

Just what are these Anti-Oxidants and Free Radicals we hear so much

If you don't have your health, you don't have anything so the saying goes. But **EVERYONE** seems to be telling us what IS and ISN'T healthy. And, year to year, even the definition of **HEALTHY** changes depending on the latest medical knowledge. Lastly, even what we're told is healthy for us is hard to "digest" so to speak. I mean, just what is an Antioxidant anyway? Sounds like something you add to your laundry to make it whiter?? Free Radicals? Didn't they disappear in the late 60's?... Are they still around?? It's no wonder the hype is so hard to "swallow", they're not speaking our language! Things were so much simpler when Mama told us, "just eat it!, it's good for you!"

Just about everybody has heard the word "antioxidant." Over the past few years, articles touting the benefits of natural antioxidants — such as vitamins C and E and antioxidants in green tea and fruits have been touted in countless magazine and newspaper articles. Yet, even with all this press, most people don't have a good understanding of the concept of oxidation and anti-oxidation.

A common way used to describe oxidation is a piece of metal in the process of rusting.

The process that occurs in the body is

obviously different since we are made of living tissue. During the normal metabolism (or breakdown) of carbohydrates, fats, and proteins for energy production, certain molecules are generated that can damage the contents within cells. These destructive molecules often contain an unstable oxygen atom missing an electron. You may recall from high

school or college chemistry that atoms, such as hydrogen and oxygen, have a pair of electrons spinning around them. An atom with only one electron in its orbit is very unstable. Chemists call this atom a free radical. This free radical can then steal an electron from a neighboring molecule and hence cause it to be damaged. The process of this damage is called oxidation.



WARNING!

Free radicals can initiate cancer by damaging DNA in your cells. Therefore part of cancer prevention is to limit free radicals and to quench them with antioxidants.

Cigarette smoke, fried foods, ozone, excessive sun exposure, car exhaust, certain drugs, radiation, and air pollution are common causes of oxidation. The body had developed ways to counteract these oxidants by producing antioxidants. An antioxidant is any chemical, natural or synthetic, that has the ability to neutralize oxidants (toxins or free radicals), thus protecting our cells from being damaged. Usually, there's often a good balance between oxidation and anti-oxidation. And a certain amount of oxidation in the body is necessary in order to fight infections or do repair work within cells. However, when your body's oxidation rate is greater than its natural antioxidant support, the body undergoes what's called "oxidative stress." Here's where your consumption of antioxidant producing foods can help you out.

The foods listed in the chart to the right ranked among the highest in a new antioxidant study. To come up with the ranking, researchers with the U.S. Department of Agriculture (USDA) extracted the antioxidants from 100 common foods using special solvents, then ran them through a device that uses fluorescent light to monitor a chemical reaction that measures antioxidant activity. Researchers then took the resulting numbers—what they call the total antioxidant capacity (TAC)—and compared them.

The good news: You don't have to put your diet under a microscope to reap the benefits of the top 20. Rather than zeroing in on a particular food because it scored high, use the list to help you put a little variety on your plate.

THE GOOD GUYS!

It's quite likely that, over the long run, antioxidants could slow the progression of heart disease, cancer, age related cognitive decline, Alzheimer's disease, Parkinson's disease, and other conditions.

TOPTWENTY
Consider this your shopping list of power foods, based on their total antioxidant capacity (TAC) per serving (1 piece fruit/potato, 1/2 cup beans/dried fruit, 1 cup berries/artichoke hearts, 1 ounce nuts).

Food	TAC
1 Small Red Beans	13,727
2 Wild Blueberries	13,427
3 (Red) Kidney Beans	13,259
4 Pinto Beans	11,864
5 Cultivated Blueberries	9,019
6 Cranberries	8,983
7 Artichokes	7,904
8 Blackberries	7,701
9 Dried Plums (Prunes)	7,291
10 Raspberries	6,058
11 Strawberries	5,938
12 Red Delicious/Granny Smith Apple	5,600
13 Pecans	5,095
14 Sweet Cherries	4,873
15 Black Plums	4,844
16 Russet Potato	4,649
17 Black Beans	4,181
18 Plums	4,118
19 Gala Apple	3,903
20 Walnuts	3,846

GOOD NEWS!

ANTIOXIDANTS can combine with a free radical electron and prevent damage from them. Antioxidants can be found in fruits, vegetables and in supplements. Because your body is exposed to literally thousands of free radicals you need a daily supply of antioxidants.

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Antioxidant-Rich Beverages
How do the popular beverages compare in antioxidant activity?
Antioxidant compounds are found in vegetables, fruits and many natural beverages like tea. Balanced diets are naturally-rich in antioxidants. Enjoy the variety, flavours and health potential in every serving!



2 cups black tea = 1 glass red wine = 7 glasses orange juice = 20 glasses apple juice

Source: The Polyphenolic Content of Fruit and Vegetables and their Antioxidant Activities: What Does a Serving Constitute?, Paganga et al., Free Radical Research, Volume 30, February 1999