

List of Entries

Acai	Ginseng
Aloe Vera	Gotu Kola
Arnica	Grape Seed Extract
Ashwagandha	Hawthorn
Astragalus Root	Hibiscus
Bacopa	Horse Chestnut
Boswellia	Kudzu
Cayenne Pepper	Lavender
Chamomile	Lemon Balm
Cinnamon	Licorice Root
Cloves	Milk Thistle
Coriander/Cilantro	Noni
Dandelion	Olive Leaf Extract
Elderberry	Oregano
Evening Primrose	Peppermint and Peppermint
Oil	Oil
Fennel	Purple Coneflower
Fenugreek	Red Clover
Feverfew	Rhodiola
Garlic	Rosemary
Ginger	Saffron
Ginkgo	Sage

Sea Buckthorn
St. John's Wort
Stinging Nettle
Sweet Basil

Thyme
Turmeric
Valerian
Watercress

Introduction

As the costs associated with health care and medications continue to rise, many people look for alternative ways to meet their health care needs. They may also want more natural, time-tested products that come with fewer, if any, side effects. And, so, in recent years, perhaps because of the advice of a magazine article, a newspaper story, or the recommendation of a television or radio personality, some have turned to herbs, or plants with leaves, seeds, or flowers. Readily available in stores and online, herbs are certainly less expensive than most medications. But, are they effective? Are they useful for only minor problems? Are they able to address more serious concerns? Are they safe?

The goal of this book is to examine actual research studies on 50 different herbs. This is not as easy as it might initially appear to be. The research conducted on many herbs is actually quite limited, or the studies might be too esoteric for the needs of the typical reader. So, while there were scores of herbs on our initial list, many had to be eliminated. Still, the book is comprehensive and somewhat unique. We have been unable to locate a similar work.

An important point must be noted. Just because herbs are more natural than conventional medications, do not assume that they are always safe. For example, it is not uncommon for herbs to interact with medications; sometimes, that interaction may have serious and undesirable consequences. And, just because an herb may be healthful in small or moderate amounts, do not assume that it is also safe when consumed in larger amounts or in supplementation. Moreover, women who are pregnant, may become pregnant, or are breastfeeding should not use many herbs. In fact, before beginning an herbal regime, it is a good idea to discuss your intentions with your health care provider.

A

Acai 🍷

Grown in the Amazon jungle for thousands of years, the acai berry is a truly ancient medicinal herb. However, it has been recognized by the Western world for only a relatively short period of time. Still, acai berry, which is scientifically known as *Euterpe oleracea*, has been said to address a vast number of medical concerns. For example, acai is believed to support cardiovascular health and improve memory, sleep, energy, vision, and immunity. Some think acai is useful for weight loss, reducing inflammation, and eliminating toxins from the body.¹ It is important to review what researchers have learned.

Cardiovascular Health

In a study published in 2010 in *Nutrition*, researchers based in Brazil investigated the ability of acai to increase antioxidants and lower cholesterol levels in rats fed a standard or high-cholesterol diet. The researchers divided their rats into four groups. Two groups consumed the standard rat diet; the other two groups were fed a high-fat diet containing 25% soy oil and 1% cholesterol. In addition, the rats in one standard diet group and one high-fat group were also fed 2% acai pulp. After six weeks, the researchers noted that the rats in the high-fat group experienced increases in total cholesterol and decreases in high-density lipoprotein (HDL) ("good") cholesterol. These changes were attenuated in the rats fed high-fat and acai diets. The researchers concluded that their findings "suggest that the consumption of acai improves antioxidant status and has a hypocholesterolemic effect in an animal model of dietary-induced hypercholesterolemia."²

In a study published in 2011 in *Atherosclerosis*, researchers from Arkansas and Washington conducted two similar trials on mice bred to have high serum lipid levels. In the first trial, for 20 weeks, they fed one group of 15 mice a regular rodent diet and a second group of 15 mice a rodent diet plus 5% freeze-dried acai juice powder. The second trial was similar, but it was conducted for only 5 weeks. The researchers found that the mice that also consumed acai had fewer atherosclerotic lesions. Apparently, acai imparted a degree of protection against the development of atherosclerosis.³

