



ARBOR FARMS MARKET

2103 West Stadium - Boulevard Plaza
Ann Arbor - 734-996-8111 - arborfarms.com

Our August 2019 Newsletter for Healthy Living

Pomegranate's Punch

Pomegranates have been enjoyed for thousands of years and are a symbol of hope and abundance in many cultures. In North America, they're often overshadowed by more common fruits like apples and oranges, but once you learn how to eat them, pomegranates can add valuable nutrition, including powerful antioxidants, to your diet.

Pomegranate's benefits are primarily attributed to its antioxidant content. Antioxidants are nature's way of providing your cells with adequate defenses against attack by reactive oxygen species (ROS). With sufficient levels, your body will be able to resist cellular damage and aging caused by everyday exposure to pollutants. The fruit contains three types of antioxidant polyphenols, including tannins, anthocyanins and ellagic acid, in significant amounts. Ellagitannin compounds such as punicalagins and punicalins account for about half of the pomegranate's antioxidant ability.

It's also an excellent source of vitamin C, another potent antioxidant, with one whole pomegranate providing 28.8 milligrams (mg) of vitamin C. According to the National Institutes of Health, adult men need approximately 90 mg and adult women 75 mg of vitamin C per day to maintain a satisfactory vitamin C status, with smokers needing 35 mg more than nonsmokers.

According to a 2008 study, which compared the potency of 10 dif-

ferent polyphenol-rich beverages, pomegranate juice scored top billing as the healthiest. Overall, its antioxidant potency was found to be "at least 20% greater" than any of the other beverages.

Another recent study confirmed one of pomegranate's longstanding claims to fame, namely its antiaging benefits, in a human, placebo-controlled trial. The paper, published in Nature

which build on previous preclinical trials, really crystallize how UA could be a game-changer for human health."

Previous research has shown the antioxidants in pomegranate can inhibit cell proliferation and invasion, and promote apoptosis (programmed cell death) in various cancer cells, including breast and prostate cancer cells. According to the authors of a 2012 study on

"These findings... really crystallize how (pomegranate) UA could be a game-changer for human health."

Metabolism, found urolithin A (a gut bacteria-derived metabolite of ellagitannins in pomegranate) can help slow the aging process — again by improving mitochondrial function.

As reported by Medicalxpress: "Pomegranate, a fruit prized by many civilizations for its health benefits, contains ellagitannins. When ingested, these molecules are converted into a compound called urolithin A (UA) in the human gut. The researchers found that UA can slow down the mitochondrial aging process. UA is the only known compound that re-establishes cells' ability to recycle defective mitochondria,"

The authors noted that while mitochondrial biogenesis occurs naturally, the efficiency of this process declines with advancing age and is linked to sarcopenia, or the loss of muscle mass. Johan Auwerx, one of the study authors and professor at the Laboratory of Integrative Systems Physiology told Medicalxpress, "These latest findings,

prostate cancer: "The results of apoptotic analyses implicated that fruit juice might trigger the apoptosis in DU145 cells via death receptor signaling and mitochondrial damage pathway ... 11 proteins were deregulated in affected DU145 cells with three upregulated and eight down-regulated proteins. These dys-regulated proteins participated in cytoskeletal functions, antiapoptosis, proteasome activity, NF-κB signaling, cancer cell proliferation, invasion, and angiogenesis. The analytical results of this study help to provide insight into the molecular mechanism of inducing prostate cancer cell apoptosis by pomegranate fruit juice and to develop a novel mechanism-based chemopreventive strategy for prostate cancer."

In another study, men with prostate cancer who drank 8 ounces of pomegranate juice daily significantly lengthened the time it took for their PSA levels to double — from about

continued on page 3

What's Inside This Issue

- Your Future on Fast Food
- August Specials
- Rockin' the Rhodiola
- August Monthly Coupon

Pomegranate's Punch

continued from page 1

15 months to 54 months. Men whose PSA levels double in a short time are at an increased risk of death from prostate cancer, so the results suggest that pomegranate had a powerfully protective effect.

