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Ginger (Zingiber officinale) reduces muscle pain caused by eccentric exercise.

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Abstract

Ginger has been shown to exert anti-inflammatory effects in rodents, but its effect on human muscle pain is uncertain. Heat treatment of ginger has been suggested to enhance its hypoalgesic effects. The purpose of this study was to examine the effects of 11 days of raw (study 1) and heat-treated (study 2) ginger supplementation on muscle pain. Study 1 and 2 were identical double-blind, placebo controlled, randomized experiments with 34 and 40 volunteers, respectively. Participants consumed 2 grams of either raw (study 1) or heated (study 2) ginger or placebo for 11 consecutive days. Participants performed 18 eccentric actions of the elbow flexors to induce pain and inflammation. Pain intensity, perceived effort, plasma prostaglandin E(2), arm volume, range-of-motion and isometric strength were assessed prior to and for 3 days after exercise. Results Raw (25%, -.78 SD, P = .041) and heat-treated (23%, -.57 SD, P = .049) ginger resulted in similar pain reductions 24 hours after eccentric exercise compared to placebo. Smaller effects were noted between both types of ginger and placebo on other measures. Daily supplementation with ginger reduced muscle pain caused by eccentric exercise, and this effect was not enhanced by heat treating the ginger.

PERSPECTIVE: This study demonstrates that daily consumption of raw and heat-treated ginger resulted in moderate-to-large reductions in muscle pain following exercise-induced muscle injury. Our findings agree with those showing hypoalgesic effects of ginger in osteoarthritis patients and further demonstrate ginger's effectiveness as a pain reliever.

Comment in

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