

POMEGRANATE: A POWERHOUSE FOR HEALTH!





POMEGRANATE: A REVIEW OF THE HEAVENLY HEALER'S PAST, PRESENT, AND FUTURE

In the great Persian Empire, pomegranate (Punica granatum L.) had a wide reputation for use both as an herbal medicine and nutritious food.

It was also a symbol of peace and love according to Achaemenid limestones in the great Persia.



Disease fighter...

the fruit, flowers, bark, roots and leaves of pomegranates contain chemicals, such as polyphenols, that can be used to treat a number of diseases and conditions. It is rich in vitamin C and folate. Ancient cultures understood the health benefits of pomegranates and used it in remedies for digestive disorders, skin disorders, and intestinal parasites, to name a few.

Modern day research has revealed that pomegranates might contribute towards preventing serious conditions such as heart disease, diabetes, and cancer.

SOME IMPRESSIVE HEALTH BENEFITS

• Heart

Diabetes

Skin

Fertility

Immunity

Weight

Cancer

Oral Health

Prostate

Microbiome .

Sports recovery

Arthritis

Hormone support

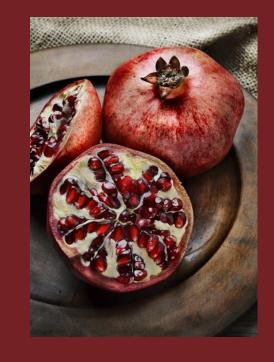






BRIEF OVERVIEW PRIMARY MECHANISMS OF ACTION

- Anti-inflammatory/Antioxidant
 - macrophage oxidative stress
 - free radicals
 - lipid peroxidation





- Anticarcinogenic
 - Antiproliferative
 - Anti-invasive
 - Antimetastatic





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▼301 Diseases Researched

View The Fridence: 562 Abstracts with Pomegranate Research

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Pomegranate consumption may yield a beneficial effect on body weight and BMI in adults.

JAN 31, 2024

The current meta-analysis revealed that PJ supplemantation has a beneficial effect in improving CRP levels.

MAR 29, 2024

The effects of pomegranate consumption on blood pressure in adults.

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The Artery



562

SEE THE GMI DATABASE



Tannins (punicalin and punicafolin), flavone glycosides (apigenin and luteolin), minerals

JUICE

Lignans, organic acids (gallic and ellagic acid), fatty acids, alkaloids, triterpenoids, phytosterols, hydrolyzable tannis and favonoids

ARILS

Polyphenols, isoflavones, organic acids (ascorbic, citric nd malic acid), lipids (punicic, eic, stearic and palmitic acid), polyunsaturated fatty acids (linolenic and linoleic acid)

PERICARP

Hydrolysable tannins, flavonoids, ellagitannins, punicalagins, minerals (potassium, phosphorus, sodium, calcium, nitrogen and magnesium)



"Accumulating data clearly claimed that Punica granatum L. (pomegranate) has several health benefits. Pomegranates can help prevent or treat various disease risk factors including high blood pressure, high cholesterol, oxidative stress, hyperglycemia, and inflammatory activities. It is demonstrated that certain components of pomegranate such as polyphenols have potential antioxidant, anti-inflammatory, and anticarcinogenic effects. The antioxidant potential of pomegranate juice is more than that of red wine and green tea, which is induced through ellagitannins and hydrosable tannins. Pomegranate juice can reduce macrophage oxidative stress, free radicals, and lipid peroxidation. Moreover, pomegranate fruit extract prevents cell growth and induces apoptosis, which can lead to its anticarcinogenic effects. In addition, promoter inhibition of some inflammatory markers and their production are blocked via ellagitannins. In this article, we highlight different studies on the therapeutic effects of pomegranate and their suggested mechanisms of actions."

Aida Zarfeshany, Sedigheh Asgary1, Shaghayegh Haghjoo Javanmard Physiology Research Center, 1 Isfahan Cardiovascular Research Center, Isfahan Cardiovascular Research Institute, Isfahan, Iran <u>LEARN MORE</u>



OMEGA-5 FATTY ACIDS

- Omega-5s are a group of fatty acids found in pomegranate seed oil and other foods and are known for their health benefits.
- They have strong anti-inflammatory and antioxidant properties, which help to protect your cells from damage.
- Studies have found that omega-5s can help maintain insulin sensitivity, promote healthy cholesterol balance, reduce the risk of cancer, maintain a healthy body weight, and protect the brain from degenerative diseases like Alzheimer's disease.

WHAT ARE THE HEALTH BENEFITS OF OMEGA-5?

