In many ancient cultures, pomegranate ( Punica granatum ) represented longevity and immortality. Modern research agrees that it helps prevent health problems associated with aging, particularly heart disease. It may also be effective in treating cancer, infection, diabetes, menopause, osteoarthritis, and neurological problems. Researchers have speculated about its becoming an inexpensive, widely available remedy that has an established safety record. Its historic use in Western and Chinese medicine has been mostly for sore throat, cuts, gum disease, diarrhea, dysentery, and parasites like tapeworm. Hippocrates recommended it to bring down a fever.

Most of the healing properties are attributed to the high content of anthocyanidins and soluble polyphenols called punicosides. The seeds have substantial amounts of ellagic acid and the tannin, punicalagin, which inhibit beta-secretase that is associated with dementia. They also contain small amounts of the brain chemicals, serotonin, tryptamine, and melatonin. The potential of pomegranate to slow progression of Alzheimer’s disease is being investigated.

Pomegranate is antibacterial and antiviral. Infections destroyed by its gallic acid and punicalagin compounds are responsible for a variety of diseases. They include E. coli, candida, and antibiotic methicillin-resistant staph (MRSA), as well as Aspergillus fumigatus, Mycobacterium intracellulare, Cryptococcus neoformans, Plasmodium falciparum, and Pseudomonas aeruginosa. In one study, when 60 children and young adults rinsed with a pomegranate mouthwash, bacteria dropped 84%. In comparison, the drug chlorhexidine produced only a 79% inhibition and pure distilled water was 11%. Pomegranate seems to also help protect against the HIV-AIDS virus and herpes infections.

Pomegranate seed contains the highest concentration of estrone in the plant kingdom (about 17 mg to a kg of dried seed), and some is found in the peel and oil. Lignan compounds, acting as gentle estrogens, decrease menopausal symptoms such as hot flashes, mood changes, and even osteoporosis. There is interest in pomegranate as a phytoestrogen to prevent breast cancer. It seems to help maintain joint integrity and function. Case Western Reserve researchers found the extract inhibits inflammation and the breakdown of cartilage in osteoarthritis, along with the enzymes thought to contribute to the disease. This action may also be helpful with other chronic inflammatory disorders.

Pomegranate is stronger than even potent antioxidants like blueberries (Vaccinium corymbosum), cranberries (Vaccinium macrocarpon), red wine (Vitis vinifera), green tea ( Camellia sinensis ), and vitamins A, C, and E. Thus, it slows down free radicals, cellular damage, and illnesses associated with aging, such as degenerative eye, nervous system, brain, and heart disease. The strongest antioxidant properties are in red pomegranate peel and white pomegranate seed, which also is best for preventing DNA damage.

A combination of pomegranate’s antioxidants with its unique type of conjugated fatty acids lowers cholesterol, especially the “bad” LDL. Less than 2 ounces of juice daily can counter high blood pressure, blood vessel inflammation, and oxidative stress from heart and circulation problems, such as hardening of the arteries (atherosclerosis). In one of several small Israeli pomegranate studies, lesions that had developed in the arteries were nearly one-third thinner after a year on the juice compared to lesions that thickened in the placebo group. Over the next three years, systolic blood pressure dropped while the antioxidant activity continued to increase. In a study with 10 diabetics, drinking pomegranate juice (50 ml) for three months helped reverse oxidation in blood and the immune system’s macrophage cells, a problem that has been associated with atherosclerosis and diabetes. (Grape juice produces the opposite reaction.) In another study, 45 people with symptoms of potential heart disease—obstructed blood flow and too little oxygen to the heart—drank a glass of pomegranate juice daily for 3 months. Blood flow improved and angina episodes were cut by half. In comparison, symptoms worsened in 17 people on a placebo.

Pomegranate slows cancer cell and tumor growth in breast and prostate cancer, and possibly, colon cancer and leukemia. Studies showing that polyphenols from green tea slow prostate cancer have researchers looking at these same compounds in pomegranates. Similar to genistein in soy ( Glycine max ), the extract seems to slow cancer cells by interfering with their growth, life cycle, invasion, and blood supply. The fermented juice also has been shown to help cancerous cells revert back to normal. Lignans, found mostly in the seed rather than pure juice, seem to stop production of unhealthy cells. Prostate cancer cells were reduced by nearly one-third in a group of 46 men with recurring prostate cancer at UCLA’s Jonsson Cancer Center when they drank 8 ounces of juice a day (570 mg polyphenol). They also saw PSA (prostate specific antigen) readings and oxidation decline, and it was well tolerated.

REFERENCES
Rosenberg, O, et al. 2006. J. juice sugar fraction reduces macrophage oxidative state, whereas white grape juice sugar fraction increases IL-10. Atherosclerosis. 188(1):68-76.