

ANTIOXIDANTS | MADE SIMPLE

THE ONLY ANTIOXIDANT GUIDE YOU'LL EVER NEED

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The Role of Antioxidants

We love antioxidants for many reasons but their main role in the body is ridding us of excessive free radicals and helping our liver to detoxify.

Excessive free radicals can cause disease, inflammation, weaken the immune system, and even take pieces of our DNA.

[In short, antioxidants reduce free radicals and detoxify toxins.]

Then What Happens?

When an antioxidant gets rid of a free radical, the antioxidant stops being an antioxidant. That's right, once they are in the body, many antioxidants actually transform into something else.

What do they become? **Free radicals!**

[Antioxidants make free radicals inert and become a free radicals.]

Antioxidants Recycle!

The newly created free radical needs another antioxidant in order to turn it back into its antioxidant state.

After an antioxidant does its job, it becomes a harmful free radical and then it needs another antioxidant to recycle it (return it to its original state).

It is a continuous cycle.

It is similar to a retail store having to constantly restock.

If new items do not arrive in time, then the company loses money. Likewise, if your body does not receive adequate amounts of antioxidants *every day* then your health may suffer.

[Antioxidant >becomes> Free Radical >becomes> Antioxidant]

Antioxidant Table

This table shows the name of the most common antioxidants followed by the type, its function in the body, what recycles it back to its active form, food sources that naturally contain it, and whether it is fat or water soluble.

Name	Type	Function	Recycled by	Sources	Soluble
Vitamin E *	Vitamin	Eight different types, anti-inflammatory, can prevent coronary heart disease, anticoagulant	CoQ10, NADH	Vegetable oil, sunflower seeds, almonds, hazelnuts, peanut butter	Fat
Vitamin A *	Vitamin	Protects eyes, helps Immune System, reproductive system, respiratory, bone growth, vision	Beta Carotene Various Carotenoids	Must be obtained exogenously. Performed retinoids, provitamin, eggs, kidney	Fat
Vitamin C *	Vitamin	Needed for function of the immune system Ascorbic acid can be converted to dehydroascorbic acid and dehydroascorbic acid can cross the blood-brain barrier Vit. C has similar chemical structure to glucose so it is easily taken in by cells	Glutathione and vitamin E	Oranges, chili peppers, red bell peppers, green bell peppers, kale, broccoli, papaya, strawberries, cauliflower, brussel sprouts, pineapple, kiwi, mango	Water
Selenium *	Mineral	Increases action of antioxidants Most important mineral in the body for antioxidants Part of glutathione peroxidase (powerful antioxidant)	N/A	Soil, seafood, chicken, beef	Water
Zinc	Mineral	Fights infections, heals wounds	N/A	Fruits, vegetables, flowers, greens	Water
Copper	Mineral	Helps in production of iron Helps to store iron Supports nerve function	N/A	Liver, oysters, sesame seeds, cocoa powder, nuts, calamari, sunflower seeds, sun dried tomatoes, roasted pumpkin seeds, dried herbs	Water
Carotenoids *	Lutein Zeaxanthin	Protect from UV Precursor to vitamin A	Vitamin A	Leaves, fruits, flowers, greens, bright colored fruits, oranges, watermelons,	Fat