Omega-5, otherwise known as myristoleic acid, is less common in nature -- found primarily in the seed oil from plants in the Myristicaceae genus where nutmeg is the most well known; the oil is also extracted from saw palmetto. Myristoleic acid extracted from saw palmetto has been shown to effectively combat cancer cells in prostate and pancreatic cancers.

Additionally, omega-5 may play a key role in the inhibition of 5-lipoxygenase, a mediator of inflammation, thus, by acting in this anti-inflammatory capacity it helps to promote appropriate inflammation in the body. Food sources of omega-5, beyond extracting myristoleic acid from the aforementioned plants, include the fat of marine animals (wild Alaskan salmon), beavers, and bovines.

What Are The Benefits Of Eating Foods Rich In Omega-5?

Did you know that Omega 5 assists in maintaining brain health and improving cognitive function? Omega-5 fatty acids have been shown to play a crucial role in maintaining brain health, reducing the risk of brain-related issues, and improving memory.



FOODS RICH IN OMEGA-5

- Pomegranate seed oil
- Full-fat grass-fed dairy products
- Coconut oil
- Salmon
- Snake gourd/ Moringa oil



"Pomegranate is a source of some very potent antioxidants (tannins, anthocyanins) which are considered to be also potent anti-atherogenic agents. The combination of the above unique various types of pomegranate polyphenols provides a much wider spectrum of action against several types of free radicals. Indeed, pomegranate is superior in comparison to other antioxidants in protecting low-density lipoprotein (LDL, "the bad cholesterol") and high-density lipoprotein (HDL, "the good cholesterol") from oxidation, and as a result it attenuates atherosclerosis development and its consequent cardiovascular events. Pomegranate antioxidants are not free, but are attached to the pomegranate sugars, and hence were shown to be beneficial even in diabetic patients. Furthermore, pomegranate antioxidants are unique in their ability to increase the activity of the HDL-associated paraoxonase 1 (PON1), which breaks down harmful oxidized lipids in lipoproteins, in macrophages, and in atherosclerotic plaques. Finally, unique pomegranate antioxidants beneficially decrease blood pressure. All the above beneficial characteristics make the pomegranate a uniquely healthy fruit."

Rambam Maimonides Med J. 2013 Apr; 4(2): e0013. Published online 2013 Apr 30. doi: 10.5041/RMMJ.10113PMCID: PMC3678830PMID: 23908863Pomegranate for Your Cardiovascular Health LEARN MORE Michael Aviram, D.Sc* and Mira Rosenblat, M.Sc.

POMEGRANATE & BLOOD PRESSURE



"Hypertension is the most common disease in primary care of patients. It is found in comorbidity with diabetes and cardiovascular disease, and the majority of patients do not tend to be medicated. Pomegranate juice prevents the activity of serum angiotensin-converting enzyme and reduces systolic blood pressure."

The effects of pomegranate juice consumption on blood pressure and cardiovascular health

Caroline Bell Stowe 1 Affiliations

•PMID: 21457902 DOI: 10.1016/j.ctcp.2010.09.004

LEARN MORE





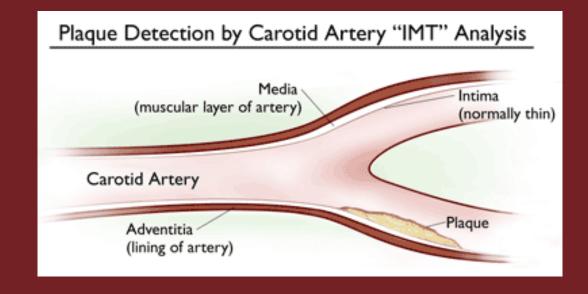
According to a study, people with high blood pressure who had a glass of pomegranate juice (150 ml/day) between lunch and dinner for 2 weeks experienced a significant reduction in blood pressure.

Phytotherapy Research | Medicinal Chemistry Journal | Wiley Online Library

POMEGRANATE & ARTERIAL PLAQUE

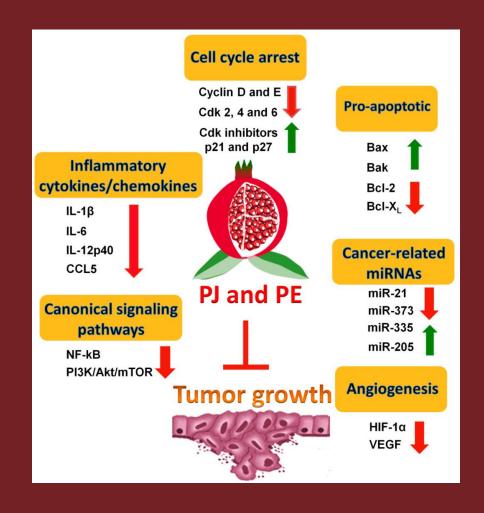
"Pomegranate juice consumption resulted in a significant IMT [intimamedia thickness] reduction, by up to 30 percent, after 1 year," reads the most eye-opening line in the study's abstract."

