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The Misery of Pain and Chronic Pain

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The USA uses over 80% of the world supply of oral and injectable pain medicines. This is partly because there are so many pain patients in the USA. About 20% of all adults have arthritis. Chronic pain, sports injury pain, traumatic pain, migraine headaches and other types of pain are common. The FDA advises using oral pain medicines whenever possible, despite the fact that at least 70,000 people die from opioid overdose every year, and about 55,000 die from ulcers, heart attacks and strokes caused by aspirin, ibuprofen, naproxen and acetaminophen every year. Of course, there are black box warnings and other cautions that have been issued by the FDA about these drugs. Yet drug development continues to focus on designing safer oral opioids and NSAIDs. The dogma is that inhibition of mu receptors or cyclooxygenase in the brain and brain stem are the most powerful ways to treat pain. The problem with using oral or injectable drugs to treat pain is that the entire body is subjected to the drugs, resulting in respiratory depression, clotting issues, ulcers and other problems.

Millions of people do not use oral or injectable pain relievers. They use hot pads, ice packs or topical pain relievers [1,2]. Several effective topical pain relievers are available. These topical pain relievers are typically monoterpenoids such as cineole or menthol. Safety issues with topical pain relief are mild compared to oral and injectable drugs. Topical pain relief involves inhibiting Transient Receptor Potential cation (TRP) channels in the skin. Pain is sensed in the skin due to the abundance of TRP channels in the skin [3]. Internal organs send sensory projections to the skin so that pain in internal organs is sensed in the skin. Monoterpenoids penetrate into the skin, inhibit TRP channels, then evaporate from the skin. Very little of a topical dose is absorbed into the blood.

Most of the commercially available topical pain relievers are not powerful enough to treat broken bones and gunshot wounds. However, an effective topical pain reliever has been reported that has a variety of monoterpenoids that inhibit a broad spectrum of TRP channels and sesquiterpenes that inhibit cyclooxygenase expression in the skin [4-9]. Sensory neurons exist in non-overlapping populations that contain distinct TRP channels. Effective treatment of pain requires a broad spectrum of TRP channel inhibition. This pain reliever has been used for many years by thousands of patients with minimal safety issues.

Chronic pain is not well described in the literature. Published mechanisms focus on the brain and brain stem. These mechanisms have not resulted in cures for chronic pain. A more recent chronic pain mechanism proposes that chronic pain comes from the skin [10,11]. The skin produces pain in chronic pain due to chemokines, leukotrienes, interleukins and prostaglandins generated in the skin. Several patients have reported that their chronic pain was cured and has not returned even years later by treatment of their chronic pain with topical preparations [12,13]. These topical preparations inhibit the pain chemokine cycle that causes chronic pain. The chronic pain that has been successfully treated with these preparations includes chronic back pain, fibromyalgia, whiplash and bursitis.

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