

The Health Benefits of Pomegranate Juice

Overview

- Pomegranate, named “the most medicinal fruit in the world”
- Key source of:
 - Thiamin
 - Riboflavin
 - Niacin
 - Vitamin B6, B9, C
 - Calcium
 - Iron
 - Magnesium
 - Phosphorus
 - Potassium
 - Zinc
- Commonly classified as a Cosmeceutical: a substance combining features that are both cosmetic and pharmaceutical.

Rich in Antioxidants (3 times greater than red wine and green tea)

- Pomegranate juice is rich in antioxidants, the levels are three times greater than that of red wine or green tea (*source: Antioxidant Activity of Pomegranate Juice and Its Relationship with Phenolic Composition and Processing, University of California, J. Agric. Food Chem., 2000, 48 (10), pp 4581-4589*)
- Antioxidants are the substances that reduce the damage due to oxygen, such as that caused by free radicals.
- Oxygen damage is linked to the effects of ageing and certain diseases, therefore pomegranates can be seen to combat these ailments.
- Free radicals are produced naturally in the body, but also are a result of the environment, e.g. UV radiation, pollution, cigarette smoke.
- As free radicals increase, they may overwhelm the body’s natural defense system and lead to ageing and certain diseases (cardiovascular diseases and some cancer).
- Therefore, by increasing antioxidant vitamins in the diet, they may help to counter some of the damage caused by free radicals.

Effects of Ageing

- Foods rich in antioxidants may delay the effects of ageing, and pomegranates in particular may play a role due to their very high levels of antioxidants. (*source: Mark Stibich, 2008 Pomegranates - Nutritious Anti-Ageing. <http://longevity.about.com/od/antiagingfoods/a/pomegranates.htm>*)
- The pomegranate may contribute to the thickening of the epidermis and help with anti-aging. Extracts of pomegranate have been shown to provide nutritional support for fibroblasts cells in the skins dermis. Fibroblasts produce collagen and elastin, the critical structure fibers that provide the skin with support and flexibility. (*source: Aslam MN, Lansky EP, Varani J. Pomegranate as a cosmeceutical source: Pomegranate fractions promote proliferation and procollagen synthesis and inhibit matrix metalloproteinase-1 production in human skin cells. J Ethnopharmacol. 2006;103:311-8.*)
- Pomegranate seed oil is commonly used in cosmetic products to revitalize dull or mature skin, assist with wrinkles, and to soothe minor skin irritations. (*source: Pomegranate as a cosmeceutical source: Pomegranate fractions promote proliferation and procollagen synthesis and inhibit matrix metalloproteinase-1 production in human skin cells, Muhammad Nadeem Aslam, Ephraim Philip Lansky and James Varani, Department of Pathology, The University of Michigan Medical School, 1301 Catherine Road/Box 0602, Ann Arbor, MI 48109, USA).*)

- Pomegranate seed oil adds moisture, has natural estrogenic properties, anti-oxidants, is anti-inflammatory, anti-microbial, improves skin elasticity, and protects the skin. *(source: Pomegranate as a cosmeceutical source: Pomegranate fractions promote proliferation and procollagen synthesis and inhibit matrix metalloproteinase-1 production in human skin cells Muhammad Nadeem Aslam, Ephraim Philip Lansky and James Varani, department of Pathology, The University of Michigan Medical School- July 2005).*

Cancer

- Pomegranates are rich in antioxidants and anti-inflammatory agents. Both are considered chemo-preventative and chemotherapeutic agents, therefore may help to combat cancer, particularly breast cancer *(source: Breast Cancer Research and Treatment Volume 21, 2002).*

Prostate Cancer

- Pomegranate juice may slow the progression of post-treatment prostate cancer recurrence *(source: April 26 2009, Pantuck, A; Zomorodian, N; Rettig, M; Aronson, W; Heber, D; Belldegrin, A. Long term follow up of phase 2 study of pomegranate juice for men with prostate cancer shows durable prolongation of PSA doubling time. J Urol, suppl. 2009: 181, 4, abstract 826).*
- Drinking a daily 250ml glass of pomegranate juice can significantly slow the progress of prostate cancer, a study suggests *(source: BBC News, July 2006, Juice 'can slow prostate cancer')*.

