



ARBOR FARMS MARKET

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Our March 2020 Newsletter for Healthy Living

Turn Up the Heat

Cardiovascular disease (CVD) is the leading cause of death for Americans, with more than \$219 billion spent annually to treat the millions who have some form of the disease. This is true for people of almost all races and ethnicities, and 1 in 4 U.S. deaths is caused by the condition. For decades, researchers have sought answers in the form of diet and exercise recommendations, new drug therapies and additional lifestyle interventions. A group of Italian scientists offers new insights into prevention of the disease with what is considered a kitchen staple in many parts of the globe: the colorful chili pepper.

Citing the need for more careful examination of the role of this vegetable in a Mediterranean diet, Marialaura Bonaccio, Ph.D., and a team of 12 others from Pozzilli, Italy, conducted a longitudinal analysis involving 22,811 men and women. They used a food frequency questionnaire to determine how often each person consumed chili peppers; this was then compared to disease and mortality rates in the group. As reported in the December 2019 issue of the Journal of the American College of Cardiology, it was found that "regular consumption of chili pepper is associated with a lower risk of total and CVD death, independent of CVD risk factors or adherence to a Mediterranean diet."

Those who ate the spicy vegetable had a 40% lower risk of having a fatal heart attack; their risk of stroke went down more than 50%. The effect was noted to be stronger in those who did not have high blood pressure.

Bonaccio noted that the effects were not tied to whether someone followed a Mediterranean diet, known to offer a wealth of heart-protective health benefits. The researchers also noted that regular consumption of chili peppers was inversely associated with cerebrovascular and ischemic heart disease death risks. While this does not mean that chili peppers are the cure for CVD, it does

Chili peppers belong to the nightshade family with varieties that include cayenne, jalapeno, habanero and serrano peppers. They were first cultivated by ancient farmers in Central and South America, regions where cuisines are famous for their piquant flavor. Today, they are grown all over the world, but Mexico, China, Spain, Nigeria and Turkey are among the largest commercial

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offer insights into the importance of eating healthily and embracing natural options to pursue optimal health.

CVD is influenced by a number of factors, including lifestyle choices. The CDC reports that 47% of Americans have at least one of three risk factors for developing heart disease, such as smoking and high blood pressure. While those numbers are daunting, the good news is you have a great deal of control over your heart health. The CDC also notes that drinking too much alcohol, failing to get enough exercise and regularly choosing unhealthy foods can also raise your heart disease risk. By taking control of your daily habits you can tip the scales in your favor, so to speak, to help prevent the development of obesity and diabetes, which also contribute to your risk for CVD.

Chili peppers, as part of an overall healthy diet, can spice up your meals while potentially offering additional health benefits including reduced risks for rheumatoid arthritis, Alzheimer's disease, cancer and even acne.

producers.

Chili pepper contains a bioactive plant compound called capsaicin, which is responsible for its hot and spicy kick. Capsaicin is concentrated in the seeds and white inner membrane; the more capsaicin it contains, the spicier the pepper. Capsaicin is a compound produced to protect the peppers from fungal attack. It is colorless and odorless, but when you eat it, it tricks your brain into perceiving heat where it touches your body. The burning sensation the compound imparts is not actually a taste. Rather, it's caused by the stimulation of nerves sending two messages to the brain of intense stimulus and warmth. The burning sensation is due to the combination of these two messages.

Capsaicin has been studied comprehensively, and you may be surprised at what it can do. The following are prominent examples: **Pain Relief** — Capsaicin may help relieve pain by exhausting your body's supply of substance P, a chemical found in your nerve cells that plays a role in transmitting pain

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2020 Organic Produce CSA



Homer Organic Family Farms



Our Farming Practices

We farm much the same way as our forefathers of the 1930's. Our fields are plowed and worked with horses. Our large families provide many hands to do the planting, picking rocks, hoeing, weeding, harvesting, washing produce and packing boxes.

