and help maintain cardiovascular health in apparently healthy individuals remains to be confirmed.
- Endothelial dysfunction: the results of interventions using apigenin-rich soup, quercetin-rich supplements or onion soups, isoflavone-rich soy protein isolates, black tea, wines, berries, or grape juices have given inconsistent results.
 - Hypertension
 - Type 2 diabetes mellitus
- Cancer: Soy products contain a group of flavonoids called isoflavones. One isoflavone found in soy products, Genistein, has been shown to counteract oxidative DNA damage by increasing the transcription of genes involved in antioxidant defense systems. It is possible that Genistein and other soy isoflavones can delay the age-related degradation of antioxidant defense systems, which would, in turn, delay the development and onset of prostate cancer.





▶ Health Benefits ◀

Flavonoids are essential antioxidants and promote several health effects. Aside from antioxidant activity, these molecules provide the following beneficial effects:



- ▶ Anti-viral
- ▶ Anti-cancer
- ▶ Anti-inflammatory
- ▶ Anti-allergic

One flavonoid called quercetin can help to alleviate eczema, sinusitis, asthma, and hay fever.

Flavonoid intake is inversely related to heart disease, with these molecules inhibit the oxidation of low-density lipoproteins and, therefore, reduce the risk of atherosclerosis developing. Some tea types are also rich in flavonoids, and their consumption is thought to lower levels of triglycerides and cholesterol in the blood. Soy flavonoids or isoflavones also lower cholesterol and protect against osteoporosis and alleviate the symptoms of menopause.

Weight loss: Flavonoid content can relieve inflammation and decrease the levels of an appetite-suppressing hormone, leptin.