

Antioxidants

<p>Antioxidants can be conceptualized in a number of different ways: as insurance against some of the more visible effects of aging; as a weapon in our fight to make our average life expectancy more closely resemble our ultimate lifespan; and as a line of defense against the risk of developing certain illnesses and diseases.</p> <p>What are antioxidants? Essentially, they are substances that reduce, neutralize, and prevent the damage done to the body by free radicals. Free radicals are simply electrons that are no longer attached to atoms. Instead of circling the nucleus of an atom (much like the earth circles the sun), free radicals are both free and radical enough to go careening through our cells, inflicting damage as they go.</p> <p>What causes free radicals to be formed? A process called oxidation creates free radicals and this process happens in the context of normal metabolic processes and our everyday exposure to our environment. In other words, eating, breathing, and going out in the sun all contribute to the the process of oxidation, free radical formation, and the resulting damage that is caused to the cells of our bodies.</p> <p>What kind of damage are we talking about? Pretty much every kind you can think of: the deterioration of bone, joints and connective tissue; the wearing out of organs; the decline of the immune system; the irritating advance of the visible effects of aging; and even, possibly, to some extent, the aging process itself.</p> <p>Because free radicals are implicated in all these processes, minimizing and neutralizing their activity with antioxidants may allow us to live longer and healthier lives, look and feel better, and reduce or eliminate the risk of certain illnesses.</p> <p>The menu to the right lists most of the known antioxidants and each antioxidant page contains a discussion of the antioxidant's characteristics as well as the nutrient category into which it is classified. For, example the antioxidant selenium is a mineral, while the antioxidant methionine is an amino acid and the antioxidant melatonin is a hormone.</p>	<p>Antioxidants</p> <p>Acetylcysteine Alpha Lipoic Acid Beta Carotene Bilberry Burdock Carnosine Catalase CLA Coenzyme Q10 Cryptoxanthin Curcumin Daidzein DHEA DMAE Garlic Ginkgo Biloba Grape Seed Green Tea Genistein Germanium Glutamine Glutathione Lutein Lycopene Manganese Melatonin Methionine OPC Paba Pine Bark Pycnogenol Quercetin Resveratrol Selenium Superoxide Dismutase Taurine Vitamin C Vitamin E Zeaxanthin Zinc</p>
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This information was obtained from www.vitaminstuff.com/antioxidants.html

Examples of Antioxidant Vitamins			
Vitamins	Daily Reference	Antioxidant Activity	Sources
Vitamin A	300-900 µg/d	Protects cells from free radicals	Liver, dairy products,
Vitamin C	15-90 mg/d	Protects cells from free radicals	Bell peppers,
Vitamin E	6-15 mg/d	Protects cells from free radicals, helps with immune function and DNA repair	Oils, fortified cereals, sunflower seeds,
Selenium	20-55 µg/d	Helps prevent cellular damage from free radicals	Brazil nuts, meats, tuna, plant

Chart adapted from Food and Nutrition Board Institute of Medicine DRI reports and National Institutes of Health Office of Dietary Supplements

*DRI's provided are a range for Americans ages 2-70.

You found this information at www.wholefoodvitaminsandupplements.com

Examples of Functional Components of Antioxidants

Class/Components	Source	Potential Benefit
<p>Carotenoids</p> <ul style="list-style-type: none"> Beta-carotene Lutein, Zeaxanthin Lycopene 	<ul style="list-style-type: none"> carrots, various fruits kale, collards, spinach, corn, eggs, citrus tomatoes and processed tomato products 	<ul style="list-style-type: none"> neutralizes free radicals which may damage cells; bolsters cellular antioxidant defences may contribute to maintenance of healthy vision may contribute to maintenance of
<p>Flavonoids</p> <ul style="list-style-type: none"> Anthocyanidins Flavanols—Catechins, Epicatechins, Procyanidins Flavanones Flavonols Proanthocyanidins 	<ul style="list-style-type: none"> berries, cherries, red grapes tea, cocoa, chocolate, apples, grapes citrus foods onions, apples, tea, broccoli cranberries, cocoa, apples, strawberries, grapes, wine, peanuts, 	<ul style="list-style-type: none"> bolster cellular antioxidant defences; may contribute to maintenance of brain function may contribute to maintenance of heart health neutralize free radicals which may damage cells; bolster cellular antioxidant defences neutralize free radicals which may damage cells; bolster cellular antioxidant defences may contribute to maintenance of urinary tract health and heart health
<p>Isothiocyanates</p> <ul style="list-style-type: none"> Sulforaphane 	<ul style="list-style-type: none"> cauliflower, broccoli, broccoli sprouts, cabbage, kale, horseradish 	<ul style="list-style-type: none"> may enhance detoxification of undesirable compounds and bolster cellular antioxidant defences
<p>Phenols</p> <ul style="list-style-type: none"> Caffeic acid, Ferulic acid 	<ul style="list-style-type: none"> apples, pears, citrus fruits, some vegetables 	<ul style="list-style-type: none"> may bolster cellular antioxidant defences; may contribute to maintenance of healthy vision and heart health
<p>Sulfides/Thiols</p> <ul style="list-style-type: none"> Dithiolthiones Diallyl sulfide, Allyl methyl trisulfide Dithiolthiones 	<ul style="list-style-type: none"> garlic, onions, leeks, scallions cruciferous vegetables—broccoli, cabbage, bok choy, collards 	<ul style="list-style-type: none"> may enhance detoxification of undesirable compounds; may contribute to maintenance of heart health and healthy immune function contribute to maintenance of healthy immune function

Chart adapted from International Food Information Council Foundation: Media Guide on Food Safety and Nutrition: 2004-2006. <http://www.ific.org/publications/factsheets/antioxidantfs.cfm>

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