In an open-label pilot study published in 2011 in *Nutrition Journal*, researchers from California evaluated supplementing the diets of healthy but overweight subjects with acai fruit pulp. The cohort consisted of 10 overweight adult men and women; they were assigned to take 100 mg of acai pulp twice daily before meals for one month. When compared to their baseline values, the researchers found that by the end of the trial the participants experienced a lowering of several markers of cardiovascular risk, such as a significant reduction in total cholesterol and borderline significant reductions in low-density lipoprotein (LDL) ("bad") cholesterol and the ratio of total cholesterol to HDL cholesterol. The researchers commented that further studies were needed.⁴

Pain Reduction

In a pilot study published in 2011 in the *Journal of Medicinal Food*, researchers from Oregon and Washington wanted to learn if acai could help people dealing with pain. The cohort consisted of 14 people between the ages of 44 and 84 who had range of motion (ROM) limitations and pain. For 12 weeks, the study participants consumed "120 mL MonaVie Active® fruit juice, predominantly containing acai pulp." The participants were evaluated at baseline and at 2, 4, 8, and 12 weeks. The researchers found that the juice consumption "resulted in significant pain reduction, improved ROM measures, and improvement in ADLs [activities of daily living]."⁵

Kills Esophageal Cancer Cells

In a study published in 2010 in *Pharmaceutical Research*, researchers from Columbus, Ohio, compared the ability of different types of berries, including acai, to prevent the formation of chemically induced esophageal cancer cells in rats. The researchers began by treating rats for five weeks with a carcinogen that fosters esophageal cancer. The rats were then placed on

diets containing 5% acai and other berries, such as black and red raspberries and strawberries. The researchers determined that all the berry types were about equally effective in inhibiting the growth of cancer. Still, the researchers noted that "the data are preliminary in that the berries were tested at only a single dose level (5%) in the diet."⁶

Antiaging Properties

In a study published in 2010 in *Experimental Gerontology*, researchers from Baltimore, Maryland, and Washington evaluated the role that acai could play on the life span of female fruit flies. The researchers began by establishing two models. The first would test acai's ability to mitigate a poor diet and the second would study acai's ability to promote longevity.

In the first study, the researchers divided fruit flies into two groups. Both groups were fed a high-fat diet that would reduce longevity by 19%. But, one of these groups was also fed 2% acai supplementation. While the flies fed only the high-fat diet did indeed have a reduction in life span, the flies fed acai had a 22% increase in longevity.

In the second model, the researchers used fruit flies that had been genetically mutated so that an enzyme that repairs cells and reduces the damage caused by free radicals failed to function properly. Unable to repair their oxidative damage, the fruit flies were forced to remain in a constant state of oxidative stress. But, while one group was fed a normal diet, the second group was also fed a normal fly diet that included 2% acai pulp. When compared to the flies fed only the normal diet, the flies fed the diet plus acai had an 18% longer life span. So, one of the ways that acai extends the life span is by reducing oxidative stress. The researchers concluded that acai "has the potential to antagonize the detrimental effect of fat in the diet and alleviate oxidative stress in aging."⁷

Protective Effect against Emphysema in Cigarette Smokers

In a truly innovative piece of research that was published in 2011 in *Food and Chemical Toxicology*, researchers from Brazil wanted to compare the lung damage in mice caused by 60 days of chronic inhalation of regular cigarette smoke to that caused by the inhalation of cigarette smoke containing 100 mg of hydroalcoholic extract of acai berry stone. They began by dividing their mice into three groups. The first group of mice became the control. They were "sham-smoked—exposed to ambient air using a smoking

chamber.” The mice in the second group were exposed to smoke from “12 commercially-obtained full-flavor . . . filtered Virginia cigarettes.” The mice in the third group were exposed to the same cigarette smoke, but their cigarettes also contained acai berry stone, which was injected into each cigarette. At the end of the trial, the mice were sacrificed so that the researchers could examine their lungs.

While the mice in the control group had normal lungs, the mice in the cigarette-smoking group had evidence of emphysema. Meanwhile, the lungs of the cigarette-smoking and acai group were not the same as the lungs of the mice in the control group. But, they “appeared less affected by emphysema than did the lungs of the mice in the CS [cigarette-smoking] group.” So, adding acai to cigarettes has the potential to reduce the many deleterious effects associated with the smoking of cigarettes.⁸

Is Acai Beneficial?