The antioxidants in pomegranates also help quench inflammation that contributes to the destruction of cartilage

“(These)... beneficial characteristics make the pomegranate a uniquely healthy fruit.”

in your joints, a key reason for the pain and stiffness felt by many osteoarthritis sufferers. One study even found that pomegranate extract blocked the production of a cartilage-destroying enzyme. There's also some theoretical evidence suggesting pomegranate juice might be useful for men struggling with mild to moderate erectile dysfunction, thanks to its ability to preserve nitric oxide and enhance its biological actions. Nitric oxide relaxes and widens blood vessels, thereby increasing penile blood flow.

As you might expect, the antioxidants in pomegranates also benefit your heart in a number of ways, includ-

ing lowering blood pressure, slowing or even reversing the growth of plaque formation in arteries, improving blood flow and keeping arteries from becoming thick and stiff. As noted in the 2013 paper “Pomegranate for Your Cardiovascular Health”:

“[P]omegranate is superior in comparison to other antioxidants in pro-

tecting 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 ... All the

above beneficial characteristics make the pomegranate a uniquely healthy fruit.”

What most people fail to appreciate is that over 90% of the pomegranate polyphenols are in the peel, not the fruit. Many people eat the sweet fruit loaded with sugars, and aren't getting all the benefits they think they are. Research shows pomegranate peel contains more than twice the amounts of antioxidants — specifically phenolics, flavonoids and proanthocyanidins — than the pulp, and has been shown to protect low-density lipoprotein against oxidation to a far greater degree than pulp. According to researchers, “pomegranate peel extract appeared to have more potential as a health supplement rich in natural antioxidants than the pulp extract and merits further intensive study.”



Reference: USDA Food Data *Pomegranates*. National Institutes of Health Sept. 18, 2018. *Journal of Agriculture and Food Chemistry* 2008; 56(S):1415-22. *Nature Metabolism* June 14, 2019; 1:595-603. *Medicalxpress.com* June 17, 2019. *Journal of Medicine and Food* 2005 Winter; 8(4):469-75. *Phytotherapy Research* 2010Feb; 24(2):182-5. *International Journal of Impotence Research* 2007 Nov/Dec; 19(6):564-7. *Nitric Oxide* 2006 Sep; 15(2):93-102. *Clinical Nutrition* June 2004; 23(3):423-33. *Rambam Maimonides Medical Journal* 2013 April; 4(2): e0013. *Pomegranates.org*.

Your Future on Fast Food

Eating fast food — the epitome of highly processed “fake” foods — can have lasting ramifications on your brain health, so much so that researchers at Australian National University suggested you can cause “irreversible” damage by the time you reach middle age, just by eating a fast-food diet and not staying active. If you are middle-aged and haven't been eating the best, don't panic — you can start making healthier changes starting today. However, the new study is eye-opening, once again hitting home the importance of healthy eating when it comes to keeping your mind strong as you age.



In a review by the scientists in the featured study, they stated that people today are consuming about 650 Kilocalories more daily than they were in the 1970s — an amount equivalent to a fast-food meal consisting of a burger, fries and soft drink. (A Kilocalorie, or Kcal, is equal to 1 Calorie, with a capital “C,” while 1,000 calories with a lowercase

“c” equal 1 Kilocalorie.) This amount is about one-quarter of the recommended daily food energy needs for men and just under one-third for women.

“The extra amount of energy that people consume daily compared to 50 years ago means that many people have an unhealthy diet,” ANU professor Nicolas Cherbuin, lead author of the study, said in a news release, adding: “People eating too much of the wrong kind of food, particularly fast food, is the other big worry. As a society, we need to stop asking, ‘do you want fries with that?’, and the mindset that comes with it. If we don't, then expect to see more overweight and obese people suffering from serious diseases.”

The review focused on “how normal but elevated blood glucose levels in individuals without T2D [Type 2 diabetes] contribute to neurodegenerative processes, and how the main risk factors for T2D diabetes, including obesity, lack of physical activity and poor diet, modulate these effects.” Often, “high normal” blood sugar levels progress to impaired

fasting glucose and, eventually, Type 2 diabetes. Impaired glucose metabolism is then associated with neurodegeneration that impairs cognitive function. What's more, these factors begin not in old age but much earlier, such that following a healthy lifestyle in young adulthood may be protective against cognitive decline later.

