

Hot Pepper Ingredient Kills Prostate Cancer Cells



Capsaicin, the pungent alkaloid in jalapeños and other Chile peppers that makes them hot, not only puckers the mouth and burns the tongue but also drives prostate cancer cells to kill themselves off, according to studies published in the March 15 issue of *Cancer Research*.

According to a team of researchers from the Samuel Oschin Comprehensive Cancer Institute at Cedars-Sinai Medical Center, in collaboration with colleagues from UCLA, the pepper component caused human prostate cancer cells to undergo programmed cell death or apoptosis.

Capsaicin induced approximately 80 percent of prostate cancer cells growing in mice to follow the molecular pathways leading to apoptosis. Prostate cancer tumors treated with capsaicin were about one-fifth the size of tumors in non-treated mice.

"Capsaicin had a profound anti-proliferative effect on human prostate cancer cells in culture," said Sören Lehmann, M.D., Ph.D., visiting scientist at the Cedars-Sinai Medical Center and the UCLA School of Medicine. "It also dramatically slowed the development of prostate tumors formed by those human cell lines grown in mouse models." Lehmann estimated that the dose of pepper extract fed orally to the mice was equivalent to giving 400 milligrams of capsaicin three times a week to a 200 pound man, roughly equivalent to between three and eight fresh habañera peppers - depending on the pepper's capsaicin content. Habañeras are the highest rated pepper for capsaicin content according to the Scoville heat index. Habañera peppers, which are native to the Yucatan, typically contain up to 300,000 Scoville units.

The more popular Jalapeño variety from Oaxaca, Mexico, and the southwest United States, contains 2,500 to 5,000 Scoville units. As described in their study, the scientists observed that capsaicin inhibited the activity of NF-kappa Beta, a molecular mechanism that participates in the pathways leading to apoptosis in many cell types. Apoptosis is a normal cellular event in many tissues that maintains a balance between newer replacement cells and aged or worn cells. In contrast, cancer cells seek to be immortal and often dodge apoptosis by mutating or deregulating the genes that participate in programmed cell death.

"When we noticed that capsaicin affected NF-kappa Beta, that was an indication that we might expect some of the apoptotic proteins to be affected," said the study's senior author, Phillip Koeffler, M.D., director of Hematology and Oncology, Cedars-Sinai Medical Center, and professor at UCLA.

The pepper extract also curbed the growth of prostate cancer cells through regulation of androgen receptors, the steroid activated proteins that control expression of specific growth relating genes.

In prostate cancer cells whose growth is dependent on testosterone, the predominant male sex steroid, capsaicin reduced cell proliferation in a dose-dependent manner. Increased concentrations of capsaicin caused more prostate cancer cells to freeze in a non-proliferative state, called G0/G1.

Prostate cancer cells that are androgen independent reacted to capsaicin in a similar manner. Capsaicin reduced the amount of androgen receptor that the tumor cells produced, but did not interfere with normal movement of androgen receptor into the nucleus of the cancer cells where the steroid receptor acts to regulate androgen target genes such as prostate specific antigen (PSA). Capsaicin also interfered with the action of androgen receptors even in cells that were modified to produce excess numbers of androgen receptors.

The hot pepper component also reduced cancer cell production of PSA, a protein that often is produced in high quantities by prostate tumors and can signal the presence of prostate cancer in men. PSA content in the blood of men is used as a diagnostic prostate cancer screening measure. PSA is regulated by androgens, and capsaicin limited androgen-induced increases of PSA in the cancer cell lines.

More men in the United States develop prostate cancer than any other type of malignancy. Every year, more than 232,000 new cases of prostate cancer are diagnosed in the U.S., and more than 680,000 develop the disease worldwide. Approximately 30,000 men die from prostate cancer in the U.S. each year, which is about 13 percent of all new cases.

Worldwide, there are 221,000 deaths - approximately 31 per cent - among men with prostate cancer.

Read the abstract for this study here: [Capsaicin, a Component of Red Peppers, Inhibits the Growth of Androgen-Independent, p53 Mutant Prostate Cancer Cells](#). Lehman did the experiments in Koeffler's laboratory in collaboration with UCLA cancer researchers Akio Mori, James O'Kelly, Takishi Kumagai, Julian Desmond, Milena Pervan, and William McBride. Mosahiro Kizaki, a former post-doctoral fellow in Koeffler's laboratory who initiated the capsaicin studies, is currently at the Keio University School of Medicine, Tokyo, Japan.

The mission of the American Association for Cancer Research is to prevent and cure cancer. [AACR publishes five major peer-reviewed journals](#) : Cancer Research; Clinical Cancer Research; Molecular Cancer Therapeutics; Molecular Cancer Research; and Cancer Epidemiology, Biomarkers and Prevention, as well as CR, a magazine about people and progress in cancer.

