

Capsaicin

Clearing the Pain Freeway



Capsaicin, the fiery hot stuff from peppers, has a long history as a topical pain reliever from days of old. Like other phytochemicals from plant sources, capsaicin is earning new respect in modern medicine. Capsaicin acts on substance P, a neurotransmitter that sends pain signals to the brain. By studying capsaicin's influence on substance P, researchers are learning how the body processes and responds to pain, and how to modify it.

Capsaicin appears to be one way to ease the pain by interrupting the pain pathways, especially in chronic pain conditions such as diabetic neuropathy, osteoarthritis and fibromyalgia.

Here comes the pain

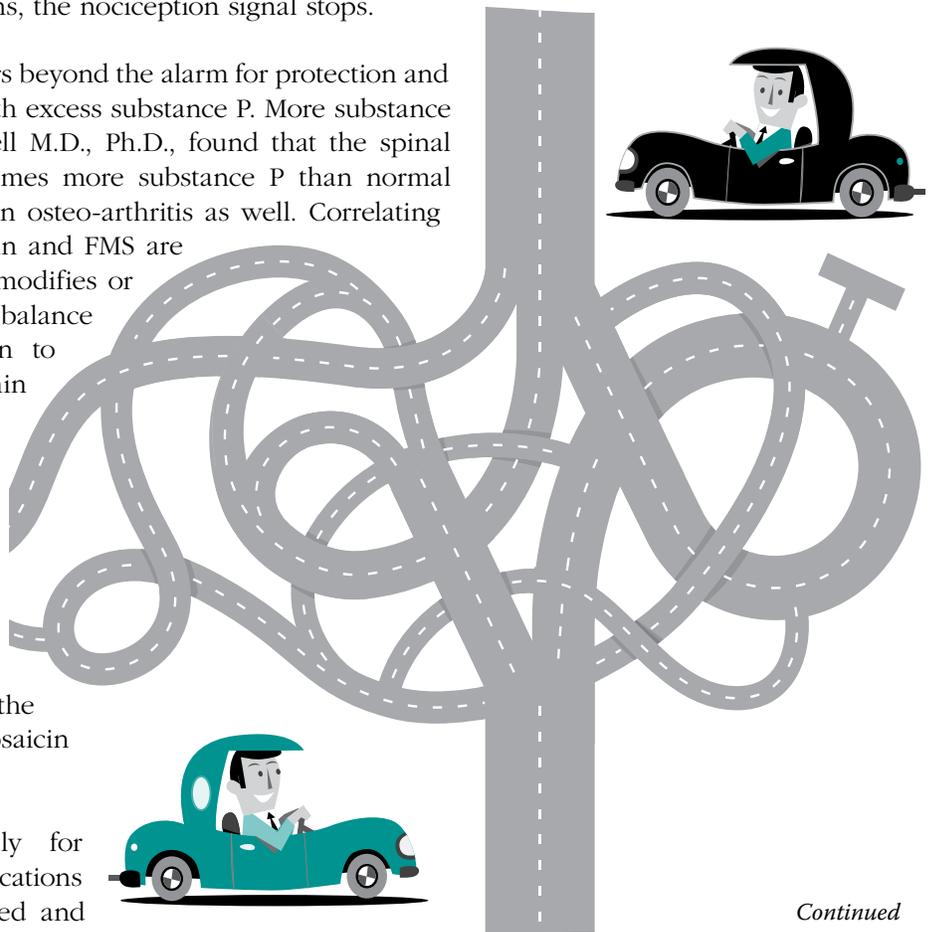
Nociception is the perception of pain. It's the body's built in alarm system to alert you of possible harm and it triggers a cascade of events. Imagine a highly complex interstate freeway. Stub your toe or burn your finger and special receptors in the skin interpret the touch as pain and promptly dispatch messengers (like cars), that race across a network (freeway) of nerves to deliver the signal to your brain. These skin receptors respond to heat (your burning finger), chemical (especially imbalances) or mechanical (stubbing your toe) stimuli. Generally speaking, short, episodic pain travels along different nerve fibers or freeways than persistent, sustained pain. Most of the time your body will heal from trauma and injury. Emergency over. In normal situations, the nociception signal stops.

In some instances, however, the pain lingers beyond the alarm for protection and becomes chronic, flooding the freeway with excess substance P. More substance P means more pain. In fact, I. Jon Russell M.D., Ph.D., found that the spinal fluid of fibromyalgia patients have 3-4 times more substance P than normal subjects. Substance P levels are elevated in osteo-arthritis as well. Correlating research finds that those with chronic pain and FMS are low in serotonin, a neurotransmitter that modifies or polices the pain. This creates an out-of-balance neurochemical scenario that allows pain to dominate the freeways without a serotonin policeman in sight!

Clearing the freeway

When capsaicin is applied to painful areas, it depletes substance P at the site. It also interferes with the nerve fibers that send the signals and with the cell's ability to make more substance P. Less substance P mean less pain. Like an ambulance on the freeway, all pain traffic stops and gives capsaicin the right of way.

