

The effect and safety of highly standardized Ginger (*Zingiber officinale*) and Echinacea (*Echinacea angustifolia*) extract supplementation on inflammation and chronic pain in NSAIDs poor responders. A pilot study in subjects with knee arthrosis.

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The study aimed to evaluate the effect of *Zingiber officinale* and *Echinacea angustifolia* extract supplementation (25 mg of ginger and 5 mg of Echinacea) for 30 days on inflammation and chronic pain in knee osteoarthritis (OA). Consecutive nonsteroidal anti-inflammatory drugs (NSAIDs) poor responders with chronic inflammation and pain due to knee arthrosis were assessed (15 subjects, age: 67.2 ± 7.9 , body mass index: 30.6 ± 7.1 , men/women: 2/13). The primary endpoint was to determine pain improvement from baseline to Day 30 by Tegner Lysholm Knee Scoring. The secondary endpoints were the assessment of Visual Analog Scale for Pain, health-related quality of life, by the ShortForm36 (SF-36),

anthropometric parameters, hydration. After supplementation, a significant improvement of 12.27 points was observed for Lysholm scale score ($p < 0.05$), SF-36 ($p < 0.05$), and a decrease in -0.52 cm in knee circumference (left) ($p < 0.01$). This pilot study provides feasibility and safety data for the use of highly standardised ginger and Echinacea extract supplementation in people with knee OA.

KEYWORDS:

Chronic pain; Echinacea angustifolia; Zingiber officinale; arthritis; dietary supplement; ginger; inflammation; knee osteoarthritis