We are dipping south of the border to sort fact from advertising hype about the Acai berry from Brazil. Increasingly popular in supplements, energy drinks, and even candy bars, the berries are being marketed as the latest health craze, sometimes blended with the equally popular goji berries (Lycium barbarum) from China [see AHA 22:1]. Commercial products made with processed berries have been available for about six years. Internet businesses sell them to lose weight, lower cholesterol, and gain energy. When ripe, Acai berries are the size of a large blueberry with a thin layer of dark purple, edible pulp surrounding a large seed. I’ve eaten them fresh and found them dry and bitter. No wonder it is usually blended with sweet fruit juices.

Pronounced ah-SAH’-ee, the tree is one of the seven species of the Euterpe palm native to the swamps and floodplains of central and tropical America. You may have eaten it as heart of palm, a delicacy the world over that is extracted from the center of the trunk. It is also called assai palm in English. Brazilians historically ate Acai berries fresh to treat a variety of digestive disorders and rubbed them on skin problems. Acai juice is still drunk in poor regions of Brazil to help with disorders related to oxidative problems, such as the heart and circulation. Acai is also the name given to a Portuguese beverage made from the fruit.

Purple Acai is one of the richest fruit sources of antioxidants, substances that aid cardiovascular health, brainpower, and enhance energy levels and probably even slow the course of aging. They also destroy cancer cells in laboratory studies, although experts are uncertain how well they work in the body since nutrient absorption, metabolism, and biochemical processes influence their activity. The antioxidant capacities of 11 commercial and non-commercial samples of purple acai fruit pulp were shown to destroy free radicals, especially the peroxy type. On the other hand, the antioxidant capacities from white acai variety are very low. The flowers and spikes also have some antioxidant action, although they are not as strong as the seeds, and especially the fruit.

Acai berries contain antioxidant procyanidins and anthocyanins, although these compounds are estimated to be responsible for only 10% of the antioxidant activity. They are also less stable than the same type of compounds found in grapes. There are at least 50 to 75 other as-yet-unidentified compounds, some of which are likely to be antioxidants. Extracts from the seeds, which contain protocatechic acid, epicatechin, and polyphenol compounds, dilate blood vessels and so have the potential to treating cardiovascular disease.

The University of Florida is one of the first institutions outside Brazil to research Acai. In their studies, extracts from the berries caused up to 86% of leukemia cells to self-destruct. Although these were only laboratory tests, compounds that show good activity against cancer cells in a model system like this tend to have beneficial effects in bodies as well. Stephen Talcott, assistant professor with the Institute of Food and Agricultural Sciences there, said, "This study was an important step toward learning what people may gain from using beverages, dietary supplements or other products made with the berries." More research is underway to determine how Acai antioxidants do affect humans. Researchers hope to determine how well the compounds are absorbed into the blood to discover how they alter blood pressure and cholesterol levels. In other studies, acai reduced growth of cancer cells from 56 to 86%, depending on the type of extract and its concentration. Several fruits, including grapes, guavas, and mangos, destroy cancer cells in similar ways. Another use for Acai is in a drink that increases the contrast and signal in MRI (magnetic resonance imaging) scans on the digestive tract.

The indigenous Piaroa and Hi wi people of the Venezuelan Amazon know acai as “manaca.” Efforts are being made to discover alternatives that can be grown locally to replace wheat flour, which is imported as a food staple. Preferences and eating habits of the communities and simplicity of preparation were considered in preparing flour from locally grown acai, as well as sweet potato (Ipomea batatas) and yam (Dioscorea spp.). Small cakes and cookies that are popular with the locals were made and well accepted. The nutritional value of Acai was considered remarkable because it was high in fat (16%), dietetic fiber (60%), and iron (25 mg/100 g).

REFERENCES
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