

Antioxidants

Our bodies are battlegrounds against infection and diseases. Normal body functions such as breathing or physical activity and other lifestyle habits such as smoking produce substances called free radicals that attack healthy cells. When these healthy cells are weakened, they are more susceptible to cardiovascular disease and certain types of cancers. Antioxidants, such as vitamins C and E are carotenoids, which include beta-carotene, lycopene and lutein, help protect healthy cells from damage caused by free radicals.

| Rank | Food | Serving Size | Total Antioxidant Capacity per Serving Size |
|------|---------------------|--------------------------|---|
| 1 | Small Red Bean | 1/2 cup dried beans | 13727 |
| 2 | Wild Blueberry | 1 cup | 13427 |
| 3 | Red Kidney Bean | 1/2 cup dried beans | 13259 |
| 4 | Pinto Bean | 1/2 cup dried beans | 11864 |
| 5 | Blueberry | 1 cup cultivated berries | 9019 |
| 6 | Cranberry | 1 cup whole berries | 8983 |
| 7 | Artichoke Hearts | 1 cup cooked | 7904 |
| 8 | Blackberry | 1 cup | 7701 |
| 9 | Prune | 1/2 cup | 7291 |
| 10 | Raspberry | 1 cup | 6058 |
| 11 | Strawberry | 1 cup | 5938 |
| 12 | Red Delicious Apple | 1 | 5900 |
| 13 | Granny Smith | 1 | 5381 |
| 14 | Pecan | 1 ounce | 5095 |
| 15 | Sweet Cherry | 1 cup | 4873 |
| 16 | Black Plum | 1 | 4844 |
| 17 | Russet Potato | 1 cooked | 4649 |
| 18 | Black Bean | 1/2 cup dried beans | 4181 |
| 19 | Plum | 1 | 4118 |
| 20 | Gala Apple | 1 | 3903 |

Carotenoids

Among the 600 or more carotenoids in foods, beta-carotene, lycopene, and lutein are well-known leaders in the fight to reduce the damage from free radicals. Goods high in carotenoids may be effective allies against prostate cancer (beta-carotene); cancers of the mouth, pharynx, esophagus, stomach, colon and rectum (lycopene); and may help decrease your risk of macular degeneration (lutein).

Vitamin E

Research has demonstrated the broad role of vitamin E in promoting health. The main role of vitamin E is as an antioxidant. It helps protect your body from cell damage that can lead to cancer, heart disease and cataracts as we age. Vitamin E works with other antioxidants like vitamin C to offer protection from some chronic diseases. Vitamin E is found in vegetable oils, salad dressings, margarine, wheat germ, whole-grain products, seeds, nuts and peanut butter.

Vitamin C

Perhaps the best known antioxidant, vitamin C offers a wide variety of health benefits, including protecting from infection and damage to body cells, helping produce collagen (the connective tissue that holds bones and muscles together); protecting your body from bruising by keeping capillary walls and blood vessels firm; and helping in the absorption of iron and folate. To take advantage of these benefits, eat foods rich in vitamin C like citrus fruits, strawberries, sweet peppers, tomatoes, broccoli, and potatoes.

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Challenges to Healthful Eating

The best way to build a healthful eating plan is to eat well-balanced meals and snacks each day and to enjoy a wide variety of foods. Eating at least 2 cups of fruits and 2 ½ cups of vegetables daily is a good start for healthful living. However, there may be circumstances that make healthful eating a challenge. If you are on a restricted low-calorie weight loss diet, smoke, or just don't eat enough fruits and vegetables, a multivitamin supplement may be beneficial. Ask your doctor whether you need a supplement. A registered dietitian can evaluate your eating pattern available and determine whether a supplement is right for you. We have a registered dietitian available to meet with you by appointment in our office. Make your personal appointment today as a commitment to better health!

A Nutritious Breakfast Loaded With Antioxidants

It is important to start your day on the right foot. This recipe is modified from the Food for Life Cancer Resources and is surprisingly tasty. I recommend adding some protein powder to fortify this with some important protein intake. I recommend the Pure Encapsulations protein product line as the "Purina for People." This includes their WheyBasics, PureLean, ProBasics and IsoProtein products. I also recommend the Pharmanex line of protein powders, AC Shake and My Victory. If you wish to go over the counter consider simple whey protein, or use whichever favorite product you might already be using.

Kale is one of the ingredients in this recipe. Kale is in the cabbage family and is readily available in the produce aisle of most grocery stores. Kale is a great source of beta carotene, vitamin C and E. It also is a decent plant source for calcium (135 mg in a cup of cooked Kale), folate and iron. It is also loaded with potassium. Kale also is a good source of bioflavonoids (antioxidants) and indoles (which can lessen the cancer-causing potential of estrogen).

Green Goddess Breakfast Drink

Ingredients

- 1 orange, peeled (or not if cleaned well, cut into quarters if you keep the peel)
- 1 bunch of grapes
- 1 banana (frozen recommended)
- 1 pear
- 1 cup of soy, almond, or rice milk (low fat regular milk is fine)
- 2 cups of Kale
- 1-2 scoops of protein powder (15-25 grams of protein)
- Ice cubes (optional)

Preparation

Wash all food and place in a blender for 1 minute or until desired smoothness is achieved. Makes 2 Servings.



