

Dynamic Wellness Newsletter - Supplements #2

Welcome back to the confusing world of dietary supplements!

In our last newsletter we talked about two basic supplements that most of the establishment now agree can be beneficial to the health of most people – a daily multivitamin/mineral and fish oil/Omega-3 fatty acid supplements.

In this newsletter, we're going to look at some "super antioxidants" and some condition-specific supplements that are helping people manage health problems such as:

- Arthritis
- High blood pressure
- High cholesterol
- Bone loss

Some of these products have been found to be as effective as prescription drugs — without the side effects of drugs. And researchers are finding that two increasingly popular "super antioxidant" supplements appear to be effective scavengers of free radicals — the unstable molecules in our bodies that may be contributing to, if not responsible for, most degenerative diseases and, possibly, the aging process itself.

We know that the landscape of supplements is confusing and there is still much controversy swirling around with many research studies showing inconclusive or contradictory results. Our goal here is to acquaint you with a few supplements that are showing promise for some of our most common health problems and concerns, and let you decide if you want to try them.

FREE RADICALS — THE KEY TO DISEASE AND AGING?

It is now widely believed that free-radical damage to our cells and DNA is the primary reason we age. Free radicals are unstable molecules, or atoms, created through oxidation, or exposure to oxygen. Some examples of oxidation are burning, rusting and browning (when you cut an apple).

When a molecule reacts with oxygen in a cell, it gives up one of its paired electrons, leaving it with a free, or unpaired, electron, which makes it unstable. This unstable molecule starts bouncing around looking to "steal" an electron from a healthy, stable molecule. Unfortunately for our cells, this unstable molecule acts like a bull rampaging through a china shop.

Think of our cells as containing tiny fireplaces (mitochondria) where we burn nutrients in the presence of oxygen to generate energy. Just like when we burn a fire in our living room fireplace, this process produces byproducts, like the sparks that fly out from the fire. If we don't catch and extinguish these unstable sparks with a grate in front of the fire, they can do damage to items in the room. They could even burn down the house!

The "sparks" generated in our cells through energy production are free radicals which attack the mitochondria and DNA in our healthy cells, creating more free radicals along with the cellular damage. This process is like a "free radical chain reaction"! We also produce free radicals when we're under stress and we bring them into our bodies through things like smoke, pollution, sunlight, alcohol, X-rays, and junk food containing trans fatty acids, sugar and chemicals.

If this "free radical chain reaction" is left unchecked, our cellular damage accumulates and produces degenerative changes in our bodies, which lead to premature aging and diseases like heart disease, cancer, type 2 diabetes, arthritis and Alzheimer's. It's like rusting from the inside out!



Antioxidants to the Rescue!

To counteract this damage, our bodies have a built-in defense system of antioxidants, which are molecules that give up one of their electrons to the free radical molecules to stabilize, or inactivate, them. They are free radical “hunters” that inhibit the generation of new free radicals, limit the free radical chain reactions, and repair the cellular damage. The body’s natural antioxidant system is usually capable of limiting free-radical damage resulting from our daily energy production and metabolic processes. But when we start producing more free radicals than there are antioxidants to neutralize them, an imbalance or “oxidative stress” occurs.

This oxidative stress is happening more and more due to our environment and our lifestyle choices. The following may surprise you. It did us! A study at the University of Buffalo School of Medicine found that within three hours after eating a 900-calorie, high-fat fast food breakfast, circulating free radicals in a group of healthy people increased up to 175 percent!

But here’s the good news. They repeated the test, and this time the participants took two antioxidant supplements with their meals – 1,200 IU of Vitamin E and 500 mg of Vitamin C. There was no increase in circulating free radicals. The anti-oxidants act like fire extinguishers on the extra free radicals being produced!

Previously, we recommended taking a multivitamin with plenty of the antioxidant vitamins and minerals, Vitamins A, C, E and Selenium, in our last newsletter. But there are other potent antioxidants, or free-radical hunters as we like to call them, being studied that we think you should know about as well.

Super Antioxidants

In the ongoing search for the fountain of youth, scientists are identifying several other substances that have antioxidant properties and improve the efficiency of our energy-producing mitochondria. There have not been a lot of human studies on these substances so far, but considerable laboratory animal studies are showing impressive free radical reduction and anti-aging results.

