RBC Celebrates 15 years IN NUTRITIONAL SCIENCE

NanoCeuticals™ Today

RBC Life Sciences: Pioneering Nanotechnology in Nutritional Science

Volume 1, Number 10 March 2006

Is ORAC the Wrong Way to Measure Age-Defying Antioxidants?

If you want to slow your aging process, you will want to know about nutritional antioxidants -- how they help you feel younger, how they contribute to your wellness, and how to choose the most effective ones.

Oxidation

The process of oxidation starts with the air you breathe. Each oxygen atom has a nucleus in the center with tiny electrons circling around it like satellites orbiting the earth. Any atom that has eight electrons in its outer orbit is stable, but oxygen has only six. It is therefore very unstable -- it needs two more electrons. When Oxygen comes into contact with other atoms it may steal two electrons from them creating fire that releases heat energy, or the oxygen atom may simply attach itself to one or more atoms to share electrons, as it does with hydrogen to make water (H_20) or carbon to make CO_2. Either way it is called "**oxidation".**

For example, oxygen burns the wood in your fireplace by capturing its electrons and releasing heat energy into the room. In your body, oxygen captures electrons from your digested food releasing the energy you use for all the activities in your body.

What remains after oxidation?

In the fireplace, oxidation of the wood hydrocarbons produces CO_2 which floats up the chimney, and leaves carbon ashes on the floor. In your body, oxidation of your food molecules produces CO_2 which you exhale, but the "ashes" remain in your body as electron-deficient molecules called "free radicals". They are dangerous because they roam through your body attempting to replace their missing electrons by stealing electrons from your vital cells, causing them to weaken and age early, and damaging their ability to reproduce as healthy normal cells.

Anti-oxidation

Scientists agree that **oxidized** compounds wrinkle your skin, damage internal organs, and contribute to the signs and symptoms of early aging. The natural way to resist oxidized damage is to provide your body with **anti-oxidants** – some of which you make, some you eat, and some you take.

How do you know which antioxidant is best for you?

The ORP Test.

Please note: the essential function of an antioxidant is **to supply electrons to electron-deficient free radicals** so they no longer steal electrons from vital cells. Then how do you determine which antioxidant is the most effective?

You can measure an antioxidant's potential to supply electrons dispersed into a liquid by using an ORP (Oxidation/ Reduction Potential) meter. Oxidized materials are shown as + above zero, antioxidants are either a low + or a negative reading. Lower numbers indicate more available electrons.* For example:

	ORP
• CoQ 10	+49
• wheatgrass juice	-120
• Microhydrin	- 600 to -800

There is no antioxidant on the market that lowers ORP readings more than Microhydrin, and it is the only one shown to reduce lactic acid during exercise, proving bioavailability, and the only one shown to reduce NAD a precursor to energy.*

The ORAC Test

Another test, known as ORAC, was developed to measure the antioxidants in foods, primarily polyphenols, which are present in brightly colored fruits and vegetables. The ORAC test was developed based on the intensity of the color in the food which is related to its ability to quench a certain type of free radical. Blueberries, carrots, and prunes show high ORAC values. Antioxidants that have high ORAC values may NOT have high bioavailability, making the ORAC value NO measure of how the antioxidant is used in the body.*

Furthermore, not all antioxidants have color. Some of the most effective antioxidants are white minerals, such as zinc, selenium, or Microhydrin. Therefore an ORAC test CANNOT be used to evaluate these antioxidants.*

Misinformation

Some companies sell an antioxidant made from plant foods and claim that theirs is superior because of its high ORAC value, misleading the public into thinking that the ORAC test determines the effectiveness of all antioxidants.

Your Best Antioxidant

We wanted to create the most effective antioxidant on the market. We recognized that different types of free radicals have different chemical structures. Accordingly, we used different types of antioxidants -- some water-based, some oil based -- some scavenge directly, some indirectly. We added alpha lipoic acid, quercitin, green tea, cysteine, milk thistle, selenium, vitamin C, and niacinamide, to our powerful Microhydin. The result was the best antioxidant on the market! These antioxidants have also been shown to support the body's internal mechanism for creating its own antioxidants. They have shown anti-aging effects in animals, and support for the health of starving children who suffer severe oxidative damage. The product that provides you the most effective antioxidation is **Microhydrin Plus**! *

** These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.*