Cayenne Pepper - The Amazing Healing Herb

Cayenne pepper, also known as red pepper, has been used for medicinal purposes from ancient times to combat fatigue and as an overall stimulant. Even though you may find that cayenne pepper is usually red, it can have different color such as orange and yellow.

History

Traditionally it was also used to help with the pain related to stomachaches and gas, to improve and treat diseases of the circulatory system diseases, as a treatment for arthritic and rheumatic pain. It is named after the city Cayenne in French Guyana. Of course, we all know of the pepper that is used in spicy meals, but time and again, it has been proven that Cayenne pepper has healing agents. It comes from the *Capsicum Annuum Longum* plant which can grow up to a height of 3 feet. And it is also used to make mace or pepper spray.

Health Benefits

The cayenne pepper has high concentration of capsaicin which can produce high intense of heat, and capsaicin is a very effective in relieving pain. It is also well known for its anti-ulcer relieve and digestive aid. In the tropical countries, people love the cayenne pepper because of its ability to reduce body temperature.

One of its main uses is to help improve blood circulation or vasodilation, as it is medically known, by opening up blood vessels, namely the large arteries, veins and arterioles. Another common use of cayenne pepper is thermogenics, where they increase the body's metabolism. Studies show that it also helps with digestion helping the body develop hydrochloric acid. Therefore it plays a major role with dyspepsia, improving gas pains, bloating, and nausea. The importance of having a good the digestive system is second to none. When one cannot digest food properly it affects their overall health and organ functionality.

According to a recent *New England Journal of Medicine* study, the Italian doctors managed to reduce the indigestion symptoms significantly of 30 men and women by taking daily doses of red pepper. These 30 patients were randomly selected to have either 2.5 grams of red pepper powder each day or a placebo (The study took 5 weeks). In the group that receives the cayenne pepper, they have lesser symptom scores than the placebo group. The symptom scores for the red pepper group were 38% for nausea, 50% for stomach pain, 46% for stomach fullness, 48% for overall symptom scores lower than the placebo group.

Cardiovascular activity

It is also believed to end a heart attack in a few short seconds by administering Cayenne extract orally to the victim because not only does it enhance blood circulation, it also increases cardiovascular activity. At the same time, it lowers blood pressure. It can clear the blood of substances and gases as well.

Pain Relief

A cream made from the *capsicum* plant serves as the pain reliever for arthritis, diabetes and HIV, nerve pain associated with cancer-related surgery, and pain associated with shingles. Although the pain may

increase after the first use, it will decrease afterward. The reason for this is that it releases compounds that are involved between the nervous system and the other parts of the body. This cream can release itching involved with psoriasis and other skin conditions. In liquid form, dripped into the nostrils, it can relieve cluster headaches and serves as a decongestive.

Cayenne pepper if made into a plaster and apply directly on the skin of the back can actually relieve back pain. As it is an astringent, it stops bleeding and avoids any swelling. It can be used to stop bleeding gums as well. Due to its stimulating powers, it can avoid shock or depression related to trauma by applying a few grains on the lips.

Capsaicin is the main ingredient behind cayenne pepper effective treatment for cluster headaches and osteoarthritis pain. Capsaicin would cause the release of "Pain" from the nerve cells which may cause infection and pain for the start. After "Pain" is released, capsaicin would block the pain sensation

Nutrition Value

Nutritional values of cayenne are as follows: vitamin A, vitamin C, vitamin B complex, and is a great source of calcium and potassium. In combination with other herbs, it is known to stimulate the others, almost as a catalyst. It channels the nutrients throughout the body like neural hormonal action, cellular respiration and metabolic data transmission.

Cayenne pepper is also a main ingredient in the popular Master Cleanse Diet. In conjunction with lemon juice, and Grade B maple syrup, these ingredients aid in cleansing the colon and the body of toxins that the body cannot rid itself of.

How to Choose And Store Your Cayenne Pepper

You can easily find Cayenne Pepper in various forms like fresh, dried, crushed dried, or ground. On the left, we have provided you with the organic cayenne pepper powder, ground, from Amazon (It comes with pack of 4). It is advisable to choose organically grown herbs to avoid consuming the irradiated cayenne pepper. And do keep them in tightly sealed glass jar, away from the direct sunlight so you can keep it for up to one year.

When the famous master herbalist Dr. John Christopher was bothered by stomach ulcer problems as a student, one of his herbal instructors recommended young John drink a solution of cayenne pepper powder in water daily.

