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THE NUTRI-SPEC LETTER

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YOUR UNIQUE POWER OVER FREE RADICALS

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Dear Doctor,

You (and only you in the domain of your patients) uniquely offer dominance over free radicals. You have the power to banish them from your realm --- then detoxify any metabolic mess they left behind. ----- Your “trick” is to ...

**CLOBBER THOSE NASTY RASCALS
WITH BOTH ANTI-OXIDANTS
AND ANTI-REDUCTANTS.**

You are thus the true guardian and protector of your own Health Span & Life Span, as well as those of your family and your patients.

In response to [last month's Letter](#), you may be among those who asked us, “Is a particular nutrient an antioxidant or an oxidant, or is it both under different conditions?”

A nutrient cannot be both --- it is either an antioxidant or an oxidant --- OR --- an antireductant. Most antireductants (such as lipoic acid) have been categorized as antioxidants. --- Why? --- Antireductants decrease the INFLAM-AGING from Reactive Oxygen Species (ROS) just as well as do antioxidants, but by an entirely different mechanism.

Here is the way to look at it. Antioxidants are free radical scavengers.

LIKE VACUUM CLEANERS --- THEY SLURP UP THE END RESULT OF OXIDATIVE FREE RADICAL DAMAGE.

In contrast, antireductants have no benefit whatsoever on ROS after they are formed, but rather prevent their formation in the first place. Antireductants so effectively facilitate normal oxidation that they prevent ROS oxidative damage, even though, chemically speaking, they have no antioxidant function at all.

That antireductant effect to normalize oxidative metabolism is why even a polyunsaturated fatty acid such as the Omega-3 alpha-linolenic acid has been categorized as an “antioxidant”. It is as powerful a pro-oxidant as you can imagine in a food-derived supplement, but it is an effective antireductant by normalizing mitochondrial oxidation. It confers this benefit by blocking the PROSTA-GLANDIN formation driven by Omega-6 polyunsaturated fatty acids.

The mistaken assumption is that all things that decrease free radicals are antioxidants, when really many of the things that decrease free radicals are oxidants. One good example is selenium. Even better examples are Thiosulfate (your Oxy Tonic) and Cysteine (NAC from your Activator & Rejuvenator). These are the antireductants you can think of as protecting you against Reductive Stress, but also protecting you from “too much of a good thing” --- the Reductive Stress and consequent oxidative damage, from an excess of antioxidants.

That potential damage from antioxidant supplementation was the key point of last month’s Letter. We highlighted, using Cardiovascular Disease to illustrate, how CVD is not (contrary to popular opinion) associated with oxidative damage to the heart and vasculature, but is almost entirely a Reductive Stress, not an Oxidative Stress pathology. The Reductive Stress from excess antioxidant supplementation creates Reductive Stress, which creates more Oxidative Stress, which exacerbates both Exogenous INFLAM-AGING and Endogenous INFLAM-AGING.

By increasing Endogenous INFLAM-AGING, excess antioxidant supplementation, in addition to specific effects such as increasing the risk of heart attacks and strokes, will shorten Life Span. Yes, that truth violates everything you have come to “believe in” regarding nutrition supplementation. But those are the facts of life and death. And only you, as a Nutri-Spec practitioner, are prepared to deal with the truth --- and support your Health Span & your Life Span, and those of your patients --- all the while other nutritionists and alternative healthcare providers are inadvertently doing damage to their patients.

Nevertheless --- It is never “not good” to supplement with antioxidants. We all have excessive oxidative processes out of control in our body to some degree --- and they get worse as we grow older. However, we also have insufficient oxidation (= cellular energy production) processes, as well as excesses of reductive processes going in our body at the same time. Those metabolic insufficiencies and damaging processes also accelerate as we age. --- So --- there is never a problem with supplementing with antioxidants, as long as there is a balance between the antioxidants, the oxidants, and the antireductants.

How do you determine that balance between antioxidants and antireductants on an individualized basis for each patient? ----- That is the essence of your Stage Of Life INFLAM-AGING Defense Diphasic Nutrition Plan (SOLID DNP).

Exogenous INFLAM-AGING (your Health Span) is all about inflammation caused by oxidative free radical damage. Endogenous INFLAM-AGING (your Life Span) is determined almost entirely by inflammation related to Reductive Stress --- and secondarily, to the oxidative damage that derives from Reductive Stress.

Exogenous INFLAM-AGING is your focus on patients under age 33. But you know that at age 23 biological clocks are activated that allow Endogenous INFLAM-AGING to begin taking control of the aging process. So, there is a decade between age 23 and the 33rd birthday when the Oxidative Stress of Exogenous INFLAM-AGING is still the major factor, yet Reductive Stress is beginning to rear its ugly head.

