



Açaí

Euterpe oleracea Mart.

Family: Arecaceae (Palmae)

Other common names: Cabbage palm fruit

Botanical drug used: Fruit and pressed fruit juice

Indications/uses: Açaí products are marketed to produce rapid weight loss, improve digestion, prevent cardiovascular disease and other degenerative diseases and to 'delay the ageing process', as an antioxidant.

Evidence: Claims about alleged health benefits can only be substantiated to a very limited degree.

Safety: Overall, açaí fruit is considered to be safe although very limited data are available. High levels of manganese have been identified in the fruit, which may be above the daily recommended dose and thus might negatively impact on iron absorption (da Silva Santos et al. 2014).

Main chemical compounds: The main chemical compounds of açaí include a range of fatty acids and polyphenols, most notably anthocyanins and flavonoids. The main polyunsaturated, monounsaturated and saturated fatty acids include oleic (56.2%), palmitic (24.1%) and linoleic acid (12.5%) (Schauss et al. 2006). The main anthocyanins are cyanidin, delphinidin, malvidin, pelargonidin and peonidin and the other phenolics include catechin, ferulic acid, quercetin and resveratrol (Poulose et al. 2012).

Clinical evidence: Overall, the clinical evidence is weak (Heinrich et al. 2011). In an uncontrolled pilot study, consumption of açaí fruit pulp reduced levels of selected markers of metabolic disease risk in overweight adults, indicating that further studies are warranted (Udani et al. 2011). Antioxidant and lipid peroxidation levels in 12 volunteers in a randomised, placebo-controlled crossover experiment showed statistically significant positive changes both 1 hour and 2 hours after consumption. The same product was also tested for its effects in 14 volunteers with reduced range of motion (RoM) and produced a significant pain reduction and an improvement in measures of RoM and other activities of daily living (Jensen et al. 2011).



Pre-clinical evidence and mechanisms of action: In rabbits, an improvement of lipid profile and an attenuation of atherosclerosis were observed after açai administration (Feio et al. 2012). Açai pulp promoted a hypocholesterolaemic effect in a rat model of dietary-induced hypercholesterolaemia, through an increase in the expression of ATP-binding cassette, subfamily G transporters and LDL-R genes (de Souza et al. 2012). Açai pulp extracts also produced a significant concentration-dependent reduction in cyclooxygenase-2, p38 mitogen-activated protein kinase, tumour necrosis factor- α (TNF- α) and nuclear factor- κ B (NF- κ B) in a mouse brain BV-2 microglial cells, suggesting a protective effect of açai pulp fractions on brain cells, which could have implications for improved cognitive and motor functions (Poulose et al. 2012).

Interactions: No clinical reports of any interactions are available.

Contraindications: No specific contraindications are known. Based on da Silva Santos et al. (2014), a daily consumption of 300 ml of açai pulp would lead to a six-fold excess of the recommended daily intake of manganese for an adult, which in turn would negatively impact on iron absorption.

Adverse effects: No data available.

Dosage: For products, follow manufacturers' instructions. No adequate dose-finding studies have been conducted. The use of 120 ml fruit juice per day has been suggested, but evidence for this dose is lacking.

General plant information: A native of northeastern Brazil, this palm is one of the most naturally abundant species in the Brazilian Amazon's estuary floodplains. It has become a 'poster child' of the power of the Internet to promote food supplements or HMPs (Heinrich et al. 2011).

In Brazil, as the fruits are commonly prepared using lukewarm water (i.e. not boiled), attention has been drawn to the potential risk of outbreaks of Chagas disease (*Trypanosoma cruzi* infections) transmitted by triatomines (especially *Rhodnius pictipes*), which have been found to contaminate açai fruit with faeces or with dead insects (Nóbrega et al. 2009).

References

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