According to the study: “The notion that T2D is associated with neurodegeneration, cognitive impairment, dementia and mortality is not new. However, these associations are often thought to be mostly relevant in old age despite the availability of substantial evidence indicating that the pathological processes at play are initiated in mid-adulthood or before. ... It is of particular concern that the pathological cascade leading to higher FBG and ultimately T2D typically begins decades before and starts impacting cerebral health and cognition from its onset.”

Reference: Australia National University June 13, 2019. *Frontiers in Neuroendocrinology* June 6, 2019. *Neurology* January 9, 2019. *Science News* April 25, 2019.

Rockin' the Rhodiola

Scientists around the world have been keenly studying the attributes of a root plant known as rhodiola, which is a tough perennial that produces beautiful, chrysanthemum-like flowers. Beyond its attractive appearance, though,

age to all of the above. Some studies suggest it can even increase your life-span. One study notes: "*Studies on isolated organs, tissues, cells and enzymes have revealed that Rhodiola preparations exhibit adaptogenic effect includ-*

to health have been identified in rhodiola. Three of the most important, noted for having adaptogenic properties (meaning they can provide different effects depending on what your body needs) are: **Salidroside**, also known as rhodioloside, considered by many experts to be the plant's most important bioactive molecule, and likely responsible for its protective and stimulant effects on the brain. **Rosavin**, which has

"...Rhodiola preparations exhibit adaptogenic effect including neuroprotective, cardioprotective... and life-span increasing."

rhodiola has a number of highly valuable qualities for health. Rhodiola thrives in cold mountainous regions and barren sea cliffs such as those in Northern Asia, Europe and North America. Closely related species also used in traditional medicine include *Rhodiola imbricata*, *Rhodiola algida* and *Rhodiola crenulata*.

Because its history harkens as far back as the Vikings, rhodiola has several different monikers. Besides the scientific name *Rhodiola rosea*, it's also known as golden root, rose root, king's crown and *hóng jǐng tiān*, depending on where it's found. For millennia, people familiar with the plant used its extracts to improve strength and virility. For instance,



Siberian brides were given rhodiola sprigs to increase their physical endurance to face long, sub-zero winters, fend off anxiety and depression, and increase fertility.

A renowned Greek text known as *De Materia Medica* written in 77 A.D., describes numerous medicinal properties from the plant's stem. According to Swedish Medical Center, rhodiola was long ago integrated into the traditional medicines of Sweden, Norway, Iceland and Russia. Recent history supports many of even the most ancient claims. Introduced to a body that's flagging due to prolonged or higher-than-normal stress, rhodiola has been proven to relieve both physical and mental fatigue, soothe frazzled nerves and even improve the ability to concentrate.

Rhodiola boasts an extensive list of vitality-boosting abilities found in the stem, roots and leaves of the plant, such as boosting your immunity from disease, positively impacting brain, organ, nerve, sexual and neurological functions, and helping to prevent dam-

ing neuroprotective, cardioprotective, antifatigue, antidepressive, anxiolytic, nootropic, life-span increasing effects and CNS (central nervous system) stimulating activity."

"A number of clinical trials demonstrate that repeated administration of R. rosea extract SHR-5 exerts an antifatigue effect that increases mental performance (particularly the ability to concentrate in healthy subjects), and reduces burnout in patients with fatigue syndrome. Encouraging results exist for the use of Rhodiola in mild to moderate depression, and generalized anxiety. Several mechanisms of action possibly contributing to the clinical effect have been identified for Rhodiola extracts."

One way the compounds in rhodiola are beneficial is that they support your body's ability to stave off another type of stress: oxidative. It also helps fight infection and burn energy, while simultaneously helping to decrease inflammation, increase energy, prevent fat buildup, protect your heart and lungs, reduce pain and improve your mood. The latter benefit explains why rhodiola is known as a nootropic, described as a substance that enhances brain function.