Breast Cancer

- Phenolic acids (present in pomegranates) produce growth inhibition of cancer cells, particularly important for hormone-dependant breast tumours, so may help to slow this type of breast cancer. *(source: The Technion-Israel Institute of Technology -Dr. Ephraim Lansky).*
- In addition to having anti-inflammatory effects, the juice, peel, and oil also have demonstrated anti-cancer activities, including interference with tumor cell growth and reproduction. *(source: James Kumi-Diaka, PhD, an associate professor of biological sciences at Florida Atlantic University in Davie).*

Colon Cancer

- The polyphenolic phytochemicals in the pomegranate may play an important role in the modulation of inflammatory cell signaling in colon cancer cells. *(source: Journal of Agricultural and Food Chemistry, 2006 February, 8:54(3):980-5).*

Diabetes

- Diabetes is associated with increased oxidative stress, therefore as pomegranate juice is a potent source of antioxidants, despite the sugar content, consumption by diabetic patients can help to relieve oxidative stress *(source: Anti-oxidative effects of pomegranate juice (PJ) consumption by diabetic patients on serum and on macrophages, The Lipid Research Laboratory, Technion Faculty of Medicine, The Rappaport Family institute for Research in the Medical Sciences, Rambam Medical Center, Internal Medicine Department E, Rambam Medical Center, Haifa, ISRAEL).*
- Pomegranate juice may lower the risk of Type 2 diabetes *(source: Diabetic Information 2006, Pomegranate Juice Lowers the Risk in Diabetes).*

Drug Interactions

- Unlike grapefruit or cranberry juice, pomegranate juice does not interfere with the metabolism of drugs. *(source: Dr. David Greenblatt Technion-Israel Institute of Technology "Pomegranate Juice Does Not Impair Clearance of Oral or Intravenous Midazolam, Comparison with Grapefruit Juice," Feb. 2007 Journal of Clinical Pharmacology, Tufts University School of Medicine).*

Osteoarthritis

- Being both rich in antioxidants *and* anti-inflammatory properties, pomegranate juice may help to combat arthritis. (source: *Effect of antioxidants on knee cartilage and bone in healthy, middle-aged subjects: a cross-sectional study*, Department of Epidemiology and Preventive Medicine, Monash University, Central and Eastern Clinical School, Alfred Hospital, Melbourne, VIC 3004, Australia, Cancer Epidemiology Centre, The Cancer Council of Victoria, Carlton, VIC 3053, Australia, Baker Heart Research Institute, Australia, School of Population Health, The University of Melbourne, Australia, MRI Unit, Mayne Health Diagnostic Imaging Group, Epworth Hospital, Australia).
- Compounds found in the juice may inhibit cartilage degradation. (source: *Pomegranate fruit shown to slow cartilage deterioration in osteoarthritis*, Cleveland (Sept. 1, 2005) - *Pomegranate fruit extracts can block enzymes that contribute to osteoarthritis*, Case Western Reserve University School of Medicine study, *Journal of Nutrition*, September 2005).

Atherosclerosis (coronary artery disease)

- Pomegranate juice (and its anti-atherosclerotic properties) has been shown in many studies to have a clear link to reducing blood pressure. (source: *Pomegranate juice consumption for 3 years by patients with carotid artery stenosis reduces common carotid intima-media thickness, blood pressure and LDL oxidation*. The Lipid Research Laboratory, Rappaport Family Institute for Research in the Medical Sciences, Rambam Medical Center, Haifa 31096, Israel).
- It may offer wide protection against cardiovascular diseases (due to its inhibitory effect on oxidative stress). (source: *Pomegranate and Cardiovascular diseases : Pomegranate Juice Polyphenolic Antioxidants Protect against Oxidative Stress and Atherosclerosis - I International Symposium on Human Health Effects of Fruits and Vegetables*, B. Fuhrman, M. Aviram).
- It may exert beneficial effects on coronary heart disease and daily consumption of pomegranate juice may improve stress-induced myocardial ischemia in patients who have Coronary Heart Disease. (source: *Effects of Pomegranate Juice Consumption on Myocardial Perfusion in Patients With Coronary Heart Disease* *The American Journal of Cardiology*, Volume 96, Issue 6, Pages 810-814 M.Sumner, M.Elliott-Eller, G.Weidner, J.Daubenmier, M.Chew, R.Marlin, C.Raisin, D.Ornish).

