



# HerbClip™

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**FILE: ■ Pomegranate (*Punica granatum*)**

■ **Medicinal Properties**

■ **Health Benefits**

**HC 070361-309**

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**RE: Medicinal Properties of Pomegranates**

Horowitz S. The power of the pomegranate: biblical fruit with medicinal properties. *Altern Complement Ther.* June 2006:121-126.

The word "pomegranate" (*Punica granatum*) comes from the Latin for "fruit of many seeds." In folk medicine, the fruit's astringent properties have been used to treat various ailments (cuts, sore throats, tapeworms, dysentery, and gum disease). Pomegranate juice is marketed in the United States as a major source of antioxidant nutrients that protect against heart disease and other ailments. Recent research has focused on its potential use as a treatment for cardiovascular disease, diabetes, and various forms of cancer. The author examines those properties of the pomegranate, as well as its history and nutritional and chemical makeup.

Pomegranates are believed to be native to the areas from eastern Iran through northern India, says the author. More than a dozen cultivars of the fruit ("Wonderful" being the leading commercial cultivar in the United States) have been grown commercially in California's San Joaquin Valley since its introduction by Spanish settlers in the late 18th century.

Pomegranates are a good source of vitamin C, providing between 10-20% of the recommended daily allowance according to one source<sup>1</sup> and up to 40% according to another. The potent antioxidant properties of the fruit have been attributed to its high content of soluble polyphenols. When tested in vitro on normal and colon-cancer cell lines, the juice was found to have superior antioxidant, antiproliferative, and proapoptotic effects compared with single purified active ingredients, probably the result of synergistic actions among the fruit's multiple compounds. Studies have shown that the antioxidant activity of the pomegranate flowers yielded activity two to three times the antioxidant potency of tea or red wine.

The author notes research suggesting that pomegranate juice may be cardioprotective, reducing risk factors (such as cholesterol accumulation, foam-cell formation in macrophages,

and oxidized low-density lipoprotein [LDL]) without affecting native LDL. Cited by the author is an Israeli study in which 10 patients with carotid artery stenosis (advanced plaque build-up in the arteries) drank pomegranate juice and experienced reduced blood pressure, LDL oxidation, and progression of carotid lesions at 1-year and 3-year study intervals. In a randomized, double-blinded, placebo-controlled study at the Preventive Medicine Research Institute in Sausalito, CA, pomegranate juice drinkers with coronary artery disease had a 17% improvement in blood flow compared with an 18% worsening in the control group. The study team concluded that the antioxidants in the juice may help prevent the formation of fatty deposits on artery walls.

In studies of the fruit's anticancer effects, pomegranate fruit extract (PFE) has been found to be chemopreventive in mouse mammary organ culture and in human breast cancer cells in vitro. In another study cited by the author, researchers at the University of Wisconsin in Madison found that PFE significantly reduced serum prostate-specific antigen levels and inhibited proliferation of aggressive human prostate cancer cells in athymic mice. Pomegranate extracts have exerted antiproliferative, antiestrogenic, and proapoptotic actions on leukemia cells as well as breast- and prostate-cancer cells.

Results of studies with diabetic patients have shown that supplementing the diet with pomegranate juice had beneficial antioxidant effects on macrophages, implying that it could reduce the development of atherosclerosis. Australian researchers found that pomegranate flower extract reduced factors (hyperglycemia, hyperlipidemia, and a fatty heart) that can result in increased cardiac-impairing fibrosis in patients with type 2 diabetes.

Other studies have shown the benefits of pomegranate in promoting neurologic health, maintaining joint integrity and function, exhibiting estrogenic properties, blocking herpes simplex virus replication and adsorption, enhancing immune function, treating periodontal disease, enhancing the activity of antibiotics used to treat methicillin-resistant and methicillin-sensitive *Staphylococcus aureus* infections, and preventing smooth muscle dysfunction and fibrosis in erectile dysfunction.

The author also mentions other uses of the fruit. In Ayurvedic medicine, the astringent properties of pomegranates are linked with bone and cartilage build-up; in the cosmetic arena, fruit-peel extract has been shown to stimulate a type of procollagen synthesis and inhibit a dermal degeneration process.

The antioxidant, immune-boosting, and anticarcinogenic properties of the pomegranate, says the author, offers multiple potential medical applications.

—*Shari Henson*

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