

Steroid injections do not hasten the need for knee replacement

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New research shows that corticosteroid injections for knee OA treatment do not hasten a patient's progression to a total knee replacement when compared with hyaluronic acid injections. Details of this study was presented at ACR Convergence, the American College of Rheumatology's annual meeting (ABSTRACT #1652).

Osteoarthritis (OA) is a common joint disease that most often affects middle age to older people. It is commonly referred to as "wear and tear" of the joints, but it is now known that OA is a disease of the entire joint, involving the cartilage, joint lining, ligaments, and bone. OA is characterized by breakdown of the cartilage, bony changes of the joints, deterioration of tendons and ligaments, and various degrees of inflammation of the joint lining, or synovium.

The researchers wanted to know if [corticosteroid injections](#) for [knee](#) OA sped up the progression of the disease, leading to a need for total knee replacement surgery sooner. Recent research suggests that steroid injections have a threefold-higher risk of progression for people with knee OA. However, many patients in this and other studies of corticosteroid therapy have more advanced knee arthritis, which is a risk factor for [disease progression](#) in and of itself. To clarify the potential risks of steroid injections for knee OA progression, this new study compared steroid injections to hyaluronic acid injections, which is not associated with cartilage loss.

"The treatment options we have for knee OA are limited. Weight loss can reduce pain from knee OA and delay progression of disease, but this is very difficult for most patients to achieve," says the study's co-author, Justin J. Bucci, MD, assistant professor of medicine at Boston University School of Medicine. "Pain medications cannot be used safely by many patients with OA because of co-existing heart or kidney disease. Steroid injections are considered a safe and effective intervention for relieving pain from knee OA. Recent studies have raised the possibility that steroid injections are associated with progression of OA. Clinicians and patients need to know if steroid injections are making knee OA worse so they can make informed decisions about their treatment."

The researchers used two large cohort studies of people with knee OA who received either corticosteroid or hyaluronic acid injections. They

reviewed the rates of radiographic progression, or joint damage seen on X-rays, and total knee replacement surgery. Patients in the first cohort had medical visits every 12 months, and those in the second cohort had visits every 30 months. Their exams included knee X-rays and questions about their steroid or hyaluronic acid injections over the previous six months. Knee OA progression was measured using two standard scores Kellen and Lawrence grades (KL) and medial joint space narrowing, both of which are radiographic measures

When they analyzed X-ray progression, the researchers excluded anyone with a baseline KL 4 score and anyone who had received either corticosteroid or hyaluronic acid injections in the past. They compared X-rays from each patient's medical visits before their first [injection](#) to those taken after their last injection. They assigned KL and joint space narrowing scores to each X-ray at medical visits where total knee replacement surgery was prescribed.

In all, the researchers analyzed 792 knees, including 647 treated with corticosteroid injections and 145 with hyaluronic acid injections. They found that the rate of total knee replacement surgery was greater among patients with a single exam where they reported hyaluronic acid injection compared to those with a single exam where they reported corticosteroid injection. They did not find a difference in those patients reporting injections at multiple exams. Further analysis showed similar rates of X-ray progression for both injection treatments at either single or multiple medical exams.

Corticosteroid injections are not associated with higher risk of two key signs of worsening knee osteoarthritis, either radiographic progression or progression to a total knee replacement, compared to hyaluronic acid injections, the study's findings show.

"We did not find any association between steroid injections and

worsening knee OA in our study. Patients and clinicians should see this study and feel reassured that these injections are not causing progression of OA or earlier [total knee replacement](#)," says Dr. Bucci. His group's future research will focus on magnetic resonance imaging (MRI) of knees undergoing steroid injection treatment for OA. "MRI provides a more detailed look at structures within the knee compared to X-rays and these images were obtained as part of the cohorts we studied. This information will add to the findings from our current study, and give patients and clinicians a better understanding of what happens to knees treated with [steroid injections](#)."

More information: [acrabstracts.org/abstract/prog ... -hyaluronic-acid-ha/](https://acrabstracts.org/abstract/prog...-hyaluronic-acid-ha/)

Provided by American College of Rheumatology

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