Decreasing neuropathic pain, especially for diabetics, is one of the most researched applications for capsaicin. Sensory nerves are damaged and



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Capsaicin

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result in a continual firing of pain. Given the increased rise in type 2 diabetes, and the younger age at onset, capsaicin offers an answer for this irreversible pain. It helps reduce the pain of shingles and the post-herpetic nerve pain that lingers after the shingles lesions are gone. Capsaicin alleviates mild muscle pains and strains, tendonitis and bursitis. It turns down the amplified pain of fibromyalgia. Given its mode of action, capsaicin may be indicated for burning foot pain, trigeminal neuralgia, reflex sympathetic dystrophy and other neuropathic pain conditions. While oral analgesics may stop the pain faster than a speeding bullet, they may also stop the patient, with their side effects

(nausea, drowsiness, fatigue, constipation). Topical capsaicin takes a little longer to clear the congested freeways but its slow, continued use, applied locally, does not have the systemic side effects of oral agents.

Safety

As a topical, capsaicin acts only on the area of pain and not system wide, making it safe for long-term use. Although capsaicin may cause a redness or "burning" sensation on the skin, there is no actual tissue injury. This is a normal action and decreases with repeated use. Capsaicin should not be applied to open wounds or sores. Capsaicin is on the FDA *GRAS* (generally recognized as safe) List. People who are allergic to nightshades (potatoes, eggplant, tomatoes) may be sensitive to capsaicin.

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Continued

Q&A about a “HOT” Pain Reliever

What's the best way to use capsaicin?

To effectively reduce substance P, apply capsaicin 3-4 times per day. Once relief is noted, try reducing that amount. If you hurt all over, pick your worst pain spot and start there. Often pain is referred and by reducing your worst pain area, it reduces overall pain. Each bottle comes with an instructional pamphlet.

Why do you need gloves? The lotion doesn't feel hot.

During initial use, capsaicin must be applied 3-4 times per day (layered) to be effective. This layering causes a buildup of capsaicin. If applied without gloves, your hands could transfer the capsaicin to sensitive areas such as your eyes, to pets or children.

When will I notice pain relief?

It depends on how chronic your pain is. Chronic pain, FMS and ME/CFS have more substance P (The "pain" neurotransmitter) than other conditions. Some people

notice relief in days. For those with chronic pain, it may take up to 6 weeks. Minor sprains and muscle strains may notice relief in hours.

How does aloe vera help?

According to research, aloe vera allows the capsaicin to penetrate through several skin layers. Most capsaicin products are based in petroleum, which "sits" on top of the skin. With aloe vera, you also use less since it penetrates deeper and it's easy to apply.

Does MSM help control pain?

As a topical, MSM facilitates the delivery of capsaicin into the skin by maintaining the suppleness of cell walls. Supple walls are more permeable, allowing nutrients and other beneficial substances (like capsaicin) into the skin.



Capsaicin *continued*



Summary

Interestingly, capsaicin cream was the very first non-drug product my husband, David, used for his FMS pain. Research shows that capsaicin's mode of action affects the nerve fibers that cause sustained, noxious pain such as in FMS and diabetic neuropathy. If you decide to give capsaicin a try, make sure it's capsaicin (not capscium) listed under the Active Ingredients on the label. A lower percent (0.025%) will be more tolerated than a hotter, higher percent (0.075%) of capsaicin. A base of aloe vera allows the capsaicin to penetrate several layers and reduces the sensation of heat. So, next time you're in pain, call the capsaicin ambulance and clear the pain freeways!

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For more information on capsaicin's action and recommended use, request Capsaicin, Reducing Substance P for Pain Relief.

**“Those who do not
feel pain seldom think
that it is felt.”**

Dr. Samuel Johnson

Health
POINTS

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Syvilla's Story

Staying Mobile with PCF

by Syvilla F., Pennsylvania

I want to express my appreciation for Pain Control Formula™ (PCF) which I have used for longer than I can remember. I have chronic back and ankle pain from old injuries. At one time I used a cane. In 1986 when I fell and fractured my heel, I had a lot of pain for many years. Then in 1992, again I fell, this time on a wet floor outside my classroom which caused so much pain that I retired early. I had a lot of physical therapy and even spent nine weeks in a Pain Management Clinic. At some time later because of my connection to the National Fibromyalgia Association in California, I learned about To Your Health and the Pain Control Formula™. I know that I wrote to you telling you many of these same things in 2001 and I am still a faithful user.

I finally had to have hip replacement surgery in April 2008 after suffering with osteoarthritic pain for over a year. I am still experiencing some pain and use Pain Control Formula™ every morning and most evenings. It's the first thing I put on after my shower. In the beginning when I used PCF, I applied it several times a day just as the directions suggested to get my pain down. Now twice a day is my maintenance routine. Sometimes when I still have pain, I go back and forth with other topicals such as ALCiS and occasionally Aspercreme. I depend on the topical pain relievers because I am allergic to so many other pain medications taken by mouth.

I live in a retirement community in Pennsylvania and tell others there about PCF. I have shared with many friends and relatives, telling them to be patient as it takes time for PCF to be effective. If it helped me, I think it will help them with their pain as well. Although I tried other capsaicin products, I like the way TyH's cream formula goes on. It's easy to apply and spread around and does not have the “burning” some of the other products do. I remember when PCF was a lotion and I like the cream the best.

I make sure I don't run out of the Pain Control Formula™. It has kept me mobile for years. I really appreciate it and I appreciate To Your Health.

Syvilla taught Home Economics for 26 years before retiring. Her husband died in 1998 and in 1999 she moved to a retirement community about 30 miles west of Philadelphia. Syvilla has an active life; working with the Residents Council and the Fitness & Wellness Committee in her community, as well as with a local Crafters Group. Her daughter lives in San Diego and is active in the National Fibromyalgia Association; she enjoys working with her at conferences occasionally.