Acai is certainly an intriguing herb that may well be useful for a wide variety of medical concerns. It will be interesting to see what future studies on this herb learn.

Notes

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Website

Acai Berry. www.acaiberry.org.

Aloe Vera 🌿

Aloe vera was esteemed by the ancient Greeks as a universal panacea. The ancient Egyptians thought it was the plant of immortality. In fact, the word

aloe comes from the Arabic word *alloeh*, which means “shinning bitter substance,” and, in Latin, the word *vera* means “true.”¹

Historically, aloe vera was used for a wide variety of medical problems, such as the treatment of soldiers’ wounds, skin irritations, and constipation. Still, aloe vera was also used for general skincare, overall health, beauty, and well-being. Today, it is primarily used as a skin-care product.² But, what have the researchers learned?

Burns

In a study published in 2009 in *Surgery Today*, Iranian researchers investigated the treatment of second-degree burns with either aloe vera cream or silver sulfadiazine (SSD), a sulfur medicine used to prevent and treat bacterial and fungal infections. Their cohort consisted of 30 patients with second-degree burns on two different sites of their bodies. Each subject had one site treated with aloe vera cream and the other site treated with SSD. The researchers found that the site that was treated with aloe vera healed significantly faster than the site treated with SSD. “The sites treated with aloe were completely healed in less than 16 days versus 19 days for the sites treated with SSD. These results clearly demonstrated the greater efficacy of aloe cream over SSD cream for treating second-degree burns.”³

Another study on burns was published in 2008 in the journal *Burns*. In this trial, Australian researchers examined the use of aloe vera, saliva, a tea tree oil impregnated dressing (Burnaid), or nothing (the control) on burns made under anesthesia on the flank skin of eight-week-old pigs. Though the researchers initially hoped to collect a sufficient amount of pig saliva, and since that effort was fruitless, they used saliva from a human volunteer. After the burns were created, the researchers applied the 20-minute weekly treatments for 6 weeks. They noted that while all three treatments reduced the subdermal temperature, “they did not decrease the microflora or improve the re-epithelialisation [regrowth of epithelium over surface of a wound], scar strength, scar depth or cosmetic appearance of the scar.” As a result, the researchers concluded that the treatments they tested “cannot be recommended for the first aid treatment of partial thickness burns.”⁴

In an article published in 2007 in *Burns*, Thai researchers reported on their systematic review of four controlled clinical trials in which aloe vera was used for the treatment of burns. In total, the studies included 371 patients. The researchers determined that the wounds treated with aloe vera healed, on average, 8.79 days shorter than those treated with a control. Yet,

because there were “differences of products and outcomes measures,” the researchers thought that these results should be viewed with at least some degree of caution. Nevertheless, they added that “cumulative evidence tends to support that aloe vera might be an effective intervention used in burn wound healing for first to second degree burns.”⁵

Psoriasis

In a randomized, double-blind, eight-week clinical study published in 2010 in the *Journal of the European Academy of Dermatology and Venereology*, Thai researchers randomly treated 80 people with mild to moderate psoriasis with either a 70% aloe vera cream or 0.1% triamcinolone acetonide, a topical steroid medication. The researchers found that the people treated with the aloe vera cream had a greater reduction in the Psoriasis Area and Severity Index (PASI). Although the findings were not statistically significant, the researchers noted that the aloe vera cream “may be more effective than 0.1% TA [triamcinolone acetonide] cream in reducing the clinical symptoms of psoriasis; however, both treatments have similar efficacy in improving the quality of life of patients with mild to moderate psoriasis.”⁶

On the other hand, a double-blind, placebo-controlled Danish study published in 2005 in the *Journal of the European Academy of Dermatology and Venereology* came to different conclusions. This study included a two-week washout period that was followed by a four-week treatment period with two daily applications of commercial aloe vera gel or a placebo. There were also two follow-up visits—after one month and after two months. The findings are noteworthy. “Aloe vera-treated sites compared with 82.5% of the placebo-treated areas from week 0 to week 4, which was statistically significant in favour of the placebo treatment.” Moreover, 55% of the 40 participants who completed the study reported side effects, primarily a drying of the skin on the test areas. The researchers concluded that “the effect of this commercial Aloe vera gel on stable plaque psoriasis was modest and not better than placebo.”⁷

