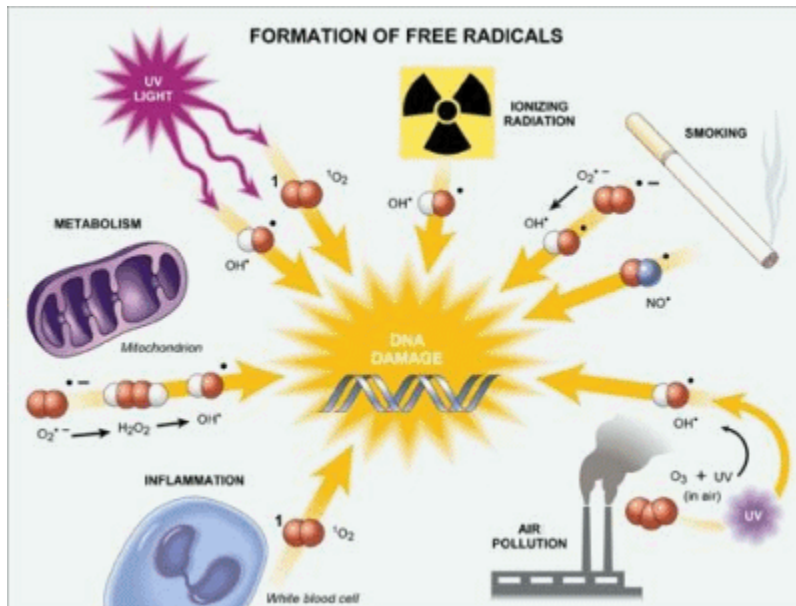


ANTIOXIDANTS & FREE RADICALS

How Free Radicals Damage Your Cells

Just as a piece of metal rusts or an apple turns brown when exposed to air, The human body is vulnerable from contact with air. It's the downside of being an oxygen breather.



If you could view the microscopic world of your body at the cellular level, you'd witness your cells under attack from damaging molecules called free radicals - the natural by-products of your own metabolism. Free radicals are electrically charged molecules that attack your cells, tearing through cellular membranes to react and wreak havoc against nucleic acids, proteins, and enzymes inside.

These attacks by free radicals, collectively known as Oxidative Stress, are capable of causing cells to lose their structure, function and can eventually destroy them. Not only does our body normally produce them, but the air we breathe contains free radicals in the form of toxins and pollution.

The Effects of Free Radical Damage

Can you feel the effect of free radical damage? Not immediately. But unless you take the necessary steps to help counteract the unrelenting attack from free radicals, you run the risk of allowing cumulative damage to the important tissues of your nervous system, joints, internal organs, and blood vessels.

Overall, free radicals have been implicated in the development of at least 50 diseases! A partial list includes arthritis and other inflammatory diseases, kidney disease, cataracts, inflammatory bowel disease, colitis, lung dysfunction, pancreatitis, drug reactions, skin lesions and aging, to mention only a few.

Heart Disease

Heart disease and cancer are two of the most widespread diseases associated with free radical damage. Heart disease is the leading cause of death in America today, prematurely killing an estimated one in three Americans.

Several factors, such as high blood cholesterol levels, hypertension, cigarette smoking, and diabetes, are chief culprits in the promotion of heart disease, however, more and more studies are linking low intakes of dietary antioxidants to an increased risk of heart disease.

Cancer

Cancer is the second leading cause of death in this country. It is estimated that antioxidant-deficient diet may account for as much as 35% of all human cancers. The amount of antioxidant-rich fruits and vegetables included in one's diet appears to have a significant impact on cancer risk. Many scientific studies have reported that a reduction in cancer risk is associated with a diet high in antioxidants.

Chronic Fatigue

Free radical damage has also been strongly associated with the symptoms of chronic fatigue. In the human body, energy comes from the mitochondria, commonly referred to as the energy power houses of cells. The mitochondria can be thought of as an energy generator. Any of a variety of factors which cause alterations or disruptions in the workings of the mitochondria may contribute to symptoms of fatigue, muscle pain and energy deficiency.

Chronic Fatigue Syndrome and fibromyalgia are both often characterized by symptoms of increased fatigue (especially following physical activity), sleep disturbances, morning stiffness, and widespread deep muscle pain. Some scientists have suggested a relationship between the dysfunction of the mitochondria and these conditions. It is estimated that between three and six million people in the United States are affected by fibromyalgia, with the majority of cases reported in women between 24 and 45.

Piecing Together Balanced Free Radical Protection



Fortunately, free radical formation is controlled by a complex network of beneficial compounds known as antioxidants. Antioxidants are capable of stabilizing or deactivation free radicals before they attack cells.

But providing proper antioxidant protection is a challenge similar to putting a puzzle together. All the necessary pieces must be available and properly combined to create comprehensive and balanced protection.

To help you benefit from the antioxidant pieces needed to protect your cells, I suggest that you eat a well-balanced

diet rich in fresh fruits, fresh vegetables, and whole grains. Then, if necessary, this should be supported with balanced, comprehensive, and excellent quality antioxidant supplements.

Take the [Oxidative Stress Questionnaire](#) to help determine whether you may be in need of extra protection.