Measure Your Antioxidant Status

by Dr. Raymond Kordonowy

Recently in the news and the medical literature there has been positive data correlating antioxidant intake and improved health. Oxidation is an inevitable outcome of burning oxygen, even in our human cells. This process is potentially harmful to our cells due to the release of free radicals which are unstable molecules that damage healthy cells. Free radicals contain at least one negatively charged electron which makes them chemical highly reactive. Antioxidants are positively charged molecules that combine with the free radical containing molecules, rendering them harmless.



If the balance of free radicals exceeds the amount of antioxidants the body becomes more vulnerable to degenerative disorders (From Foods That Harm and Foods That Heal, published 1997). Macular degeneration is now the most common cause of blindness in the United States. This disorder has been proven to improve (dry type) with improved antioxidant intake by either diet or supplements. The retinal specialist doctors recommend various supplement formulas such as the AREDS products and others. If you are presently supplement with these products you can now actually measure your antioxidant status to monitor your product's effectiveness and/or the need to supplement further-using the Biophotonic scanner.

Recently in the literature, research showed a statistically reduced incidence of heart attack in women that correlated with the highest level of dietary antioxidant intake. Also recently, data showed men's stroke rates were inversely correlated with lycopene intake (a potent antioxidant found in tomatoes/red pigmented vegetables and fruits). The more intake the men had the lower the rate of stroke in the time period studied.

As circumstances would have it, I recently became aware of and started providing a simple, affordable test that measures a person's antioxidant status. The ability to measure is what science is all about. This circumstance arose from my chance self-introduction to Dr. Corey Howard MD from Naples Florida. Dr. Howard co-chairs the Florida Medical Association annual delegates meeting. As a delegate, I introduced myself to him and told him I practiced nearby. He and I discussed the fact that we found our practices moving more towards Wellness (mine with Lipidology and his with lifestyle medicine) and he explained to me the availability of this new "life changing" technology. He came to my office and showed the system to me. Following that I performed due diligence on this scanner and the company behind it and also behind another top notch vitamin/supplement line from this company known as Pharmanex.

The technology involves something known as Raman Spectroscopy. This Nobel prize winning physics accomplishment proved that chemical structures have signature light reflective properties. A large pool of human antioxidants are stored in the skin. These antioxidants are known as carotenoids and represent a family of compounds including the beta carotene, lutein. Pharmanex owns a patented technology they call the Biophotonic scanner. This device projects a specific blue light frequency into the skin of the hand. Some of this light is reflected back to the scanner with a signature frequency that only carotenoids will create. The amount of reflected light returning then can be correlated to a quantity of carotenoids and thus a measurement score is reported. This technology has been verified to correlate well with a persons overall antioxidant score and has been validated in studies done on retina measurements to study antioxidants and macular degeneration treatment. Dr. Oz featured this technology on one of his programs. Apparently his score was great but the audience overall had a terrible average. I am finding in my practice so far a wide range of results. The results tend to correlate with anticipated results based upon lifestyle and dietary histories.

The Recommended Dietary Intake for vegetables and fruits is 6-10 servings (2.5 cups of vegetables and 2 cups of fruit). Data also shows nearly no one can meet even this minimal recommendation (let alone optimal dietary intake). Data

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shows most people take supplemental vitamins. Recently for the first time a study has shown that for adult men, taking a multivitamin (Pfizer's Centrum) resulted in a measurable reduction in cancer compared to nonsupplement users. Multi vitamins vary by product but usually contain some but not all nutritional antioxidants. Now if you are supplementing you can measure whether what you are buying/taking is working or not. Furthermore, you can monitor your dietary changes to see if you are doing a good enough job. Follow this link to see a list of high antioxidant foods.

Smoking greatly increases your oxidation status (one of the mechanisms behind the cancer risk associated with this behavior). Sun exposure consumes carotenoids in the skin (this is probably why these antioxidants are stored both in the skin and the retina of the eye (light is a form of UV radiation and this is harmful to cells). Exercise can create higher antioxidant requirements. Weight loss/fat burning markedly increases free radicals and so person's dieting and losing weight need significantly more antioxidants. This is one of the reasons persons losing weight or seeing our Dietitian, Marcy Russo (Registered Dietitian), should consider taking additional vitamin supplementation. You can now monitor your needs and benefits of supplements with periodic scans.

Pharmanex has a vitamin line that is scanner guaranteed, meaning that Pharmanex guarantees if taken as directed and if purchased using their Automatic Delivery Rewards program (ADR program) if your score doesn't improve at 1 and 2 months they will return your money. Using the ADR program also results in loyalty discounts over time as well as free monthly scans (they pay for your scan). The company actually will email you to remind you to get your score done. By getting the product delivered monthly you are guaranteed fresh product. Antioxidant supplements will degrade/age on the shelf and thus vitamins expire/lose potency over time after production. All of the above discovery is why for the first time since I started offering vitamin supplements I have added a second supplier/vitamin line. I can't buy and offer the product at my office for less than the ADR program offered to persons buying in the program and thus I won't be supplying this line in the office.

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Disclosure: I do receive partial revenue from sales of this product line. This also is true from Pure Encapsulations product sold in my office or from my website store.