

Antioxidants & Your Health

A look into the book:

The Antioxidant Miracle

By Ashley Walter

What is an Antioxidant?

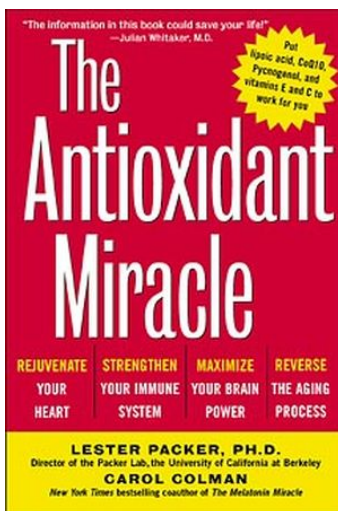
An antioxidant is a molecule that can slow or prevent the oxidation of other molecules. This is important because oxidation can produce free radicals that damage our cells via chain reactions.

Specifically, antioxidants destroy the intermediates of these chain reactions, therefore, breaking the chain and eliminating harmful free radicals.

Free radicals can cause diseases like cancer, heart disease; Alzheimer's, stroke, and can suppress the immune system overall.

“The key to good health is to maintain the right balance between antioxidants and free radicals.

That is the job of the body's antioxidant defense network” (Packer, 17.)



Top Facts about Antioxidants

- ✓ There are 5 main antioxidants: lipoic acid, vitamins C, and E, Co Q10, and glutathione
- ✓ “The primary job of the antioxidant network is to prevent antioxidants from being lost through oxidation” (Packer, 18.)
- ✓ They were coined the “network” antioxidants because they work together

The Basic Antioxidant “Cocktail”

According to Lester Packer, Ph.D.

Packer prepared the perfect combination of supplemental antioxidants in order to balance your system for optimal health.

Suggested to Take in the Morning:

- 100 mg tocotrienols
- 200 mg mixed tocopherols
- 30 mg Co Q10
- 50 mg Lipoic Acid
- 250 mg ester vitamin C
- 400 mcg folic acid
- 2 mg vitamin B6

Suggested to Take in the Evening:

- 200 mg natural alpha tocopherol
- 50 mg lipoic acid
- 250 mg ester C
- 30 mg ginkgo biloba
- 200 mcg selenium

The 5 Network Antioxidants

1. Lipoic Acid

What it does: protects against stroke, heart disease, cataracts, enhances memory and can slow brain aging.

It has been used in Europe to prevent Diabetes and can even help control it by improving the use of glucose by muscle cells.

Lipoic Acid is also said to increase the levels of the other 4 network antioxidants.

Food Sources: potatoes, spinach, and red meat. Unfortunately, lipoid acid is only found in small amounts in food, so a supplement is necessary.

2. Vitamin E

What it does: it can lower inflammation, heal arthritis, fight against cancer, protect against heart disease and high cholesterol, improve vision, boost immune function, and keeps our skin looking young and healthy.

Vitamin E is known as the “longevity” antioxidant because it is said to slow our natural aging process.

There are 2 important types of Vitamin E: tocopherols and tocotrienols which are the members of the E family that can help fight against and treat diseases like: atherosclerosis, high cholesterol levels, and some cancers.

Food Sources: almonds, asparagus, avocado, nuts, olives, red palm oil, seeds, spinach and other green leafy vegetables, vegetable oils like: canola, corn, sunflower, soybean, and cottonseed oil, and wheat germ.

3. Vitamin C

What it does: beautifies the skin, regenerates vitamin E, protects the body against cancers and heart disease, and can also defend us against developing cataracts.

Studies have shown that vitamin C can shorten the length and lessen the severity of the common cold. It is thought to possess an antiviral characteristic; however how it works does this is uncertain.

Food Sources: there are numerous sources for Vitamin C, including: lemon, lime, melons, blueberries, blackberries,

According to Packer, lipoic acid is the “antioxidant’s antioxidant” because it can recycle all the other network antioxidants.

“Vitamin E is a powerful antioxidant that can help us maintain our antioxidant advantage and ward off the diseases that cut life short” (Packer, 59.)

Diabetics may be deprived of vitamin C because it competes with glucose for entrance into the cells. But, it is needed to ward off heart disease. Oftentimes, a supplement is necessary.

“Heart patients often have dangerously low levels of Co Q10, an indication that they lack the “spark plug” required to keep the heart running normally. In fact, heart muscle biopsies in patients with various heart diseases showed a Co Q10 deficiency in 50 to 75 percent of all

4. Coenzyme Q10 (Co Q10)

What it does: regenerates Vitamin E (like vitamin C,) treats gum disease, can help prevent the brain from developing Parkinson’s disease and Alzheimer’s, has been used in Japan to ward off and even treat heart disease, and may soon be used to stave off breast cancer.

