

Turmeric Extract Improves Osteoarthritis Knee Pain, Study Says

By Enrico de Lazaro, *Sci News*



In a new study led by the University of Tasmania, an aqueous-based extract of turmeric (*Curcuma longa*) improved knee pain versus placebo in patients with knee osteoarthritis with local inflammation over 12 weeks; the effect on pain was only moderate; however, it was achieved without any effect on knee structural measures assessed by magnetic resonance imaging (MRI).

Knee osteoarthritis is a chronic joint disease characterized by joint pain and functional loss, leading to impaired quality of life and a tremendous socioeconomic burden.

Despite its large disease burden, no approved disease-modifying drugs currently are available to treat osteoarthritis.

The current pharmacologic therapies, such as acetaminophen and nonsteroidal anti-inflammatory drugs, do not slow structural progression and are associated with gastrointestinal, renal, and cardiovascular complications. These medications have a low to moderate effect on pain, resulting in patient dissatisfaction, which hastens joint replacement

An ideal treatment approach for osteoarthritis would be to use a safe agent with several mechanisms of action.

Turmeric extract has been used in both Ayurvedic and Traditional Chinese Medicine to treat arthritis. Curcumin, the principal component in the extract, has anti-inflammatory, analgesic, antioxidant, anticancerous, and wound-healing properties.

“We aimed to determine the efficacy of turmeric extract on knee symptoms and effusion-synovitis volume in older adults with symptomatic knee osteoarthritis and ultrasonography-defined effusion-synovitis,” said senior author Dr. Benny Eathakkattu Antony from the University of Tasmania and colleagues.

“We hypothesized that turmeric extract would decrease knee pain and knee joint effusion-synovitis volume over 12 weeks in patients with an inflammatory phenotype of knee osteoarthritis.”

The researchers randomly assigned 70 participants with symptomatic knee osteoarthritis and ultrasound evidence of swelling inside the knee joint to receive either two capsules per day of turmeric or a matched placebo for 12 weeks to determine whether turmeric reduced knee symptoms and joint swelling.

Changes were assessed by standardized questionnaire and MRI, respectively, over 12 weeks.

The scientists also looked for changes in cartilage composition, pain medication usage, quality of life, physical performance measures, and adverse events.

After 12 weeks, they found that patients taking the turmeric supplements reported less pain than those in the placebo group with no adverse events.

“Participants in the turmeric group consumed fewer pain medications compared to the participants in the placebo group,” said co-author Professor Graeme Jones, a rheumatologist at the University of Tasmania.

“However, there was no difference in the structural aspects of knee osteoarthritis between the groups.”

“Despite the positive findings, due to the modest effect of the turmeric, small sample size of the study, short-duration of follow-up and the single research center, we suggest that multicenter trials with larger sample sizes and longer duration of follow-up are needed to assess the clinical significance of their findings,” the authors said.

The findings were published in the journal *Annals of Internal Medicine*.

Zhiqiang Wang *et al.* Effectiveness of *Curcuma longa* Extract for the Treatment of Symptoms and Effusion-Synovitis of Knee Osteoarthritis. A Randomized Trial. *Annals of Internal Medicine*, published online September 15, 2020; doi: 10.7326/M20-0990