How this translates into the supplementation of your SOLID DNP is that for patients under age 23 you enhance the Health Span of your patients with your Oxy-

Max (an incredibly powerful antioxidant). The more health challenges your patients have, the more Oxy-Max they need.

From age 23 through 32, the emphasis remains on Oxy-Max (along with Adapto-Max as per your SOLID DNP instructions), and only in the most severely unhealthy patients do you consider adding a little Rejuvenator to your Oxy-Max & Adapto-Max.

Then at age 33, Rejuvenator becomes critical. With Rejuvenator + Adapto-Max (and of course, Activator to team up with Rejuvenator, along with Immuno-Synbiotic --- and --- further individualized for each patient with the BALANCING PROCEDURE) your supplementation remains perfectly in step with the changing needs of all patients as the years go by.

Anti-Oxidants? Anti-Reductants? What is the difference? Should you care?

You absolutely do not need to care about the underlying biochemistry distinguishing ---

OXIDATIVE STRESS vs. REDUCTIVE STRESS.

But you absolutely must care to know that there is a difference, and how understanding that difference is critical in maintaining your health, and above all, in providing comprehensive, individualized nutrition plans to your patients.

For a more technical explanation of the underlying biochemistry, you can punish yourself by reading the Addendum to this Letter. You do not need to understand any of that, but you absolutely must understand that the understanding is built into the lifelong nutrition Plans you offer your patients.

Your Stage Of Life INFLAM-AGING Defense Diphasic Nutrition Plans (SOLID DNP) adjust your supplementation for patients based on their stage of life. You (and your patients) can easily grasp the concept that the nutrition supplement needs of a 16-year-old high school athlete are entirely different than those of a 66-year-old with impairment due to arthritic inflammation. The nutrition needs of a 24-year-old pregnant woman are different than those of a 52-year-old woman feeling the effects of menopause ----- That concept should be a no-brainer for anyone involved in nutrition --- yet no one is addressing that specifically as you are --- with your SOLID DNP.

SPECIAL FOR NOVEMBER: 2 **FREE** for every 10 you buy of Oxy-Max, Adapto-Max, and Rejuvenator.

ADDENDUM

To understand how oxidants can decrease free radical oxidation you must understand the difference between normal and abnormal oxidation.

Fatty acids consist of a polar carboxyl group bound to a non-polar hydrocarbon chain. Under normal conditions the polar carboxyl group exerts an induction effect on the non-polar group, thus changing successive carbons of the chain to alternate polarities --- the odd carbons being positive and the even carbons being negative.

Now, when it comes to normal oxidation processes, oxygen combines with a positive carbon only. This induction effect that polarizes the carbons in the fatty acid chain is especially pronounced in unsaturated fatty acids, which have double bonds. These double bonds have the capacity to become a semi-polar center and consequently to bind or lose radicals without altering the chain of the molecule itself. This binding principally involves non-metallic elements and this is where oxidant/antireductant nutrients like Selenium, Thiosulfate, and NAC come in.

The semi-polar character of the double bonds renders the nearby carbons highly reactive. So in normal oxidation processes the oxygen binds to a nearby carbon to produce what is called a hydroperoxide, and a hydroperoxide has an -OOH group.

Under normal circumstances the oxygen fixation becomes reversible and the fatty acid liberates the oxygen in highly activated free radical form. These are normal free radicals.

They “energize” cellular energy formation. They drive your physiology. They vitalize your life.

LIVE STRONGER LONGER!

Thus, the physiological role of unsaturated fatty acids in oxidation processes is to change oxygen to a free radical.

Under abnormal oxidation conditions, the fixation of oxygen occurs at the double bond itself. Thus, instead of hydroperoxides being formed, epoxides or peroxides are formed, depending on the molecular or ionic character of the oxygen. These are the free radicals that you read about in all the literature. They are extremely harmful and they should be treated with antioxidants – as these constitute what we call in Nutri-Spec, a Dysaerobic Metabolic Imbalance. They are also the essence of ---

Exogenous INFLAM-AGING.

The point we are making here is that certain elements like selenium, and of course Thiosulfate, are powerful oxidants (= antireductants) that stimulate the normal free radical formation. The true antioxidants are the tocopherols, the tocotrienols, CoQ10, and glutathione. These are the nutrients properly called antioxidants because they are free radical scavengers --- clearing out the products of abnormal oxidation.

I don't know that this discussion is necessarily making clear to you the difference between oxidative activity and antioxidant activity, the difference between hydroperoxides and peroxides, and the difference between Dysaerobic oxidation and normal oxidation. Please just pick up on the big idea that the presence of free radicals does not necessarily suggest the need for antioxidant nutrients, nor can you assume that anything that decreases the level of free radicals has functioned as an antioxidant; it could have been an antireductant.