

## Long-Term NSAID Use Associated With Worsening Symptoms, Structural Changes in Knee OA

**L**ong-term use of nonsteroidal anti-inflammatory drugs (NSAIDs) is associated with worsening symptoms and structural changes among patients with knee osteoarthritis (OA), according to study results presented at the American College of Rheumatology (ACR) 2023 Annual Meeting, held from November 10 to 15, in San Diego, California.

Researchers conducted a meta-analysis of cohort studies to determine the long-term effects of NSAIDs on knee OA symptoms and structural changes.

Eligible participants were those who had or were at risk for knee OA.

Patient data were extracted from 3 independent cohort studies – the Osteoarthritis Initiative (OAI), the Multicenter Osteoarthritis (MOST), and the Cohort Hip and Cohort Knee (CHECK).

Data were recorded at baseline and follow-up. Annual follow-ups in the OAI and CHECK studies were conducted over a period of 4 and 5 years, respectively; in the MOST study, follow-ups were performed every 2.5 years over a period of 5 years.

Participants receiving treatment with NSAIDs at baseline and all follow-up visits were considered long-term users, and those not receiving NSAIDs were considered nonusers. Data were adjusted for factors including age, sex, race, body mass index, and comorbidities.

Study outcomes included worsening of symptoms, such as pain, disability, and stiffness, and structural changes and incidence of total knee replacement (TKR). The Western Ontario and McMaster Universities Arthritis Index



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scores and Kellgren/Lawrence grades, respectively, were used to assess the outcomes.

A total of 4197 patients (435 long-term and 3762 nonusers of NSAIDs), with both knees, were included in the study.

Compared with nonusers, long-term NSAID users had a significantly increased risk for worsening pain (odds ratio [OR], 2.04; 95% CI, 1.66-2.49), disability (OR, 2.21; 95% CI, 1.74-2.80), and stiffness (OR, 1.58; 95% CI, 1.29-1.93).

Compared with nonusers, long-term NSAID users also had a significantly increased risk for structural changes (OR, 1.43; 95% CI, 1.15-1.77) and incidence of TKR (OR, 3.13; 95% CI, 2.08-4.70).

Overall, long-term NSAID use may not result in favorable outcomes in terms of symptoms and structural changes for patients with knee OA.

Study authors concluded, “[H]ealth care providers should weigh the benefits and risks of long-term NSAID use in patients with [knee] OA and consider alternative strategies to improve patient outcomes in the long term.”

*Disclosure: Both study authors declared affiliations with biotech, pharmaceutical, and/or device companies. Please see the original reference for a full list of the authors’ disclosures.*

### REFERENCE

Salis Z, et al. Association of long-term use of non-steroidal anti-inflammatory drugs (NSAIDs) with worsening symptoms and structural changes of knee osteoarthritis: an individual patient data meta-analysis of cohort studies. Abstract presented at: ACR 2023; November 10-15, 2023; San Diego, CA. Abstract #1196.