Rhodiola has its own benefits in this regard, as it stimulates brain activity and has been found to be directly responsible for activating four important neurotransmitters: norepinephrine, serotonin, dopamine and acetylcholine. Each of these is significant as depression is strongly linked to low dopamine. Studies note that working together, these neurotransmitters are important for memory, concentration and learning. Rhodiola also improves wakefulness and reduces both physical and mental fatigue, as well as anxiety.

Where do all these incredible benefits come from? The rose-like fragrance is due to the presence of geraniol essential oil, but more than 140 different and powerful organic compounds related

Michigan Grass-fed Beef:

*Humanely-raised at
Lamb Farm in Manchester, MI*



Porterhouse & T-Bone Steaks only \$14.99/lb

many of the same properties and mechanisms as salidroside, but requires a higher dose to produce the same effect. **Tyrosol**, which is one of the antioxidant elements in rhodiola extracts, but while it may contribute to its benefits, it often goes unlabeled on commercial supplements.

One study shows salidroside helps restore the balance between free radicals and antioxidants, and protects your brain against poor blood flow and subsequent stroke (aka ischemia). Due to its antibacterial strength, salidroside has also been used successfully to treat acne. While standard acne treatments can trigger antibiotic resistance and even worse problems, salidroside can get rid of the thin, slimy layer of bacterial cells known as biofilm that is difficult to eradicate. Its antioxidant activity may help fight aging, although the mechanisms are not well-studied in humans. It is well-known, though, that high oxidative stress underlies many chronic diseases and age-related health problems.

Reference: BMC Complementary and Alternative Medicine May 29, 2012. Swedish Medical Center 1999-2019. *Planta Med* Feb 2009; 75(2):105-12. Institute for Women's Health and Body Nov 21, 2018. PLOS One Jan. 10, 2013. *Journal of the International Society of Sports Nutrition* March 15, 2018. *Phytomedicine* June 2010; 17(7):481-93. Anxiety.org Sept. 13, 2016. *Journal of Food and Drug Analysis* Sept. 2015; 23(3):359-69. *Current Pharmacological Reports* Dec. 1, 2018.



ARBOR FARMS MARKET

PRSRT STD
US POSTAGE
PAID
ANN ARBOR MI
PERMIT NO 150

2103 West Stadium - Boulevard Plaza
Ann Arbor - 734-996-8111 - arborfarms.com

\$2 OFF

your next purchase
of **\$15 or more** at
Arbor Farms Market.

Limit one coupon per visit. No cash value.
Valid through August 31, 2019.

August Specials



Enjoy
Michigan's Harvest



Effective through August 11th

- Michigan Cherries..... \$4.99/lb
- Michigan Blueberries, pint pkg..... \$3.99
- Organic Blueberries, 6-oz pkg..... 2/\$6
- Grass-fed Delmonico Steaks..... \$14.99/lb
- Miller Poultry Pick of the Chick..... \$2.49/lb
- Sockeye Salmon Fillets, wild-caught, Alaska.... \$19.99/lb
- Organic Cauliflower..... \$2.49/lb

Arriving in August:

Local Products from Local Growers

Lamb Farm - Manchester Homer Organic Farms

Graham's Organics Rosebush Wunsch Farm - Traverse

Green Valley - Marlette Better Way - South Haven

Effective August 1st - 25th

- Cadia Olive Oil, 25 oz Extra Virgin..... \$7.99
- Larabars, assorted varieties, 1.6 oz..... 10/\$10
- Santa Cruz Organic Lemonade, select 32 oz..... 2/\$4
- Cadia Almond Butter, Creamy 16 oz..... \$8.99
- Evol Burritos, assorted Frozen 6 oz..... 2/\$5
- Violife Vegan Cheeses, assorted 5-8 oz..... \$4.49
- Ecos Laundry Liquid, 100 oz., Free & Clear..... \$9.99
- Bach Flower Remedies, entire line..... 20% OFF
- Jarrow Vitamins & Supplements entire line 20% OFF



Shop
Local

Keep your \$\$\$
in Michigan

Arbor Farms Brand Vitamins & Herbs..... 20% OFF entire line!