We are certified organic. Every year all of our farms are inspected by a third party and the information sent to our certifier to verify that we are in compliance with National Organic Program Standards. This is to assure you that we are not using harmful chemicals and pesticides or genetically-modified organism (GMO) seeds.

About Us

We farmers (there are seven participating in our co-op) have been raising produce for more than a decade, providing fresh vegetables for farmer's markets and several Ann Arbor food stores.

We, being of the Amish faith, do not have computers or e-mail, and only limited access to phones. Our communication is best done by mail or through our friends at Arbor Farms.

What is a CSA Program?

By subscribing to a CSA you are investing in a share of the farmer's harvest. You are also sharing the farmer's risk. If a crop fails we will need to substitute something else or wait for the next planting. You will get a box of fresh vegetables every week. The early harvest begins June 3rd, continues throughout summer, and ends October 1st (for a total of 18 weeks).

Not only are subscribers getting the freshest food, but they are also showing their support for the small farmer. The program works well for farmers and members both. The farmer can plan how much to grow; the member knows they have a box of fresh vegetables coming every week. It makes shopping quite simple. It broadens your eating habits, as you will try new things you've never had before. It can challenge the cook. A seed catalog to us is like a cookbook to you. Sometimes we like to try new items. So be our guest and enjoy the food.

What might I see in my weekly box?

Early Season: June

Asparagus,
Leaf Lettuce,
Swiss Chard,
Kale varieties,
Collards,
Zucchini,
Peas: Snap and Shell,
Salad Greens,
Rhubarb

Summer Season: June/July/August

Lettuce, Broccoli, Cabbage,
Radishes, Beans, Peppers,
Zucchini, Cucumbers, Hot Peppers,
Carrots, Peas, Tomatoes,
Sweet Potatoes, Basil,
Cantaloupe, Potatoes,
Green Onions, Sweet Corn,
Onions, Eggplant, Beets,
Garlic, Watermelon

Late Season: September/October

Remaining summer crops,
Red Peppers,
Hard Squash,
Spinach,
Late Greens,
Turnips,
Parsnips

Community Supported Agriculture

Subscribe now through May 15th

Turn Up the Heat, *continued from page one*

signals to your brain. In one study, heartburn sufferers were given 2.5 grams of red chili peppers per day. They noted that at the beginning of the treatment, pain slightly worsened, but then gradually improved over time. In another study, 80% of those treated with capsaicin ex-

“While capsaicin alone is a powerful molecule, in combination with.....raw ginger root, it becomes even more important .”

perienced a reduction in pain after two weeks. The authors of a separate investigation found that in those with moderate pain, a topical capsaicin treatment was effective in reducing intensity regardless of dose and site of application.

Weight Management — Spicy foods, quite literally, can help burn fat and help you lose weight. In a study published in the *Journal of Nutritional Science and Vitaminology*, participants were given 10 grams of red pepper during a meal. After eating, the researchers monitored the participants' energy expenditure and learned that chili peppers increased it after consumption.

Reduce Hunger — Several studies have shown that capsaicin may help reduce hunger. According to a study published in the *European Journal of Nutrition*, capsaicin works by reducing the production of ghrelin, the hormone responsible for triggering hunger.

Blood Pressure Maintenance — Capsaicin may help promote long-term heart health. According to the authors of one study, mice affected with high blood pressure experienced relief after they consumed food mixed with capsaicin. The researchers went on to suggest that capsaicin activates the transient receptor potential vanilloid 1 (TRPV1), which contributes to vasorelaxation and lowered blood pressure.

Boost Digestive Health — Aside from reducing hunger, capsaicin may help promote a well-functioning digestive tract. Scientists found that in one study, it enhanced the buffering component of gastric secretory responses and gastric emptying and it prevented gastric mucosal damage from ethanol-based beverages. Another group of scientists suggested that capsaicin can help promote the healing of gastric ulcers by inhibiting acid secretion and stimulating alkali and mucus production and gastric blood flow.