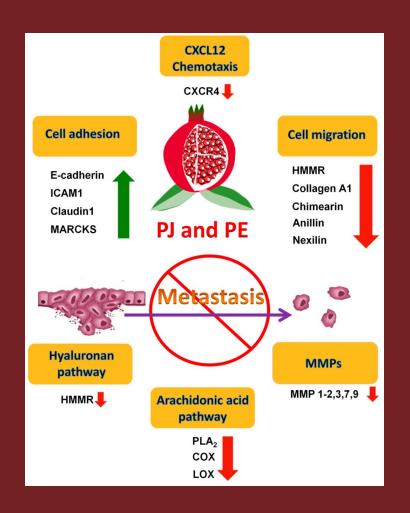
<u>Pomegranate juice: a heart-healthy fruit juice - PubMed (nih.gov)</u>





POMEGRANATE & PROSTATE CANCER





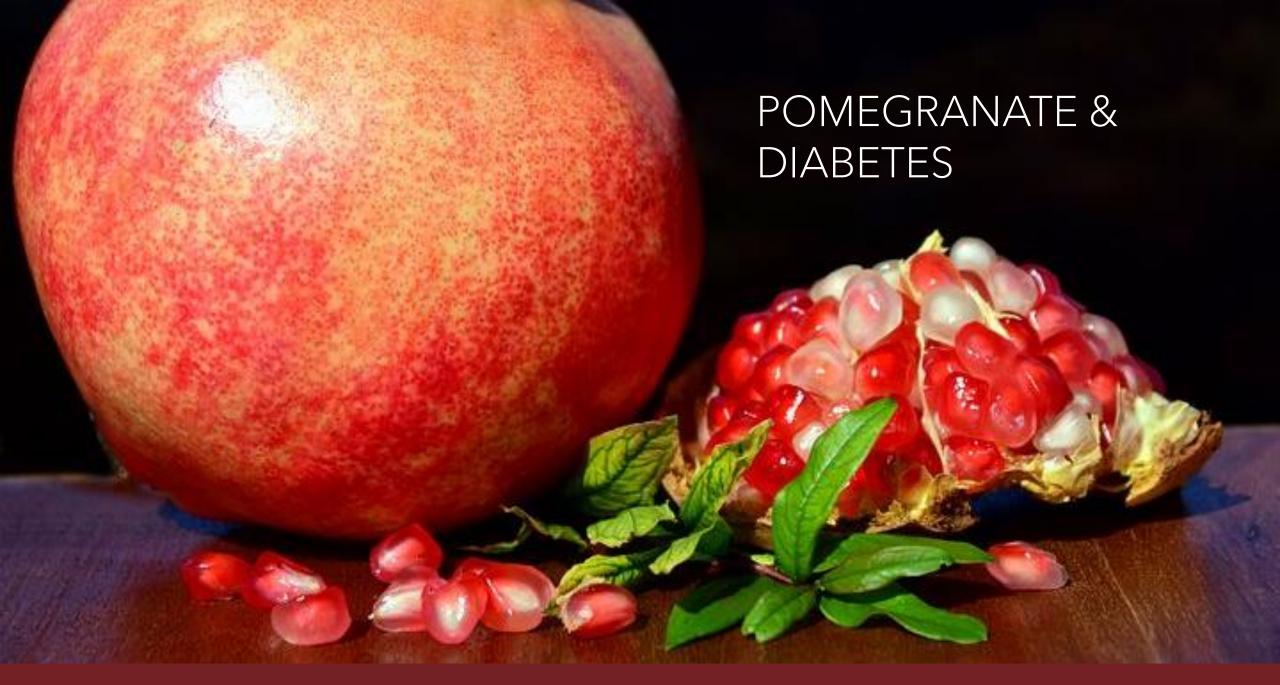




Pomegranate fruit and pomegranate extracts have been shown to inhibit proliferation, invasion and angiogenesis (the growth of new blood vessels) in a variety of breast cancer cell types, including hormone receptor positive (ER+/PR+), triple negative (ER-/PR-/HER2-), and HER2 overexpressing (HER2+).