At first, Dr. Christopher thought this was a contradiction. How could something so hot help his ulcers? But he bravely took the advice and to his surprise, it did cure his ulcers. Following that experience, Dr. Christopher become a zealous advocate of cayenne for both heart issues and for boosting the efficacy of some of his other herbal formulas.

Christopher has even documented cases where he helped patients come out

of heart attacks using only a teaspoon of cayenne powder in a cup of warm water. He isn't alone; there are several anecdotes of people recovering from serious heart attacks by downing cayenne teas or tinctures. (Sources below)

One of Dr. Christopher's interns, Dr. Richard Schulze, ND, MH, took up the cause proclaiming, "If you only master one herb in your life, master cayenne pepper. It's more powerful than any other." Both Schulze and Christopher recommend taking a half to full teaspoon of cayenne powder in water two to three times daily as an overall health tonic.

Using cayenne as an herbal medicine or tonic

If you use cayenne, ensure it's organic. Even organic cayenne is inexpensive and the potential benefits are invaluable. The powder comes from various dried and ground chili peppers, all containing capsaicin (cap-say-sin). The amount of capsaicin is indicated by the [cayenne](#) powder's heat levels, measured in Scoville heat units (SHU) or heat units (HU).

The lowest therapeutic level of SHU or heat units is 35,000. You will often find cayenne powder listed at 40,000, 60,000, 90,000 or 100,000 SHU or heat units. Unless you have a fondness for really hot spicy foods, you may want to start at the 40,000 level. Ultimately, moving up the heat line is recommended for optimum efficacy.

Dr. Christopher liked to use warm purified or distilled water to mix in the fine cayenne powder. One-half to a full cup of water can be used for to mix a half or full teaspoon of cayenne that can be quickly gulped. Allowing the heat to permeate is part of cayenne's therapeutic value, which is a reason why Dr. Schulze disdains cayenne capsules.

Dr. Schulze endorses using a homemade tincture in addition to the cayenne tea. A tincture is easy to carry around and may provide an on-the-spot remedy for heart attack to avoid an ER trip when away from home.

Cayenne's health benefits

Cayenne powder serves as both a general tonic and a medicine. In addition to potentially helping cease the fatal throes of a heart attack, ingesting cayenne daily also clears clogged arteries while strengthening the whole cardiovascular system and the heart.

It is also a valuable aid for digestion and elimination which can ultimately help [heal](#) hemorrhoids and ulcers. Both Dr. Christopher and Dr. Schulze assert that ingesting cayenne powder will boost the potency of the other herbs and supplements you're taking.

In cayenne studies, scientists have demonstrated an 80% reduction with prostate cancers in mice and in human prostate cancer cells in cultures. The capsaicin in cayenne actually creates accelerated cancer cell apoptosis, or cellular self destruction.

Cayenne pepper contains many beneficial phytochemicals, extremely bio-

available vitamins C & E, and minerals, including the vital heart-health mineral magnesium. It cleans the blood, allowing hormonal signals to make their way unimpeded through your system and enhancing the immune system.

You can choose to avoid Big Pharma's expensive toxic "solutions" for heart and other health issues using all natural solutions like this. Inexpensive, non-toxic cayenne goes well beyond culinary applications.

Cayenne Pepper: The King of Herbs

If cayenne pepper (*Capsicum annuum*) is not the king of medicinal herbs it is certainly a prince among them.

It may have been presumptuous for me to have first coined it "king of herbs" but I feel it is just that for there is no other medicinal herb or spice that can do what cayenne can.

If you have heard about cayenne or are interested in its health benefits, you've come to the right place.

Bold to say yes, but I stand by it. This truly is the cayenne pepper health benefits informational article.

Now, numerous health sites have commissioned many articles on cayenne and its health benefits by basically rewriting and rehashing the information originally appearing in this article.

So, if you want to get the best, most undistilled information, go to the source. This article is that source. Let's talk about why it is so amazing.

Cayenne Pepper Overview

Its [health benefits](#) are many, varied, and are truly astonishing. They are beyond astonishing; its benefits are almost unbelievable, to be honest. People from all over the world have shared their stories with me and have done so in an unsolicited manner.

What about its [side effects](#)? They are limited to small inconveniences. Many from around the globe recount amazing results from using cayenne (or capsicum as it's sometimes called) for simple healing as well in the battling and elimination of challenging health problems.

Don't believe me? Check out this [cayenne pepper testimonials page](#) within this website. All of those testimonials are unsolicited and on file. Interested perhaps in some [cayenne FAQs](#)?

Cayenne Pepper "The King of Herbs"?

Cayenne powder comes from red hot chili peppers that are not only good to eat but are great for your health.

Taking it in powder form, however, is especially potent and powerful. (Some prefer in in capsule form. For an article that discusses the pros

and cons capsules and drinking it, go to this [cayenne capsules vs. cayenne tea](#) page.)