“Co Q10 is essential for the production of energy that keeps the body running. Simply put, without enough Co Q10, you are running on empty” (Packer, 93.)

This is true because Co Q10 works within our body’s mitochondria to produce ATP; the main source of energy used by our body.

Food Sources: soybean, canola, peanut, and sesame seed oils, some seafood, and some organ meats like: pork and beef heart.

5. Glutathione

What it does: recycles oxidized vitamin C bringing it back to its antioxidant form, promotes healthy liver function by helping detoxify drugs and pollutants in our bodies, and stores and transports amino acids.

Referred to by Packer in this book as the “Master Antioxidant,” glutathione is directly related to the health and proper function of our immune system. If there are low levels in the body, it could lead to premature death.

Along with many prescription drugs, drinking alcohol in excess can significantly reduce the levels of glutathione in the body.

Lipoic acid, another network antioxidant, is directly connected to glutathione because it helps increase the levels of glutathione in the body.

Food Sources: glutathione is broken down during digestion, but can be found in fruits, vegetables, and cooked meat.

Network Antioxidant Boosters

The so-called “boosters” help support the effectiveness of the antioxidant network and the human body.

Including:

The Flavonoids; ginkgo biloba and pycnogenol (plant-based)

Flavonoids have numerous benefits-improving memory and concentration, furthers the effectiveness of vitamin C as an antioxidant, support all workings of the heart, reduce inflammation, support immune function, helps with blood circulation and prevents unneeded clogging, and can even help enhance men’s sexual function.

Flavonoids have been used to help with Chronic Fatigue Syndrome (CFS), attention-deficit disorder (ADD), and act as a natural anti-inflammatory for sufferers of rheumatoid arthritis.

Food Sources: citrus fruit, apples, onions, red grapes (also in wine,) berries, tea leaves, and dark chocolate.

Selenium: even though selenium is not an antioxidant, it works closely with vitamin E which makes it very important cancer, heart disease, and stroke prevention.

You may be deficient in selenium if you live in a particular state as selenium comes from food and water, but more particularly, soil.

Food Sources: garlic, onions, wheat germ, red grapes, broccoli, and egg yolks.

Carotenoids: alpha-Carotene, beta-carotene, cryptoxanthin, lutein, lycopene, and zeaxanthin

Carotenoids may reduce the risk of heart disease

Beta Carotene may boost the immune system

Alpha-carotene

Lycopene may lower the incidence of prostate cancer

Lutein and Zeaxanthin decrease the chances of developing macular degeneration and cataracts

Special Populations & Antioxidants

When you have or have the chance of developing certain diseases, there is a strong chance that you may be lacking specific antioxidants or essential nutrients to sustain proper function within the body that can help prevent or treat the disease at hand. Some examples include the following:

Diabetics lack the essential fatty acid gamma linolenic acid (GLA,) it is normally made in the body, so it needs to be supplemented.

Extra lipoic acid can be added to boost the function of the antioxidant network and immune system.

As well as an additional supplement of chromium that helps with insulin regulation in the body can be beneficial to diabetics.

Cigarette smokers and secondhand smokers: cigarette smoke wreaks havoc on the antioxidant network because of the toxic content. Adding extra lipoic acid, tocotrienols, Co Q10, and pycnogenol help support the network against damage from smoke.

Athletes: may want to add the amino acid L-carnitine into their diet because it helps replenish the energy supply to the body in the form of ATP and also helps boost antioxidants.

Menopausal women: women who have already gone through menopause are more susceptible to breast cancer. The tocotrienols from the vitamin E family provide protection against this increased risk. Calcium also helps prevent cancers and is suggested for postmenopausal women because it promotes bone health, helping prevent osteoporosis.

Picky eaters: supplements are meant to be incorporated into our diet to support the already healthy and whole food choices we should be making. Since we all have different tastes, without a diet rich in fruits and vegetables, you may need to help incorporate flavonoids, carotenoids, and cruciferous-plus via a supplements.

People at high risk for cardiovascular disease (CVD) and cancer: as we age, our immune systems become less and less effective. As a result, carcinogens and coagulants are more difficult to fight off. If you have a family history of cancer or CVD, it can be especially helpful to add extra lipoic acid, tocotrienols, Co Q10, and pycnogenol to help support the antioxidant network. These extra supplements can act as anticoagulants and immune system boosters.

Bibliography:

Packer, Ph.D., L., & Colman, C. (1999). *The Antioxidant Miracle*. New York: John Wiley & Sons, Inc.