Obstructive Pulmonary Disease

- Also known as Chronic Obstructive Airway Disease; a pathological limitation of airflow in the airway, which is irreversible, including bronchitis and emphysema, Polyphenols, found in pomegranate juice, may be beneficial to such diseases. (source: *Pomegranate juice supplementation in chronic obstructive pulmonary disease: a 5-week randomized, double-blind, placebo-controlled trial*. Department of Food Science and Technology, Research Group on Quality, Safety and Bioactivity of Plant Foods, CEBAS-CSIC, Murcia, Spain).

Alzheimer's Disease

- It is proven that polyphenols (found in pomegranate juice) are neuro-protective. Therefore, diet can affect the risk of Alzheimer's Disease. (source: *American Association of Naturopathic Physicians - August 2005*).
- A daily glass of antioxidant-rich pomegranate juice may halve the build-up of harmful proteins linked to Alzheimer's disease. (source: *Stephen Daniells, Oct 2006, Pomegranate juice may cut Alzheimer's risk*. <http://www.nutraingredients-usa.com/Research/Pomegranate-juice-may-cut-Alzheimer-s-risk>).

Macular Degeneration and Vision Loss

- It is suspected that cataracts develop partly as a result of the oxidization of proteins in the lens of the eye. Some studies have proven that antioxidants may be effective in

reducing macular degeneration, which leads to vision lost. *(source: The Boyd Orr Lecture: Nutrition interventions in aging and age-associated disease Mohsen Meydanic Vascular Biology Program, Jean Mayer US Department of Agriculture Human Nutrition Research Center on Aging at Tufts University, Boston, USA).*

Erectile Dysfunction

- ED can be caused by several factors, including arterial plaque, high blood pressure, heart disease, diabetes, nerve damage, endocrine imbalance or depression. Ultimately, ED is a condition that affects the blood flow to the penis during sexual stimulation.
- After a pilot study, with 61 male subjects who suffer from ED, 47% reported that erections improved with pomegranate juice. *(source: pilot study in International Journal of Impotence Research)*
- Several causes of ED (diabetes, high blood pressure, arterial plague, heart disease) can be helped by the anti-atherosclerosis activity of the active ingredients in pomegranate juice. *(source: pilot study released in the International Journal of Impotence Research www.nature.com/ijir).*
- Drinking 250ml of pomegranate juice a day, may help manage erectile dysfunction and impotence. *(source: EmaxHealth, July 2007, Pomegranate juice may improve erectile dysfunction. <http://www.emaxhealth.com/52/13631.html>).*

Increase in Sperm Quality & Count

- Pomegranate fruit is inescapably linked with fertility and birth, because of its many seeds.
- It is thought to improve sperm count and mobility. *(source: Stephen Daniells, Jan 2008, Pomegranate juice boosts sperm quality. <http://www.foodnavigator.com/Science-Nutrition/Pomegranate-juice-boosts-sperm-quality-study>).*

Chronic inflammation (arthritis and cystic fibrosis)

- Pomegranates have proven anti-inflammatory properties, which may help to fight both arthritis and cystic fibrosis. The edible part of pomegranate is rich in anthocyanins, a group of polyphenolic compounds that possess antioxidant and anti-inflammatory activities. *(source: Biochemical and Molecular Actions of Nutrients Punica granatum L. Extract Inhibits IL-1 β -Induced Expression of Matrix Metalloproteinases by Inhibiting the Activation of MAP Kinases and NF-B in Human Chondrocytes In Vitro Salahuddin Ahmed, Naizhen Wang, Bilal Bin Hafeez, Vinay K. Cheruvu and Tariq M. Haqqi Division of Rheumatic Diseases, Department of Medicine and Department of Epidemiology and Biostatistics, Case Western Reserve University, Cleveland, Ohio, September 2005).*

Antimicrobial

- New infections and strains of bacteria are emerging in hospitals, which do not react to traditional drugs (microbial resistance). Therefore the development of both synthetic and natural drugs is crucial. Pomegranates can play a vital role in this development. *(source: Medical Attributes of Punica granatum - Pomegranate By Anthony Giuffrida, Amanda Karasinski, CatherineSimoneWilkesUniversity, Wilkes-Barre, PA July, 2007).*

Drinking pomegranate juice additionally to taking antibiotics can exaggerate the intended effect of the antibiotics, being beneficial when trying to fight superbugs MSSA and MRSA.

(source: Medical Attributes of Punica granatum - Pomegranate By Anthony Giuffrida, Amanda Karasinski, CatherineSimoneWilkesUniversity, Wilkes-Barre, PA July, 2007)