Where does it come from? The fruit or body of the peppers are dried then ground down, pulped and baked into cakes, which are then sifted to make the spice.

Cayenne's botanical classification or genus is *Capsicum* *annuum* or *Capsicum frutescens* sometimes called *Capsicum fastigiatum*, which is a synonym of *Capsicum frutescens*.

Continuing, the pepper has been used for centuries as a medicinal and culinary herb and undoubtedly most just think of them as "those hot red peppers" to be used for spicing up food or to be used primarily in cooking ethnic cuisine, but it is so much more.

(For more info on why I call it a medicinal herb instead of its proper classification as a spice, go to the [Cayenne Pepper: Herb or Spice](#) page.)



Cayenne is said to have originated within Cayenne in French Guiana and is now produced or farmed in many parts of the world. It was one of the major foods of the Hunzas who are reported by many to have extraordinarily long lifespans, although this is debatable.

It was also used quite extensively by the Aztecs and Mayans. In fact, historians assert it was a staple of the Aztec diet.

Cayenne is also revered in the alternative health community and chiefly by medicinal herbalists for its remarkable array of health benefits.

Is Cayenne Pepper Good for The Heart?

So, why is cayenne so great for your heart health? What are its great health benefits? The health benefits of *Capsicum* are far reaching and astounding. So much so that many think its benefits are exaggerated. Consider this: cayenne, through the instrumentality of its secondary metabolite capsaicin (pronounced cap-say-sin), is scientifically proven to kill prostate cancer cells, among other fantastic health benefits, and that is just the beginning as to the benefits of this humble, nondescript herb.

Much scientific research has been initiated to validate what naturopathic practitioners have known for years: It can stop heart attacks, nourish the heart with vital nutrients, remove plaque from the arteries, help rebuild flesh destroyed or harmed by frostbite, heal

hemorrhoids, re-build stomach tissue, heal stomach ulcers, fortify your overall health, and mitigate the most wrenching of diseases.

Continuing, it improves circulation, rebuilds blood cells, lowers cholesterol, emulsifies triglycerides, removes toxins from the bloodstream and improves overall heart health. It's even a great insect repellent.

As mentioned, it can also heal ulcers, which seems contradictory considering its native calidity or heat. It immediately equalizes blood pressure in your system, shrinks hemorrhoids, and heals the gall bladder too.

It can be used as a diuretic as well helping in elimination both with urine and with built-up fecal matter in the intestines. It has wonderful, scientifically-proven antifungal properties as well.



This is by no means a comprehensive list. So, why haven't you heard of it? Because of money. I'm convinced Big Pharma knows about the remarkable healing properties of medicinal herbs and spices like cayenne but they are not in the business of healing people but in making money.

According to my research, in 2008, within the U.S. alone, Big Pharma sold \$160 billion dollars of drugs -- \$160 billion!!!

So, why sell a cholesterol-reducing drug when you can just take cayenne and it will do the same while also removing plaque from your arterial walls without nasty side effects?

Needless to say, it's clearly because cholesterol drugs like Lipitor make billions of dollars for their makers. (Lipitor makes on average \$8 to \$12 billion a year for Pfizer.)

That's billions with a "b" my friends. Now you know why. I'd love to be wrong but I don't think I am.

A little while ago, I was in a local supermarket where the spice was selling for \$1.67 a pound! "This incredible medicinal spice is probably the greatest medicinal agent known to man and is readily affordable to all but many pass it by because of ignorance. How sad that almost no one knows about it," I thought.

Just the heart health linkage is enough to make this a truly remarkable medicinal herb, but its uses and benefits go far beyond that remedy.

Capsicum truly is a king among the herbal family and is one of the greatest health secrets of all time.

It is hot, yes, and tough to swallow, but that inconvenience is most tolerable when one considers that you can literally save your life and a bundle of money by taking it religiously.

The information in this article may be small but it's packed with information on the incredible health benefits of cayenne, health benefits that can be yours.

[How To Start Supplementing With Cayenne](#)

[Cayenne Pepper FAQ](#)

[Cayenne Capsules vs. Cayenne Tea](#)

[What is Cayenne Pepper](#)



Conclusion

Lastly, let me say this: Please do your own homework, research and objective thinking. Don't let anyone tell you how to think. If you are open minded, you will find some pearls of great price that will bless your health -- like cayenne pepper. Don't let prejudice and ignorance (ignorance literally means "without knowledge") prevent you from considering the therapeutic benefits of it.

I truly believe you've found one of the greatest health secrets in cayenne for I and many before me have discovered for ourselves the incredible health blessings of this humble spice.