Because the research is so promising and these substances may offer different benefits than the basic antioxidants, we want you to be aware of the following two supplements.

Coenzyme Q10 (CoQ10)

(also see chart on page 3 for heart disease impact)

- Essential to cellular energy production
- Improves use of oxygen at the cellular level, particularly in heart muscle cells
- A powerful antioxidant – can protect the body from free radical damage
- Helps protect LDL (“bad”) cholesterol from oxidation
- Is heart protective in numerous ways

Alpha-lipoic acid (*The “universal” antioxidant*)

- Can enter all parts of a cell to help neutralize both water and fat-soluble free radicals
- Assists in the conversion of glucose to energy
- May help lower blood sugar and treat neuropathies in people with diabetes
- Helps regenerate other antioxidants:
 - Vitamin C
 - Vitamin E
 - CoQ10
- Beneficial for immune system, liver and cardiovascular system support

This newsletter is intended as a sharing of knowledge and information from our research and we are not advocating that you use of any of these supplements without consulting with a qualified healthcare professional. This is neither intended nor implied to be a substitute for professional medical advice. It is important that you do not reduce, change, or discontinue any medication or treatment without consulting your physician first.

We are only providing dosage recommendations for those well-established and researched products. For others, there is insufficient research and consensus for specific dosages. We recommend that you follow the suggested dosages on the labels of individual products.

POPULAR DRUG-ALTERNATIVES

Following are some of the most popular and well-researched condition-specific supplements that are helping people achieve health improvements in the areas of heart, circulation, bone and joints.

Some of these products have been in large human studies that found them to be as effective as prescription drugs — without the side effects of drugs.

NOTE
The best time to take vitamins or minerals is with meals.

Condition-Specific Supplements

| Supplement | Primary Claims <i>(not all conclusively proved and some are dose-dependent)</i> | Other Functions / Claims | Other Info |
|--|--|--|--|
| COENZYME Q10 (CoQ10) | HEART HEALTH – Blood Pressure / Multiple Functions - Known as the heart's energy fuel - Enhances heart muscle function - Promotes normal blood pressure - Helps protect LDL ("bad") cholesterol from oxidation - Maintains healthy blood vessels - Reduces risk of plaque rupture and clots | - Powerful Antioxidant - Needed by every cell in body - Increases cellular energy production - Enhances overall energy level, stamina, and immune system health | Cholesterol-lowering statin drugs can deplete CoQ-10 levels in the body. Canadian law requires that statins carry labels warning that such CoQ10 depletion can lead to impaired cardiac functioning in patients with congestive heart failure. |
| POLICOSANOL Has been shown to normalize cholesterol as well as or better than cholesterol-lowering drugs | HEART HEALTH – Cholesterol - Lowers harmful LDL-cholesterol and raises protective HDL-cholesterol - Helps stop the formation of artery lesions - Lowers blood triglyceride levels | - Inhibits the oxidation of dangerous LDL-cholesterol - Inhibits the formation of clots | |
| GINKGO BILOBA One of the most well-researched herbs in the world. | HEALTHY CIRCULATION – Brain Function - Improves circulation to brain and extremities - Inhibits blood clotting - Antioxidant that combats oxidative stress in the brain | - May improve cognitive function: increased mental sharpness, better concentration, and improved memory - Used to treat Alzheimer's disease | It is a blood thinner and should not be used by persons taking blood-thinning drugs like Coumadin (warfarin), heparin, aspirin, Plavix, Ticlid, and Trental |
| CALCIUM (Should be taken with Vitamin D & Magnesium) | BONE HEALTH - Helps build and maintain strong bones | Also important for maintenance of normal blood pressure, blood clotting, muscle contraction, and nerve transmission | Calcium Dosage/Day 1300 mg - ages 9-18 1000 mg - adults <50 1200 mg - older adults 1500 mg - post-menopausal women |
| GLUCOSAMINE Sulfate and CHONDROITIN Sulfate Helps slow deterioration of cartilage and relieve pain | JOINT HEALTH – Osteoarthritis - Glucosamine is thought to promote the formation and repair of cartilage - Chondroitin is believed to promote water retention and elasticity in cartilage and inhibit enzymes that break down cartilage | May protect joints from further damage | These two substances have been researched more than any other supplements on the market. Clinical reports and research trials demonstrate that they support healthy joint function. |

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