Superfoods Fact Sheet
Açaí Berry (Euterpe oleracea)

Parts used: Berry

The berry comes from the acai palm, also referred to as ‘The Tree of Life’, in the heart of the Brazilian rain forest. The palm as a long thin trunk up to 25 m high, with the branches grouped at the top, from which hang ribbon-like leaves. Great clusters of the berries hang from these branches.

Each acai palm produces around 20 kg of fruit each year, and has to be picked and processed quickly to retain the benefits of the berries. It has now become a major part of the Brazilian economy, where it is made into juice, or dried and powdered for use in supplements, or pulped and frozen to be used as an additive to smoothies etc.

Because it loses its potency quickly it is rare to find the berries outside South America, but its products are widely available. Mildly tart in flavour they make excellent additions to dishes combining with sweeter fruits.

Historic and Traditional Uses

Indigenous to the rainforests of the Amazon it has been used for centuries for its healing, immune-boosting and energy-boosting properties. It was found to have tremendous health properties and has been used by the tribes of the Amazon basin for centuries as a cure for a variety of ailments.

The Yanomami Indians of Brazil believed that it was a food that ‘holds unique power’ due to its energizing sustenance, and the Shuar tribe have used this little berry for centuries for medicinal purposes. Amongst the many uses they had for it were an immune booster, fighting infections, protecting the heart and helping to control and enlarged prostate. It is a great energy food for the tribesmen, and was also used to fight schistosomosis, an infection transmitted by snails. It was traditionally pulped to make a wine that was rich in minerals and nutrients.

It is only very recently that this berry’s popularity has spread outside of South America.

Health Benefits

There are many claimed health benefits for açaí berries, some of which have scientific backing and some of which are still being investigated.
What is very clear is that it is a potent antioxidant and has an impressive nutrient profile amongst which are phytochemicals which are powerhouses for helping to slow ageing, boost the immune system and protect against chronic disease.

Amongst the many health benefits claimed for the acai berry are:

- anti-ageing
- boosts circulation
- helps with digestion
- enhances sexual libido
- aids weight loss
- energy booster
- fights cancer
- improves mental acuity
- helps keep heart healthy
- lowers cholesterol
- lowers blood pressure
- prevents cellular damage
- improves metabolic disease
- aids detoxification
- helps improve vision
- anti-inflammatory

Its high antioxidant profile gives credibility to many of these claims, but given that it really only came to the attention of the Western world in the 1990s very few good studies have been done on it, and most of those have been done on animals.

Cancer
A 2006 study at the University of Florida discovered that extracts from the berry ‘triggered a self-destruct response’ in up to 86% of leukaemia cells tested. The researchers cautioned against false hopes of a cure, but were very ‘encouraged’ by the findings. Researcher Stephen Talcott stated ‘Compounds that show good activity against cancer cells in a model system are most likely to have beneficial effects in our bodies’.

Alzheimers Disease
Oxidative damage appears to be responsible for the cognitive and functional decline seen with Alzheimers, and many researchers therefore consider that acai berries will help to slow the progress of the disease.

Heart & Cholesterol
A Brazilian study examined the benefits of acai on cholesterol in rats and found those supplemented with had lower levels of total and LDL cholesterol. This was replicated in humans in a small scale study published in May 2011 in Nutrition Journal.

Anti-Ageing
Research on fruit flies found that those supplemented with acai lived significantly longer than those not supplemented. It was also associated with beneficial changes in certain age-related genes. The researchers

1 Journal of Agriculture and Food Chemistry, Jan 2006, S Talbot Brazilian Berry destroys cancer cells in lab.
2 Archives of Neurology, 2004;61:82-88, Peter P Zandi et al, Reduced Risk of Alzheimer’s Disease in Users of Antioxidant Vitamin Supplements.
3 Nutrition, 2010:26:804-10

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concluded ‘açaí has the potential to antagonize the detrimental effect of fat in the diet and alleviate oxidative stress in aging’.  

**Neurodegenerative Diseases**
Researchers at the University of Caxias do Sul in Brazil discovered that treating rats with frozen acai pulp reduced the damaging effects of hydrogen peroxide, an oxidising agent implicated in diseases such as Parkinson’s and Alzheimers, on the cerebral cortex, hippocampus and cerebellum.

**Anti-Inflammatory**
Recent research suggests that acai have beneficial anti-inflammatory activity within the body, including within the brain. It therefore suggests that health issues with an inflammatory base would benefit from acai supplementation.

**Other Claims**
Other, as yet unverified, claims tend to rely on the antioxidant activity of açaí. A study in 2008 showed that açaí antioxidants are easily taken up by the body, and therefore problems associated with free radical damage will be benefitted. Amongst those mooted are:

- Macular degeneration
- A sexual enhancer
- Heart health
- Cellular health
- Skin health
- Improved mental function
- Improved energy

Further research is needed on all these claims. In addition, açaí is being used as part of many weight-loss regimes. The proteins present in açaí show an inhibitory effect on alpha amylase (a carbohydrate digestive enzyme), giving the potential for açaí to act as a carb-blocker, although further research needs to be done on this.

**Nutrients:**
Acai berries have an impressive nutrient profile, including 19 amino acids, various trace minerals, essential fatty acids and antioxidants.

The primary active constituents of açaí berries that have elevated them to superfoods status are antioxidant substances called anthocyanins and flavonoids – two of the anthocyanins found in acai were previously undiscovered elsewhere.

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4 Exp Gerontol, 2010: 45:243-51
5 Food Chemistry, Kang et al 200; 125; 152-157 Flavinoids from acai pulp and their antioxidant and anti-inflammatory activities.
6 J Agric Food Chem, 2008:7796-802; 8326-33
7 Food Chemistry Araujo et al 2004; 85;107-110 Biological activity of proteins from pulps of tropical fruits.
Anthocyanins are responsible for the red, purple and blue hues of many fruits, vegetables and flowers. The higher the levels the stronger the colour, ranging from deep purple to black. Açai berries are a deep purple colour.

Both anthocyanins and flavonoids are powerful antioxidants that defend cells against free radical damage within the body and play a role in the cells protection system.

The ORAC (Oxygen Radical Absorbing Capacity) is a scientific measure of antioxidant capacity, and although they can differ from source to source acai berries consistently show the highest value of all fruits. One source gives blueberries an ORACs value of 2,600 and Açai a whopping 5,500!

Anthocyanins and flavonoids have been linked with an increase in youthful health, energy and stamina, as well as immune benefits.

Other health-giving nutrients include the essential fatty acids. Nearly 1/3 of the acai berry consists of unsaturated fats such as omega 3, 6 and 9.

In addition, every 100 grams contains:

- Calcium: 12 mg
- Iron: 11.8 mg
- Protein: 2.4 g
- Vitamin C: 9 mg
- Phosphorus: 58 mg
- Vitamin A: 1000 iu
- B1: 0.36 mg
- B2: 0.01 mg
- B3: 0.40 mg
- Vitamin E: 4.5 iu

Açai contains 18 amino acids including oleic acid and aspartic acid, which can be converted to D aspartic acid, an amino acid with testosterone-boosting potential. Also low concentrations of oestrogen-blocking resveratrol have also been found.

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\(^8\) Journal of Agriculture and Food Chemistry 54 (22), November 2006, Schauss, AG et al, Antioxidant Capacity and Other Bioactivities of the Freeze-dried Amazonian Palm Berry.

\(^9\) Journal of Agriculture and Food Chemistry 54 (22), November 2006, Schauss, AG et al, Antioxidant Capacity and Other Bioactivities of the Freeze-dried Amazonian Palm Berry.