

The 2 Super Antioxidants!

Açai & Resveratrol are two super foods that provide many health benefits.

These two substances contain miniscule amounts of many nutrients and are especially rich in those compounds that combat free radicals, such as polyphenols, lignans and anthocyanins. **Açai** berry is also rich in healthy omega fats and amino acids.

It has been shown that the antioxidants in Açai are able to enter cells in a useful form and that they can neutralize free radicals even at very low doses.¹³



Açai Berry

Açai (pronounced ah-sigh-EE) is a fruit that grows on the Açai Palm tree in the Amazon Rainforest of Brazil. The Açai berry is small in size (smaller than a grape) and is dark purple in color.

Resveratrol (trans-resveratrol) is a phytoalexin produced naturally by several plants when under attack by pathogens such as bacteria or fungi. It acts as a defense for the plant against such pathogens. **Resveratrol** is derived from the skin of dark grapes and it



Japanese Knotweed

can also be derived from Japanese knotweed (*Polygonum cuspidatum*) a large, herbaceous perennial plant.



Resveratrol is sold as a nutritional supplement because it exhibits a wide range of beneficial biological effects.^{13, 14, 15}

Michael's® Açai & Resveratrol combination is one of the most cost effective ways of attaining these two incredibly powerful antioxidants.

Get Your Free Radical Scavengers Today!

Açai & Resveratrol

Supplement Facts	
Serving Size: Two (2) Veggie Capsules	
Amount Per Serving	% Daily Value
Acai Extract 4:1 (berry) (<i>Euterpe oleracea</i>)	600 mg *
Resveratrol (20% Trans-resveratrol, 40 mg) (from Japanese Knotweed [Root extract] [<i>Polygonum cuspidatum</i>] & Grape seed extract [<i>Vitis vinifera</i>])	200 mg *
*Daily Value not established.	
OTHER INGREDIENTS: Modified Cellulose Gum, Silica, Vegetable Stearate & Hydroxypropyl Methylcellulose.	

Available in 2 bottle sizes: 60s & 120s

Sources Cited

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2 Super Antioxidants Together In 1 Veggie Capsule!

SuperFood Factors

Açai & Resveratrol



The One-Two Punch Of Free Radical Scavengers

Michael's®
Naturopathic Programs
SINCE 1984

What Do Antioxidants Do?

Antioxidants neutralize free radicals. They act as scavengers, helping to prevent cell and tissue damage.

What Are Free Radicals?

Free radicals possess an unpaired electron in the outer ring of the atom or molecule and because it does, it is seeking balance in its outer shell. It has to steal an electron to attain balance. Then the result might be an atom or molecule that is itself a free radical—thus a chain reaction could begin, resulting in the disruption of a living cell. Of particular importance is that free radical damage accumulates with age.^{1,2}

Free Radicals Can Affect Cells At The Membrane Level.

Membranes are vital to functioning of all aspects of cells because the cell membranes and organelle membranes are where transactions occur. Intact, functional membranes are required for all cells.

Where Do We Find Free Radicals?

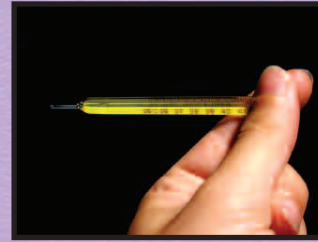
Many body processes result in the production of free radicals. Our bodies possess built in enzyme systems and antioxidant systems to deal with many of the free radicals that are produced by metabolic processes.

Besides the ongoing metabolic actions that constantly produce free radicals, we are exposed to them in many other ways.

Factors Causing Free Radicals

A Wide Variety Of Environmental Agents

These could be as simple as room air fresheners, airborne chemicals such as pesticides, solvents, exhaust fumes and others also, may generate free radicals.



Fever

Free radicals are important to biological processes, including the immune system's actions against pathogens.³

Immune system cells manufacture free radicals for use in destroying pathogens. Antioxidant systems are well-distributed throughout cells and in organelles such as the mitochondria. However, just the presence of highly reactive substances within the cells means that the antioxidant systems must be impeccably in control of these reactions AND that the cells have the wherewithal to generate all the antioxidants that are needed, when they are needed. This means proper nutrition.



And "proper" in the case of free radicals would mean more organic foods which will contain less conventional chemicals. This is especially true for fruits and vegetables. Also important are supplements

containing antioxidants such as vitamins A, E and C to name a few.

Ozone

Interestingly, mammals do not have a specific enzyme system for the detoxification of ozone, a prominent component of urban air pollution.⁴ While not considered a "free radical", ozone is a powerful oxidant and has effects on biomolecules such as lung tissue.⁵

Dust & Other Particles

There are many inorganic particles floating in the air and they may be in higher amounts depending on where you live. These particles, also known as mineral dust (e.g. asbestos, quartz, silica) can have effects on the lungs. It seems that free radicals may intensify the actions of the particles.^{7,8}



Silica particles as well as asbestos are dealt with by phagocytes, immune system cells in the body's bloodstream and tissues, that engulf and ingest foreign particles, cell waste material, and bacteria. These cells can rupture releasing other chemicals and proteolytic enzymes that could lead to increased production of free radicals and other reactive oxygen species due to the immune system action itself. When inhaled, silica is considered to be a "macrophage poison" – macrophages being a type of phagocyte.⁸

Tobacco

Tobacco smoking is another of those items that causes free radicals in the body.⁹ Burning of tobacco leads to the production of over 3,800 chemicals. Although some of these are in the tobacco vapor most of the chemicals with negative effects are in the particulates of tobacco smoke.¹⁰



Some studies have shown that tobacco smoke contains oxidants that may influence intracellular antioxidants in the lung cells. This was *in vivo* by a mechanism that is related to oxidant stress.¹¹

Smokers seem to have elevated amounts of neutrophils.¹² These appear in the lower respiratory tract which could contribute to a further elevation of the concentration of free radicals since immune system cells use oxidants as part of their weaponry.