

Polyphenols

What are Polyphenols? Polyphenols are the chemicals that give vegetables and fruits their colors. They are also the plant's primary defense mechanism against invading bacteria and other parasites.

Why do we need to eat them? Consuming a diet rich in polyphenols is important because they:

- help to maintain a healthy level of good bacteria in the gut where over a trillion bacteria live.
- reduce inflammation in the body to prevent certain diseases, like heart disease and many other chronic diseases, from occurring.
- boosts antioxidants levels and anti-aging genes that help control free radicals in the body.
- helps to control blood sugar spikes after meals.



Boosting your intake of polyphenols on a daily basis is easy to do:

1. Eat lots of unrefined fruits, vegetables, whole grains and legumes. Refining of foods removes polyphenols, so eat fresh or freshly cooked fruits, vegetables, whole grains and legumes instead of refined (or processed) foods and meat products. Polyphenols tend not to be destroyed by moderate

cooking or heating. It's best to eat them raw, freshly cooked (sautéed, baked, roasted or steamed).

2. Choose richly hued fruits, vegetables, and whole grains. The richer the color of fruit, the higher its antioxidant level. The deep red color of pomegranates and strawberries, deep blue color of blueberries, purplish-black color of blackberries, and reddish-orange color of guavas is due to the presence of polyphenols. Every 100 grams of these fruits can provide as much as 200-300 mg of polyphenols. Other fruits that deliver a great deal of polyphenols include oranges, red grapes, cranberries, cherries, raspberries and prunes. Polyphenols found in green vegetables are responsible for giving them their green color. So 'go green', when it comes to boosting your polyphenolic content. Green vegetables, like artichoke, spinach, kale, turnip, lettuce, broccoli, watercress, and zucchini are some of the richest sources of polyphenol antioxidants. Other vegetables that have high concentration of polyphenols are eggplant, red cabbage, sweet potatoes, and onions. Polyphenols are present in canned beans, but if you are looking for a high antioxidant dose, eating red beans is the best bet. A bowl of red beans is jam-packed with phenolic compounds. Apart from red beans, a high antioxidant level is also found in black beans. The darker the beans, the more will be its antioxidant levels. Hence, the dark-red kidney beans tend to have higher antioxidant levels than white beans.

3. Use a sprinkling of herbs into your cooked dishes. Herbs are also one of the top sources of polyphenol antioxidants. Basil, cinnamon, thyme, curry, and oregano are some herbs

known for their high antioxidant value. The compound responsible for the color of turmeric, called curcumin, also happens to be a polyphenol. Apart from adding a spicy flavor, these herbs also impart antioxidant properties to your dish. Moreover, these herbs are well-known for their antibacterial and antiviral properties.

4. Drink polyphenol-rich beverages. Some beverages are concentrated, easily absorbed sources of polyphenol antioxidants. For instance, Black or Green Tea and coffee are very rich sources of certain types of polyphenols. A 200 ml cup of green tea contains around 266 mg of polyphenols, which is more than a serving of broccoli. Drink red wine and beer instead of other alcoholic beverages. Hard liquor is distilled so essentially does not contain polyphenols. Red wine is a very rich source of the famous polyphenol Resveratrol, which is present in high concentrations in the skins of wine grapes. Specifically, Pinot Noir is considered the highest polyphenol count of all the types of wines. Beer is also a great source of polyphenols, and contains a great variety of polyphenols. This is because beer is made with barley as well as hops. Barley provides the majority of the polyphenols found in beer, but hops are an important source of a variety of polyphenols. For the highest concentrations of polyphenols, choose well-hopped bitter beers such as India Pale Ales or dark beers. Dark malt that is used to make dark beers provides melanoidin antioxidants that actually may help to keep the hop polyphenol antioxidants in the beer during the brewing process. Non-alcoholic red wine and beer are also available, and may be a good source of polyphenols as well.

5. Eat dark chocolate and cocoa powder. Chocolate and cocoa are somewhat refined, but are one of the richest sources of polyphenols. Choose dark, bitter chocolate (at least 72% or higher Cacao) and unsweetened cocoa. The saturated fat in chocolate should not raise bad cholesterol when consumed in moderation. A square or two of dark chocolate after a meal will provide a good source for you.

6. Eat an assortment of nuts. Walnuts are powerhouses of dietary polyphenols. A handful of walnuts contains antioxidative polyphenols in significant amounts. So, whether you have roasted or raw walnuts, they pack a healthy punch. Another nut that stands out for its high polyphenol content are pecans. Munching on these antioxidant-rich nuts can certainly provide you with a healthy dose of polyphenols.

7. Eat seafood, especially salmon. Among the different seafood, fish wins hands down for its high polyphenolic content. The pink color of salmon is due to the presence of polyphenols. The antioxidant levels vary in different types of fish, but the wild Alaskan salmon displays high antioxidant levels.

8. Shop for produce at the farmers' market or grow your own. Plants raised organically or in more natural conditions can be much higher in polyphenols. Plants actually produce polyphenols in order to protect themselves from diseases and pests, especially when grown in less than ideal conditions. And then you eat the plants and the polyphenols protect you!

9. Avoid foods that are sources of free radicals and destroy antioxidant polyphenols. Polyphenols are antioxidants so will essentially be neutralized or destroyed by unhealthy free radicals. It is good that free radicals can be neutralized by polyphenols, but the polyphenols will not be able to act in the body to the extent that is desirable. Therefore, avoid foods that are high in free radicals such as deep fried foods, meats, and refined foods. Be sure to avoid overly cooked or charred meats. Deep fried foods are notorious sources of free radicals, as the deep frying oil is continuously oxidized as it is heated. The fried food is also cooked at very high temperatures, so more free radicals are formed.

10. Relax. Your body will use up antioxidant polyphenols faster if you are under stress.

References: Dr. Barry Sears, *The Mediterranean Zone* and ZoneLiving.com
www.wikihow.com/Boost-Your-Intake-of-Polyphenol-Antioxidants
<http://www.buzzle.com/articles/how-to-increase-your-intake-of-polyphenol-antioxidants.html>

