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## What is a flavonoid?

These star ingredients in fruits and veggies are potent disease fighters.

By Jennifer Nelson

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Flavonoids are plant-based compounds with powerful antioxidant properties found in many fruits and vegetables like blueberries and grapes. They serve a variety of functions such as protecting blood vessel walls in people who have heart disease or diabetes, alleviating allergies, protecting brain health against dementia and even preventing some cancers.

Flavonoids or bioflavonoids — another word for the same compounds — have medicinal properties that include the ability to defend against cancer, viruses, not to mention anti-microbial, antihistamine and anti-inflammatory characteristics.

### Where to find the flavonoids?

"The best ones are blueberries, chocolate and green tea," says Dr. Laurie Steelsmith, a naturopathic physician and author of "Great Sex, Naturally: Every Woman's Guide to Enhancing Her Sexuality Through the Secrets of Natural Medicine."

"Blueberry and pomegranate open blood vessels and help circulation, which helps with everything from diabetes to heart disease and even improves libido."

**Blueberries:** Blueberries are loaded with antioxidants that can help support blood vessel walls and play a role in protecting the brain from oxidative stress, which is important in treating the early stages of Alzheimer's disease and many other conditions. Blueberries also contain a compound known as D-mannose, which can help prevent urinary tract infections by interfering with the ability of bacteria to adhere to the walls in the urethra and bladder. On top of all that, the tannins found in blueberries can help reduce inflammation in the stomach and intestines.

**Green tea:** Another flavonoid favorite is green tea, which contains compounds called polyphenols (wine has them too) that have potent antioxidant, anti-inflammatory, and anti-cancer properties. "Green tea may help women who have abnormal Pap smears due to human papilloma virus (HPV), help prevent breast and ovarian cancer, and have potential benefits for weight management," says Steelsmith. Studies show compounds in green tea (namely caffeine, theanine, and catechin) may help increase metabolism, which in turn helps you drop pounds.

**Chocolate:** Flavanols are the main type of flavonoid found in cocoa and chocolate. Along with antioxidant properties, flavanols have other potential benefits to vascular health, such as lowering blood pressure, improving blood flow to the brain and heart, and making blood platelets less sticky and able to clot. But that's not a license to overindulge in the sweet confection. One ounce of dark chocolate a day will do. Plus, these plant chemicals aren't only found in chocolate. You can find them in cranberries, apples, peanuts and onions, which are especially good for allergies.

**Bilberry:** Another noteworthy herbal star full of flavonoids is bilberry (part of the vitamin C complex). Studies show these flavonoids can help strengthen blood vessel walls and can help prevent eye disorders such as diabetic retinopathy. Cherries and blackberries also are good sources.

**Vegetables:** The USDA Flavonoid Database lists the flavonoid content of 58 veggies. Among those with the highest marks: Broccoli, kale, yellow, red and spring onions, hot peppers, rutabaga, spinach and water cress. Interestingly, mushrooms have no detectable flavonoids, so you can skip the fungi when looking for the richest antioxidant veggie sources.

### What's the ideal way to consume flavonoids?

The best way to get your fill of flavonoids is by eating loads of fresh fruit and vegetables daily. Steelsmith recommends four servings of fruit and five servings of veggies. The more deeply hued the fruit or veggie, the richer the flavonoid content. Women should only consume one glass of wine daily, while men can have two; meanwhile, chocolate should be limited to a one-ounce portion, but you can drink unlimited green tea unless you are caffeine-sensitive.

If you have a specific condition, you might try a flavonoid supplement, but dosages vary widely and may be higher than what you'd receive from a healthy, balanced diet. Researchers have yet to determine exactly what levels of flavonoids are optimally beneficial, or even whether flavonoids are harmful at high doses. As with all supplements, flavonoid supplements are not regulated by the Food and Drug Administration (FDA).

The most positive thing you can do for both your overall health and to treat specific conditions is to eat more fruits and vegetables that contain a wide variety of antioxidant-rich flavonoids, adding chocolate, wine and tea in moderation.

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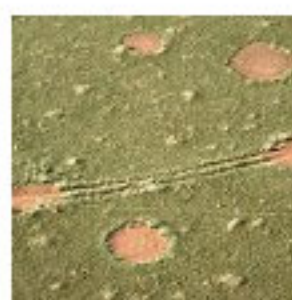
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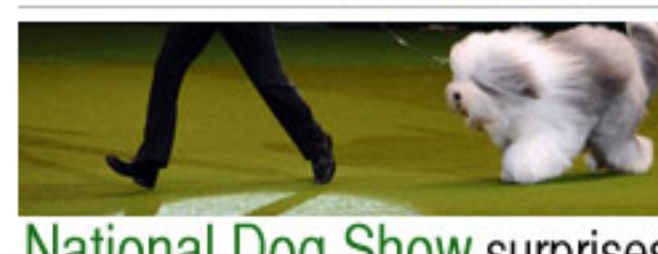
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