

## THERAPEUTIC EFFECTS OF CAPSAICIN ON PAIN MANAGEMENT

RAJATHI SAKTHIVEL<sup>1\*</sup> AND MADHURIMA DESI REDDY<sup>2</sup>

<sup>1</sup>Hindu Mission College of Nursing, Tambaram, Affiliated to the Tamil Nadu  
Dr. M.G.R. Medical University, Chennai, Tamil Nadu, India

<sup>2</sup>Department of Community Health Nursing, Shrisathyasai College of Nursing,  
Sri Balaji Vidyapeeth (DU), Chennai Campus, Tamil Nadu, India

**Published online:** 27 May 2024

**To cite this article:** SAKTHIVEL, R. & REDDY, M. D. (2024) Therapeutic effects of capsaicin on pain management, *Malaysian Journal of Pharmaceutical Sciences*, 22(1): 189–201, <https://doi.org/10.21315/mjps2024.22.1.9>

**To link to this article:** <https://doi.org/10.21315/mjps2024.22.1.9>

### ABSTRACT

Pain is an undesirable sensory experience that occurs from the noisome stimulus, it becomes a warning sign of an upcoming disease or existing disease thereby signaling immediate attention. There exists a variety of pharmacological and non-pharmacological methods to alleviate pain, with their own effects and impacts on health. The natural herb capsicum, used in most families as a spice is also found to have the therapeutic effects of for treating cardiovascular disorders, respiratory issues, gastrointestinal problems, urological disorders, cancer, diabetic peripheral neuropathy, obesity and pain reduction, especially in osteoarthritis and rheumatoid arthritis. It acts as a counter-irritant for various conditions like rheumatism, lumbago and neuralgia. It reduces pain by aiding in the depletion of substance-P and increases the activation of intracellular calcium by activating the calcium channel. The stimulation of transient receptor potential vanilloid 1 (TRPV1) causes effects like analgesia, anti-infectious, anti-carcinogenic and antioxidant. It is permissible to use capsaicin in low concentrations such as in creams, lotions, gel patches and nasal sprays. High-concentration capsaicin is available in the form of oral formulations, intradermal, subcutaneous and intravenous. Capsaicin is mostly available in topical form, in many concentrations such as 0.025%, 0.0355%, 0.075% and 0.10%. It has been permitted to use capsaicin to the maximum concentration of 8%. Capsaicin is safe to use even in pregnancy, lactation, children and adolescents but is contraindicated for children less than 2 years old as well as for people with bleeding disorders.

**Keywords:** Capsicum, Capsaicin, Pain, Substance-P, Commercial forms, Relief

---

\*Corresponding author: [rajathisakthi80@gmail.com](mailto:rajathisakthi80@gmail.com)