Skin Inflammation

In a randomized, double-blind, placebo-controlled study published in 2008 in *Skin Pharmacology and Physiology*, German researchers investigated the use of highly concentrated aloe vera gel, a placebo gel, or three different types of corticosteroids, on skin that was inflamed from exposure

to ultraviolet light. The researchers found that after 48 hours the aloe vera gel “displayed some anti-inflammatory effects superior to those of 1% hydrocortisone in a placebo gel.” However, the “1% hydrocortisone in cream was more efficient than A. vera gel [aloe vera gel].”⁸

Oral Health

In an in vitro study published in 2009 in *General Dentistry*, researchers acknowledged that there has been disagreement concerning the ability of aloe vera tooth gel to eliminate pathogenic oral microflora or disease-causing bacteria in the mouth. So, they compared the ability of aloe vera gel to fight germs in the mouth to two commercially popular toothpastes. The researchers found that the aloe vera gel and the toothpastes were equally effective against some disease-causing bacteria, and aloe vera gel was more effective in one particular type of bacteria—*Streptococcus mitis*. Why is this important? Commercially available toothpastes often contain abrasive elements that may be too harsh for people with sensitive teeth or gums.⁹ So, aloe vera may be a suitable substitute.

Kidney Stones

Two separate studies published in 2006 in the *Journal of the Medical Association of Thailand* show an association between the intake of aloe vera and the possible prevention of kidney stone formation. (Kidney stones can develop when a substance, such as calcium oxalate, and chemicals in urine form crystals that stick together.) One study included 31 healthy male medical students between the ages of 18 and 23. After consuming 100 g of fresh aloe gel twice a day for seven consecutive days, the subjects experienced changes in the chemical composition of their urine and decreases in their excretion of oxalate. According to the researchers, these changes have the potential to prevent kidney stone formation in adults.¹⁰ When the same study was conducted on 13 healthy boys between the ages of 9 and 13, their urine was found to have significant increases in the concentration of citrate. The researchers noted that the moderately high citrate content of aloe vera may be useful in the prevention of kidney stones.¹¹

Is Aloe Vera Beneficial?

Aloe vera seems to be useful for a number of skin conditions. And, it also may be beneficial when taken by mouth. However, when consumed, aloe

vera may cause cramps and diarrhea. And, because it may lower blood glucose levels, people with diabetes or other illnesses subject to low blood sugar should probably not take aloe vera internally.

Notes

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Website

International Aloe Science Council. www.iasc.org.

Arnica

Scientifically known as *Arnica montana*, arnica has been considered a medicinal herb since at least the 1500s. The Europeans and Native Americans used arnica to soothe muscle aches, heal wounds, and reduce inflammation. Today, arnica is thought to be effective for many conditions, such as bruises, sprains, muscle aches, wound healing, superficial phlebitis, inflammation from insect bites, and the swelling caused by a fracture. Arnica is now available as a topical cream, ointment, liniment, salve, tincture, or as an extremely diluted orally administered homeopathic remedy. Native to the mountains of Europe and Siberia, arnica is cultivated in many North American locations.¹ But, as with the other herbs in this book, it is important to review what researchers have learned about arnica.

Osteoarthritis

In a randomized, double-blind study published in 2007 in *Rheumatology International*, researchers from Switzerland compared the effectiveness of two different gels—one containing ibuprofen (nonsteroid anti-inflammation medication) and the other arnica—on treating people with radiologically confirmed osteoarthritis of the hands. At the beginning of the investigation, the cohort consisted of more than 200 people. The participants were instructed to rub the gel over the affected joints three times a day for three weeks. And, they were asked to refrain from washing their hands for one hour after each application. The researchers found that both gels improved pain and function in hand osteoarthritis. They noted that they observed similar results "with regard to [the] number of painful joints, severity and duration of morning stiffness, as well as perceived efficacy by patients and doctors."²

Postoperative (Tonsillectomy) Pain Relief

In a study published in 2007 in *Homeopathy*, researchers from the United Kingdom examined the use of arnica for the postsurgical pain from a tonsillectomy (removal of the tonsils). The cohort consisted of 190 patients over the age of 18. They were randomized to receive either arnica or an identical placebo—two tablets six times in the first postoperative day, and then, two tablets twice a day for the next seven days. The researchers found that the