A new study has demonstrated that ellagitannin compounds derived from pomegranate can reduce estrogen receptor positive (ER+) proliferation by inhibiting aromatase activity. Estrogen stimulates the growth of ER+ tumors. Androgens are converted into estrogens in the body by the aromatase enzyme, thereby promoting such breast cancer.

Rocha, A., Wang, L.,
Penichet, M. et
al. Pomegranate juice and
specific components inhibit
cell and molecular
processes critical for
metastasis of breast
cancer. Breast Cancer Res
Treat 136, 647-658 (2012).
https://doi.org/10.1007/s1
0549-012-2264-5





"This review focuses on the scientific evidence of pomegranate juice as hypoglycemic, emphasizing the chemical composition and the possible mechanisms of action associated with this effect. Studies were identified using the PubMed, Scopus, and ISI Web of Science databases to identify relevant articles focused on the hypoglycemic effect of pomegranate juice. The physiological responses to pomegranate juice are reported here, including a decrease of oxidative stress damage, an increase of insulindependent glucose uptake, maintenance of θ -cell integrity, inhibition of nonenzymatic protein glycation, an increase of insulin sensitivity, modulation of peroxisome proliferator-activated receptor-gamma, inhibition of α -amylase, inhibition of α glucosidase and dipeptidyl peptidase-4, and decreases in inflammation. Overall, we found a significant hypoglycemic effect of pomegranate in in vitro and in vivo studies and we summarize the potential mechanisms of action."

Antioxidants (Basel). 2022 Mar; 11(3): 553. Published online 2022 Mar 15. doi: 10.3390/antiox11030553 PMCID: PMC8945221PMID: 35326203 Potential Mechanisms of the Improvement of Glucose Homeostasis in Type 2 Diabetes by Pomegranate Juice



POMEGRANATE & YOUR SKIN

BENEFITS OF POMEGRANATE FOR THE SKIN



- Antioxidant powerhouse
- Natural sun protection
- Moisturization
- Anti-inflammatory properties
- Collagen production
- Brightening effect
- Exfoliation
- Anti-acne
- Healing properties
- Detoxification



"Even within skin health applications, pomegranate seed oil and its bioactive compounds have been particularly effective in combating UV-induced stresses on animal skin and in-vitro models, where cells and microorganisms are separated from the whole organism. They have also aided in healing wounds and have shown major anti-inflammatory, analgesic, and anti-bacterial properties."

<u>Foods.</u> 2021 Mar; 10(3): 657.

Published online 2021 Mar 19. doi: 10.3390/foods10030657 PMCID: 23808709 Nutritional and Bioactive Components of Pomegranate Waste Used in Food and Cosmetic Applications: A Review Katharine Ko, † Younas Dadmohammadi, † and Alireza Abbaspourrad* Graziana Difonzo, Academic Editor, Silvia Grassi, Academic Editor, and Maria Paciulli, Academic Editor



"In vitro and animal studies have demonstrated that topical application and oral consumption of pomegranate reduces UVB-induced skin damage. We therefore investigated if oral pomegranate consumption will reduce photodamage from UVB irradiation and alter the composition of the skin microbiota in a randomized controlled, parallel, three-arm, open label study."

"In summary, daily oral pomegranate consumption may lead to enhanced protection from UV photodamage."

Sci Rep. 2019; 9: 14528.

Published online 2019 Oct 10. doi: 10.1038/s41598-019-50926-2

PMCID: PMC6787198 PMID: <u>31601842</u> Pomegranate Juice and Extract

Consumption Increases the Resistance to UVB-induced Erythema and Changes the Skin Microbiome in Healthy Women: a Randomized Controlled Trial







POMEGRANATE & YOUR TEETH

Pomegranates can also help you prevent the plaque build-up that leads to tooth decay and gum disease.

One study investigated the effect of pomegranate juice on dental plaque. Participants in the research did not clean their teeth for twenty-four hours. These people then rinsed their mouths with 30ml of pomegranate juice. Researchers measured the amount of plaque build-up before and after the participants rinsed with the juice.

The study concluded that pomegranate juice can significantly lower the number of oral bacteria that can form plaque. Notably, the juice was particularly effective against lactobacilli bacteria. Participants in the study saw a 46 percent reduction in this type of bacteria after they rinsed with pomegranate juice.



POMEGRANATE & MENOPAUSAL SYMPTOMS

Effects of pomegranate supplement on menopausal symptoms and quality of life in menopausal women: A double-blind randomized placebo-controlled trial

Background: Menopausal symptoms have negative effects on the aspects of quality of life and impose a high cost on the health system. In traditional Persian medicine, pomegranate is recommended to alleviate menopausal symptoms.