May Lower the Risk of Cancer —

Capsaicin may have the ability to fight against cancer by attacking pathways in the growth of cancer cells. In a study presented during the 2019 Experimental Biology meeting, researchers were interested in evaluating the ability of capsai-

cin to reduce metastasis in lung adenocarcinoma, which accounts for the majority of all non-small cell lung cancers. In vitro experimentation led to the discovery that capsaicin stopped metastasis by blocking the activation of a key pro-

tein regulating the proliferation and motility of cancer cells, the Src protein.

While capsaicin alone is a powerful molecule, in combination with 6-gingerol found in raw ginger root, it becomes even more important to your health. Researchers discovered that mice prone to lung cancer experienced a reduction in diagnosis when fed a combination of capsaicin and 6-gingerol. Together the chemicals had an increased ability to bind to a receptor that is responsible for tumor cell growth. This ability reduced potential for developing lung cancer in the experimental animals.

During the study, researchers fed one group just capsaicin, another just 6-gingerol and the third a combination of the two. While under observation, all of the mice that received capsaicin developed lung tumors; half the mice that received 6-gingerol developed lung tumors, but only 20% of the mice given the combination developed cancer.

Ginger has a long history of calming nausea related to surgery, morning sickness and chemotherapy. The anti-inflammatory properties have given many people relief with the pain of osteoarthritis. As ginger also increases the motility of your gastrointestinal tract, it has been used for the treatment of chronic indigestion. Significantly reducing pain associated with menstrual disorders and improving brain function are other health benefits associated with ginger.



Bright red chili peppers contain beta carotene. According to WH Foods, just 2 teaspoons provide 6% of your daily recommended dose of vitamin C and more than 10% of vitamin A. Vitamin A is vital to the health of the mucous membranes lining your nasal passages, lungs and intestinal tract.

Capsaicin supplementation may also reduce your risk of coronary heart disease (CHD). In one investigation, researchers evaluated the effects of capsaicin on serum lipid profiles in those who had low high-density lipoprotein (HDL). Using a randomized, double-blind, controlled clinical trial with 42

participants, half were assigned to take capsaicin daily while the other served as the control group. Those in the experimental group experienced a reduction in triglycerides and C-reactive protein. Capsaicin appeared to improve risk factors in those who had low HDL, and the researchers concluded it may contribute to the prevention and treatment of CHD.

The authors of another study

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found those using an over-the-counter pain salve with capsaicin could reduce damage to the heart during a heart attack. The researchers noted: *“Both this and the capsaicin effect are shown to work through similar neurological mechanisms. These are the most powerful cardioprotective effects recorded to date. This is a form of remote cardioprotection, using a skin stimulus that activates cardioprotection long before the blocked coronary artery is opened.”*

While the benefits of capsaicin-containing foods are notably plentiful, eating chili peppers is not considered a cure-all. Some people cannot tolerate the compound or the flavor, while others may find it upsets existing conditions. For most people, however, eating chili peppers will be a beneficial way to get added nutrition, and may prove to be beneficial for heart health. If you're considering supplementation, a natural health care practitioner can help you determine if capsaicin is right for you.

Reference: U.S. Centers for Disease Control And Prevention, *Heart Disease Facts First. Journal of the American College of Cardiology* December 2019, 25: (24)3139-49. PLOS ONE 2017; 12(2). *The New England Journal of Medicine*, 2002 March; 346(12):947-8. *Journal of Nutritional Science and Vitaminology*, 1995 Dec; 41 (6):647-56. *Clinical Nutrition*, 2009 June; 28(3): 260-65. *European Journal of Nutrition*, 2009 June; 48(4): 229-34. *Cell Metabolism*, 2010 Aug 4; 12(2):130-41. *Experimental Biology 2019, Capsaicin and Natural Capsaicin-like Compounds Suppress Metastasis in Lung Adenocarcinoma. Medical Daily*, September 9, 2016. *WH Foods 2019. Nutrition Digest*, 2009; 38(2). *Cancer Research* April 2011.



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