

## Acai: The Super Antioxidant From Brazil

Acai is an Amazonian palm tree, and possesses small purple fruits that the Amazonian natives of Brazil have used since time immemorial as food and as a remedy for certain health conditions that are now known to be associated with the activity on free radicals on body cells.

The active constituents of acai are powerful polyphenols and anthocyanin antioxidants that protect your body cells from oxidation by free radicals. In fact the plant has been referred to as 'the super antioxidant from Brazil' by many medical writers who have recognized its right to be termed as such. To understand that, you first have to understand what an antioxidant is and how it works. The chemical names of the active substances it contains will be meaningless without that background knowledge.

Oxidation occurs in your body even before you are born. What it does in general terms is to destroy your body cells, and the more it progresses the more your body is prone to cancers and cardiovascular diseases, and the more visible becomes the aging process. Chemically, oxidation is the loss of one or more electrons by an atom or molecule. Oxidation within your body is highly associated with what are known as free radicals. To explain these we have to consider the chemistry of electron pairs and free radicals, though this is not too technical so read on.

Normally electrons exist in pairs of opposite spin: in simple terms each pair makes up a single negative charge. Take hydrogen: its atomic structure contains one proton and one electron. However, the hydrogen atom cannot exist by itself since the most stable configuration is that electrons exist in pairs with a net zero spin, so the hydrogen molecule consists of two hydrogen atoms with their own protons sharing an electron pair. This is true of all covalently bonded molecules.

However, certain influences, such as pollution through tobacco smoke, pesticides, engine exhausts and the excess UV radiation of sunlight can cause a molecule to lose an electron. This creates what is known as a free radical: a molecule without an electrical charge but with an unpaired electron. Since the most stable configuration for it is to have a paired electron, the molecule will steal an electron from the most suitable candidate it finds.

In practice this will be a body cell, and the cell that loses the electron gets destroyed causing aging of the skin and many other undesirable effects, including cancers. This stealing of an electron is chemically referred to as oxidation. Antioxidants prevent this occurring to your body cells by being reactive themselves and preferentially mopping up these free electrons.

Polyphenols and anthocyanins are powerful antioxidants, and that is why the people of the Amazon rainforests have used acai not only as a food, but also for their health. It is only relatively recently that, as with many of the ancient health remedies, the scientific basis behind its use has been proved. The early Brazilian natives may not have understood biochemistry or what free radicals were, but they sure knew what was good for them.

As with many other foodstuffs containing powerful antioxidants, it is likely that it was the highly colored berries that first attracted them. That does not suggest that all brightly colored foods are good for you, but the brightly colored pigments and dyestuffs contained within them also tend to act as antioxidants due to the same electron configuration that provides them with their color. Many of these chemicals are also used as food dyes, and have been used so since before their chemistry and antioxidant effects were known. The color comes from the same electron activity that makes them destroy free radicals. That is why most highly colored foods contain significant quantities of phytochemicals.

The deep purple color of the acai fruit led chemists to determine its content of polyphenols, such as anthocyanins, that are common in other highly colored foods such as blueberries, peppers and aubergines. High concentrations of anthocyanins such as cyanidin-3-glucoside and the rutinoid analogue were found, together with flavonoids such as orientin, deoxyhexose and scoparin. A total of twelve flavonoids were discovered that explains the highly antioxidant properties of the fruits. Laboratory and other tests have indicated that over 80% of the antioxidant effect of acai is due to polyphenols other than the anthocyanins. It is likely that these are the twelve flavonoids identified to date and any others that have still to be detected.

However, it is not only for its antioxidant properties that acai is such a healthy fruit, since it contains many other nutritional components. It contains fatty acids, including linoleic acid, an omega-6 fatty acid and also beta-sitosterol that are believed to reduce the level of LDL cholesterol in the blood. The fruit also contains a high level of amino acids, essential for the synthesis of proteins and DNA.

So what exactly does this mean for you in real terms? Antioxidants can do different things for different people, and the acai berry is said to have more than thirty times the antioxidant power of red wine. When you consider that many doctors believe one glass of red wine to provide sufficient antioxidant for the average person, you are getting a very high dose with acai berries, so what does it do for you?

Due to its effect in destroying the free radicals caused by pollution, acai and similar powerful sources of antioxidants are becoming increasingly important to our diets. What was a sufficient antioxidant intake even twenty years ago is no longer sufficient. Acai can help to combat early aging by

reducing the rate at which your body cells are destroyed by free radicals. It also reduces the risk of cardiovascular disease, and the associated high risk of strokes or heart attacks.

Acai juice itself has an unusually high fiber content, and helps maintain the health of your digestive system. An associated benefit of this is that you are less liable to contract colon cancer than if you did not consume it. Due to a reduction in the rate of destruction of body cells, including brain cells, elderly people benefit through maintenance of their brain function, and a lower likelihood of degenerating cognitive ability. It helps you to maintain concentration and memory, and can also reduce the risk of you getting cataracts.

Antioxidants are also known to help maintain the immune system, and act as anti-inflammatories, and it is believed that acai juice can help to reduce the symptoms of arthritis. If you use acai berries as part of a daily diet, you should receive the benefits that it provides, although a more measured dosage in the form of a supplement will enable you to control your intake of acai, and if one thing is certain it is that you will be far healthier with a regular dose of the superantioxidant from Brazil than without.

## About the Author

More information on the Super antioxidant [Acai](#) Extract is available at VitaNet &reg, LLC Health Food Store. <http://vitanetonline.com/>

Source: <http://www.spivo.com>