

## Cure-All Juices, Part 1: Acai and Goji

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"There is a man in the waiting room who wants to talk to you," my receptionist said to me. I looked out and made eye contact with a person who acted like he knew me. *Dang*, I thought to myself. I hate it when someone who I treated twice, 10 years ago, comes in and asks if I remember him, and I have to swallow my pride and say "no," all the while hoping they will give me an out by telling me they used to have a beard or they lost 50 pounds.

Thankfully, I had not seen him before. He had a name tag, indicating that he worked for a real-estate company. After a brief introduction, I had to check on a patient. When I returned, my CA stopped me and whispered, "He is already seeing a chiropractor. He just wants your opinion." *This will be fun*, I thought and prepared to hear a typical story about how someone wants him to come in 50 times or how his knee has not been getting better with continued manipulation of the neck.

However, I guessed wrong again. His chiropractor had signed him up in a multilevel company and he wanted my opinion on the amazing juice blend that cured his arthritis in five days and his mother's 20-year battle with insomnia in three days. He launched into his spiel about the juice, which apparently had been working on chiropractors (he said he had signed up five) and focused on two of the 20 ingredients (acai and goji). I let him talk for about two minutes and then cut in. He quickly realized that company testimonials and "in-house" data would not work with me. So he changed his tactics and began to tell me what he had been told, rather than engaging me in a nutrition debate. I wanted to tell him to go back to selling houses, but instead said, "Feel free to provide me with human studies with your product." He replied, "That will be no problem!"

After he left, my CA said, "Dr Andersen, why did you do that? Now he will come back." I answered, "No, he won't. There are no human studies on his product."

### Acai

Acai (*Euterpe oleracea*) is a palm tree from South America specifically in the Amazon basin. It grows between 45 and 90 feet tall. It contains a small, round, purple and black fruit the size of a grape. It contains 12 to 15 vitamins and minerals, 15 to 20 amino acids with monounsaturated, polyunsaturated and saturated fatty acids. There are numerous phytochemicals, including anthocyanins, proanthocyanins and resveratrol. Health claims for acai, especially from those who sell the product, include antibacterial properties, sexual enhancement, antioxidant capabilities and a host of other applications. It's only a matter of time before we see some human studies; although it seems those who are getting rich from acai are in no hurry to have their claims tested.

One of the marketing techniques used for acai is its high ORAC score. ORAC stands for "oxygen radical absorbance capacity" and is a method to measure the antioxidant capabilities of various substances. Unfortunately, marketers misunderstand and misuse the ORAC score. Furthermore, this misuse is now seeping into the public domain. ORAC does not measure a substance's ability against all types of free

radicals. For example, a study in the February 2005 issue of the *International Journal of Food Science and Nutrition* found the acai berry to be ineffective in neutralizing hydroxyl radicals (even with its high ORAC score).<sup>1</sup>

## Goji

Goji (*Lycium barbarum*) is also known as wolfberry. It is a shrub with vines and can grow as large as 10 to 12 feet high and 10 feet across. Goji berries are small (1 to 2 cm in length) and red/orange in color. They are found in the north and west regions of China, as well as Mongolia. There are claims that: 1) Tibet is a major source of goji, 2) Tibetan goji is superior; and 3) Goji and wolfberry are different plants. I could not find definite answers to these points of contention, except that trade records indicate Tibet does not export goji.

Goji contains 14 to 18 amino acids, at least six polysaccharides and six monosaccharides. It also contains fatty acids, including linoleic and alpha-linolenic acid. Carotenoids are abundant, especially zeaxanthin, beta-carotene, lutein and lycopene. Calcium, magnesium, iron, selenium, vitamin B<sub>2</sub> and vitamin C are the major micronutrients among the 20 to 25 vitamins, minerals and trace minerals it contains.

As with acai, there is not yet a consensus on the exact nutrient profile. Health claims for goji include prevention of cancer, especially in the breast. It has a high ORAC score. Other advertised uses include overall improvement of the immune system, vision, liver function, diabetes, high blood pressure, fatigue and "anti-aging" effects. I am skeptical of the claims made by those who sell these products. The purported health benefits are definitely intriguing, but human research is scant and most of the available data are limited to *in vitro* studies, which are then extrapolated by marketers.

In my next article (April), we will look at another juice that makes health claims which rival those of acai and goji.

## Reference

1. Lichtenthaler R, Rodrigues RB, Maia JG, et al. Total oxidant scavenging capacities of *Euterpe oleracea* mart. (Acai) fruits. *Int J Food Sci Nutr*, 2005;56(1):53-64.

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