

DIRECT ANTIOXIDANTS NOT ENOUGH TO COMBAT OXIDATIVE STRESS

As a child, you heard it over and over from your parents and grandparents: "Eat your vegetables!" This is certainly sage advice, as vegetables give our bodies vital nutrients we need to be healthy and strong. Vegetables are typically loaded with vitamins A, C, K and B6, provitamins, carotenoids, dietary minerals, dietary fiber and carbohydrates. The USDA Dietary Guidelines for Americans recommends consuming three to five servings of vegetables daily.

For the past three decades, nutritionists have placed increasing emphasis on eating vegetables for the antioxidants they contain. Indeed, Vitamins C and E, along with carotenoids (lycopene, carotenes and lutein—found in tomatoes and green leafy vegetables), are sources of antioxidants. But these direct antioxidants simply aren't sufficient enough to combat oxidative stress.

A study conducted by the University of Arizona Department of Nutritional Sciences, published in the Journal of Nutrition in October 2011, helped verify what LifeVantage Chief Science Officer Dr. Joe McCord has said for several years: direct antioxidants aren't working.

The University of Arizona study, titled "Increasing the vegetable intake dose is associated with a rise in plasma carotenoids without modifying oxidative stress or inflammation in overweight or obese postmenopausal women," took three groups of overweight, postmenopausal women and gave them two, five and 10 daily servings of vegetables, respectively, for a three-week period. Though the results clearly showed a significant increase in plasma carotenoids (a biochemical marker of vegetable intake), when the study measured markers of oxidative stress, there was no change in any of the three groups.

"It's becoming abundantly clear that...there is no effect on oxidative stress [from direct antioxidants]," Dr. McCord said when discussing this study.

To effectively combat the ravages of oxidative stress, one needs the indirect antioxidant approach of influencing the body's natural antioxidant enzymes such as SOD and catalase. No other source can upregulate these antioxidant enzymes like the dietary supplement Protandim, the Nrf2 Synergizer.

So keep eating your fruits and vegetables for the many nutrients they provide. But to boost your antioxidants, take Protandim every day!

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ULTRA-POPULAR GREEN TEA HAS ITS PLACE IN PROTANDIM®

Of all Protandim's five ingredients, green tea is probably the most studied and most highly regarded.

Green tea has been an important part of Asian and Middle Eastern cultures for 4,000 years. Numerous varieties of green tea have been created, and the tea has only recently become popular in Western cultures.



Over the past decade, scientists and researchers have studied and tested this long-consumed beverage, produced from the *Camellia sinensis* leaves of China. These studies, conducted in university labs across the world, have examined green tea's role in lowering cholesterol, burning fat and fending off dementia, among other things.

Many health professionals agree that green tea has critical antioxidants that assist in maintaining sound health.

Physicians do urge, however, that green tea not be consumed as a drug but instead to complement the diet.

Protandim®, the Nrf2 Synergizer® includes green tea extract containing 98 percent polyphenols. Though green tea does have caffeine, Protandim contains less than 4 milligrams of it, less than a typical "caffeine-free" coffee.

ASHWAGANDHA PROVIDES A BOOST

Knowing Protandim contains an ingredient whose roots' smell is best described as that of a sweaty horse might not be overly appealing. But wait until you hear what this plant is purported to do.

Ashwagandha grows in the drier regions of India. Its name literally means "horse's smell." Though it cultivates in India, it has become a popular herb in the Western world. Ashwagandha has been admired for its dual capability of energizing and calming simultaneously.

Ashwagandha has been used as a way to support a healthy immune

system, calm mental processes, foster healthy sleep patterns, and sustain levels of energy, strength and physical activity.

With a rich source of antioxidants, ashwagandha is also used to help with stress.

Because of its recent popularity, ashwagandha has become of particular interest to researchers.

It has been shown to support healthy cholesterol levels, among other things. Studies on ashwagandha can be found at www.PubMed.gov.



REMEMBER THIS: BACOPA MAY IMPROVE YOUR COGNITIVE FUNCTIONS

Native to marshy areas of India and now found throughout the tropic and subtropical areas of the world grows the 4-inch-tall, 2-foot-wide bacopa plant. The plant's long stems are covered in tiny, pristine five-petal flowers. This beautiful, easy-to-grow plant has recently become popular among gardeners.

But what is found within the bacopa may be even more pleasing.

If you find yourself easily forgetting names, dates, places or facts, bacopa may be a remedy to consider.



Bacopa extract, one of the five main ingredients of Protandim, has long been hailed for its ability to enhance cognitive abilities. Bacopa has been important in Indian medicine for centuries, used chiefly to enhance clear thinking and memory function. Studies suggest it provides strong antioxidant defense against stress on the brain. It is also used to improve concentration, alertness and focus.

As with all Protandim ingredients, the antioxidant capabilities of bacopa are much weaker on their own than when combined with the other components to form Protandim.

FREE RADICALS: THE PRODUCERS OF OXIDATIVE STRESS

Back in 1969 when Dr. Joe McCord co-discovered the enzyme superoxide dismutase, or SOD, along with his mentor Irwin Fridovich, the scientific and medical communities knew very little about oxidative stress in biological systems. But in recent years, this topic has generated much interest. In fact, oxidative stress has been the subject of tens of thousands research studies and papers. It has also been linked to hundreds of health conditions.

Oxidative stress is inevitable, and it arises from rogue, unstable molecules called free radicals.

Free radicals have an unsatisfied electron pair, and they roam the body in search of other compounds and molecules from which they can capture electrons in order to become stable. When free radicals steal electrons from other molecules, the attacked molecule itself becomes a free radical, starting a chain reaction that can damage cells, proteins and DNA.

Sometimes, the body deliberately makes free radicals in order to neutralize viruses and bacteria. But often, they are inadvertently created through external sources such as oxygen, cigarette smoke, pollution and radiation.

Unfortunately, there is nothing we can do to completely stop the production of these free radicals. The good news is the body is equipped with antioxidants to detoxify them. SOD and another enzyme called catalase, along with the tripeptide glutathione, are deployed to eliminate free radicals, and they do so very successfully.

However, as we age, the body produces fewer of these antioxidants and more free radicals. The results of this imbalance can be severe. When free radicals overwhelm the underproduction of antioxidant enzymes, oxidative stress occurs.

LifeVantage has the key to decreasing the damage caused by these free radicals. Our flagship product, Protandim®, the Nrf2 Synergizer®, is clinically proven to reduce oxidative stress in humans by an average of 40 percent in 30 days. Protandim achieves this by inducing the protein Nrf2 to call into action more of the body's natural antioxidant defenses, thus eliminating more free radicals and allowing cells to survive the onslaught of oxidative stress.

Free radicals will always be present in our bodies but you can give yourself the best defense possible with Protandim.

LifeVantage
PROTANDIM
the Nrf2 Synergizer®