	Lycopene Beta-Carotene	Protects prostate May have cancer preventing properties		tomatoes, spinach, asparagus, and broccoli	
Flavonoids *	Polyphenols Quercetin Epicatechin	Reduces inflammation May have anti-cancer properties		Berries, fruits, species, nuts, beans, vegetables, BRIGHTLY COLORED fruits and vegetables	Water
NADH	Coenzyme	Needed for memory Necessary for release of acetylcholine-a Necessary for energy production in the mitochondria		Raw meat, raw fish, deer, rabbit, duck	Water
Catalase	Enzyme	Breaks down hydrogen peroxide		Produced naturally in the body	Water
SOD	Enzyme	Converts superoxide radical to hydrogen peroxide		Barley grass, wheatgrass, broccoli,	Water
GPx	Enzyme	Works with glutathione		Pineapples, papayas, sprouts, raw nuts and seeds	Water
Lipoic Acid *		Regulates gene expression Crosses blood/brain barrier Helps prevent the symptoms of diabetes Can scavenge and quench hydroxyl radicals My personal favorite	Vitamin A, E, C, Glutathione, CoQ10, and itself	Made in body, greens, rice, organ meats, peas, potatoes, red meat	Water and Fat
N-acetyl cysteine (NAC)	Increases glutathione in body	One of the two antioxidants that can quench hydroxyl radicals	CoQ10, Vitamin E, Vitamin C	Vegetables, meats, turkey, lamb, duck, fish	
Ubiquinol-10		Essential to generating cellular energy		Avocados, chicken, peanuts, spinach, and sardines	Fat

		Important for sustaining life			
Glutathione *		May protect inside of cells, reduces inflammation, detoxifies drugs and pollutants, and chelates heavy metals Very important for the liver Helps to transport and store amino acids	Vitamin C	NAC and Lipoic acid boosts levels, made in body	Water
CoQ10		Essential for making ATP Inactive form of Uniquinol-10 Guards the heart	Uniquinol-10	Fish, vegetable oil, red meat, organ meat, sea foods, made in body	Fat
Melatonin	Horomone	Regulates circadian rhythms and reduces inflammation Stimulates immune function Prevents toxicity of beta amyloid fragments that cause Alzheimer's disease		Olive oil, wine, beer, fruits, vegetables, made by body	Water and fat

*Found in Stern Healing's pureSkin and/or pureImmunity which both contain antioxidants specifically chosen to recycle one another.

Key Points

1. Free radicals are *very* important!

We *need* them to help us heal, help blood flow, and even fight cancer.

The problem is not that free radicals are the bad guys, the problem is that our diets typically don't promote a healthy *balance* of free radicals and antioxidants. Even though free radicals are helpful, **too many can result in them attacking us instead of the disease.**

Since our bodies naturally produce free radicals all day and night, we need antioxidants all day and night but most antioxidants cannot be produced by the body. Antioxidants must be obtained from food or supplements. If we are not eating the correct foods or supplementing antioxidants, then the free radicals are able to become prolific and may harm us- which brings us to point number two.

2. Antioxidants are necessary every single day.

If you're not taking in antioxidants every day then you may be in trouble! The body requires a daily intake of antioxidants to replenish its stores or eventually, your body could go into a state of oxidative stress (way more free radicals than antioxidants) which can severely weaken the body's immune system.

Don't worry! Because the body is such a powerful machine, damage can be undone by making sure we take in the right antioxidants every day starting now. This can be done through a healthy diet of 7 servings of fruits and vegetables every day or through proper supplementation.

3. Antioxidants in proper doses and forms.

Antioxidants come in all shapes and sizes and it's important to know exactly what you're getting. A lot of people make the mistake of taking a single antioxidant at a time. As shown by the information and table above, our bodies operate best when we consume a variety of antioxidants.

It is also necessary to consume specific doses of certain antioxidants so that we do not consume *too many* and reduce our free radicals levels to a dangerously low level. Have you ever heard of someone turning orange from eating carrots or red from eating tomatoes? It is the antioxidants that have that effect on us. Too much of a good thing is a bad thing.

So, the best way to get antioxidants is to take a variety of them at once in doses that are similar to what we consume in nature. Fruits and vegetables typically have .300mg to 25mg of antioxidants per serving. It's not necessary to count milligrams (since some compounds like alpha lipoic acid can be consumed in high doses with no repercussions) but I would suggest avoiding taking high

doses of single antioxidants such as Vitamin C. If you *are* going to take Vitamin C (or any other antioxidant), then take it with another one that will recycle it and use the table above as a guide.

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