Cherries and INFLAMMATION-INDUCED PAIN


**Tart cherry anthocyanins suppress inflammation-induced pain behavior in rat.**

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The use of **complementary and alternative medicine (CAM)** has increased in the United States and more patients are seeking CAM therapies for control of pain. The present investigation tested the efficacy of orally administered anthocyanins extracted from tart cherries on inflammation-induced pain behavior in rats. Paw withdrawal latency to radiant heat and paw withdrawal threshold to von Frey probes were measured. The first set of experiments examined the effects of tart cherry anthocyanins (400 mg/kg) on the nociceptive behaviors and edema associated with inflammation induced by intraplantar injection of 1% carrageenan. These studies also included tests of motor coordination. The second set of experiments determined if tart cherry anthocyanins (15, 85, and 400 mg/kg) dose-dependently affected the inflammation induced by intraplantar injection of 25% complete Freund's adjuvant. We found that tart cherry extracts reduce inflammation-induced thermal hyperalgesia, mechanical hyperalgesia and paw edema. The suppression of thermal hyperalgesia was dose-dependent and the efficacy of highest dose (400 mg/kg) was similar to indomethacin (5 mg/kg). The highest dose anthocyanin (400 mg/kg) had no effects on motor function. **These data suggest that tart cherry anthocyanins may have a beneficial role in the treatment of inflammatory pain.** The antihyperalgesic effects may be related to the anti-inflammatory and antioxidant properties of anthocyanins. A better understanding of the modulatory role of dietary constituents and phytonutrients on pain will offer further therapeutic options for treating patients with persistent and chronic pain conditions.

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**Dietary constituents as novel therapies for pain.**

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The use of complementary and alternative medicine has dramatically increased in the United States. The effects of select dietary constituents in animal models and clinical pain states are reviewed. Specifically, the antinociceptive and analgesic properties of soybeans, sucrose, and tart cherries are discussed. **The potential actions of dietary constituents as antiinflammatory and antioxidant agents are presented.**

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