

Heavy Metal Scavaging Antioxidants

We all live in a toxic environment. The air we breathe, the food we eat, and the water we drink is polluted. No matter where we live or how careful we are, we can't escape these health hazards. So, how do we protect ourselves against the damage done from everyday living and what can we recommend to our clients and customers?

Those involved in the natural health products industry know that antioxidants play a major role in maintaining good health and can prevent or slow the rate of oxidative damage (too much oxygen) to our body. They act as scavengers, preventing and repairing damage done by free radicals, unstable molecules (having an unpaired electron) that are created as part of the normal metabolic process or from exposure to environmental toxins. While free radicals help our bodies to generate energy and fight infections, an overabun-

dance of free radicals attack healthy cells, causing them to age prematurely.

Nature provides a myriad of nutritive brightly coloured fruits, vegetables, legumes and whole grain foods that contain powerful antioxidant free radical neutralizing substances. Besides containing specific antioxidants, these organic food sources also provide an abundance of vitamins, minerals, enzymes and phytochemicals. Antioxidants are ubiquitous in nature: about 4000 have been identified, the most familiar being Vitamin C, Vitamin E and the carotenoids. Some of the most researched are listed in the chart below. However, the list of phytochemicals known for their antioxidant activity and ability to reduce disease risk are endless, with more being discovered each passing day.

Virtually unknown are a class of powerful antioxidants

found in humic and fulvic acids found in soils. These organic compounds have the unique ability to react with both negatively and positively charged unpaired electrons and render free radicals harmless. Thus, they can either alter free radicals into new useable compounds or eliminate them as waste. When necessary, they can supply vital electrolytes, enhance and transport nutrients, make water wetter, catalyse enzyme reactions, increase assimilation, stimulate metabolism, chelate and humanize essential and trace elements. Demonstrating an amazing capacity for electrochemical balance, fulvic acid can also scavenge heavy metals and detoxify pollutants.

That a simple soil substance can neutralize radiation and deadly toxins, clean up the Earth's environment, heal agricultural lands, fuel the spark of life in living organisms, disarm and kill infectious pathogens, and destroy... truly remarkable!

COMMON ANTIOXIDANT SOURCES

Phytochemical/antioxidants

Allyl sulfides

Carotenoids

(lycopene, lutein, zeaxanthin)

Curcumin

Flavonoids (anthocyanins, quercetin, resveratrol, catechins, etc.)

Glutathione

Indoles

Isoflavones (genistein, daidzeins, etc.)

Isothiocyanates (sulforaphane, etc.)

Lignans

Monoterpenes

Phytic acid

Phenols, polyphenols, phenolic compounds

(ellagic acid, ferulic acid, tannins, etc.)

Saponins

Food source

Onions, garlic, leeks, chives

Tomatoes, carrots, watermelon, kale, spinach, spirulina

Turmeric

Grapes, blueberries, strawberries, cherries, apples, grapefruit, cranberries, raspberries, blackberries

Green leafy vegetables

Broccoli, cauliflower, cabbage, Brussels sprouts, bok choy

Legumes (soybeans, peas)

Broccoli, cauliflower, cabbage, Brussels sprouts, bok choy

Seeds (flax seeds, sunflower seeds)

Citrus fruit peels, cherries, nuts

Whole grains, legumes (soybeans)

Grapes, blueberries, strawberries, cherries, grapefruit, cranberries, raspberries, blackberries, tea

Beans, legumes