Material and methods: A randomized double-blind placebo-controlled trial was performed among 78 healthy women. Participants were interviewed three times: Before receiving the supplement/placebo, after completing the treatment, and after 3 weeks with no intervention. They filled out the demographic information sheet, modified-Kupperman index, and Menopause-Specific Quality of Life (MENQOL) questionnaires.

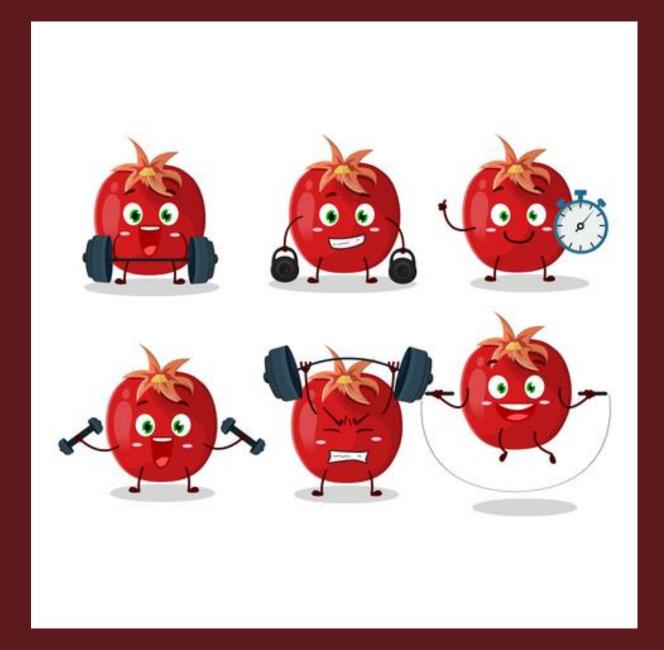
Results: The mean scores of the modified-Kupperman index and MENQOL characteristics before and after the treatment and after the follow-up period were significantly different between pomegranate and placebo groups in both modified-Kupperman and MENQOL scores (p < 0.001).

Conclusion: This study demonstrated that 4 weeks' treatment with the pomegranate supplement significantly ameliorates the irritating symptoms of menopause and improves the quality of life in menopausal women even after 4 weeks' medicine deprivation.

2022 Feb:46:101544. doi: 10.1016/j.ctcp.2022.101544. Epub 2022 Feb 2. Effects of pomegranate supplement on menopausal symptoms and quality of life in menopausal women: A double-blind randomized placebo-controlled trial

POMEGRANATE & SPORTS PERFORMANCE

Effects of pomegranate
supplementation on exercise
performance and post-exercise
recovery in healthy adults: a
systematic review



EFFECTS OF POMEGRANATE SUPPLEMENTATION ON EXERCISE PERFORMANCE AND POST-EXERCISE RECOVERY IN HEALTHY ADULTS: A SYSTEMATIC REVIEW

"The review indicates that POM has the potential to enhance exercise performance and to expedite recovery from intensive exercise. The findings and recommendations from this review may help to optimise POM-supplementation practice in athletes and coaches to potentially improve exercise-performance and post-exercise recovery."

Published online by Cambridge University Press: 23 October 2018





According to Jewish lore, the pomegranate contains 613 seeds, one for each mitzvah. For millennia across Europe, Persia, and Asia, in Buddhist, Islamic, Judaic, and Christian traditions, pomegranates have been invoked as a symbol of fertility and sometimes smashed in bridal chambers to encourage the birth of many children.

In The Unicorn in Captivity, a medieval European tapestry one can inspect before touring the quince grove at the Met Cloisters in Manhattan, a unicorn sits within a low-fenced pasture beneath a pomegranate tree. He looks content in captivity, a symbol of fertility and marriage and the fertility of a soul's marriage with Christ.

The unicorn appears to be bleeding from wounds of the hunt that chained him to this tree. On closer inspection, the wounds don't bleed—they weep seeds. The blood is pomegranate juice.

IN SUMMARY

- · Pomegranate is a superiorly rich source of nutrients vitally beneficial to health
- Pomegranate has been shown to be useful for maintaining optimal health across a broad range of body systems, to include blood sugar control, brain health, skin health, oral health, the intestinal microbiome, prevention and treatment of cancer, heart and cardiovascular health, sports recovery and joint health, hormonal health, and more
- All parts of the pomegranate are useful for health; the seeds (arils), juice, leaves, and skin
- Adding pomegranate in some form whether juice, fruit, or supplements on a daily
 or very regular basis is a very good way to support your overall health

"GO TO HEALTH!"



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