

Charlesworth J, Fitzpatrick J, Perera NKP & Orchard J.  
Osteoarthritis-a systematic review of long-term safety implications for osteoarthritis of the knee.  
*BMC Musculoskeletal Disorder*. 2019 April 9; 20 (1):151. doi: 10.1186/s12891-019-2525-0.

Lay summary prepared by Ashley Morgan, HBKin, MSc (PT), PhD candidate, School of Rehabilitation Sciences, McMaster University

## **Looking at the long-term side effects of common treatments for Knee Osteoarthritis**

Knee Osteoarthritis (OA) is a common condition where the knee's cartilage (a material that covers the end of bones) breaks down. This can lead to pain, swelling and stiffness. Treatment can help with some of these problems but there is no cure. Side effects from treatments can continue for one year or longer. To learn more about the long-lasting side effects for different treatments, information was collected from 34 good-quality studies to answer the question:

### **What are the long-term side effects of different treatments?**

#### **What was found:**

**Exercise and Losing Weight:** Several studies found that both can help with some problems caused by OA (like pain and difficulty doing activities) without any harmful long-term effects.

#### **Drugs and Supplements:**

Glucosamine or chondroitin sulphate are common nutritional supplements that may have some benefits but might also cause mild stomach problems (based on a few studies). Paracetamol/Acetaminophen (Tylenol™) One study found that it helped with symptoms but may cause minor liver, kidney, and stomach problems. The risks increase with higher amounts.

Non-Steroidal Anti-Inflammatory (NSAIDs) are a group of drugs that include Ibuprofen (Advil™), Naproxen (Aleve™) and Celecoxib (Celebrex™). They may help with symptoms (1 study) but are very hard on the stomach (2 studies).

**Injections into the Knee Joint:** After any injection there can be pain and/or swelling in the area for a short period of time.

Corticosteroids (cortisone) may or may not help. One study found that people who had cortisone injections showed worse damage on magnetic resonance imaging (MRI; a detailed picture of a structure in the body) after two years of injections compared to a group that did not have the injections.

Hyaluronic acid is a thick fluid (trade names include SynVisc™ and Euflexxa™). Many studies found it helped symptoms and a few studies did not find it helped. Pain and swelling at the injection location were the most common side effects.

Platelet Rich Plasma (PRP) treatment involves injecting part of your own blood into the knee. Pain and swelling at injection location were the most common side effects. Two studies found PRP may help without any long-term side effects.

**Surgery:** All surgery has a risk of problems like infection and bleeding.

One study showed that a group of people who had a piece of torn meniscus (a piece of thick rubbery tissue that helps cushion the knee) removed were more likely to need a knee replacement later compared to a group that did not have the surgery

A knee replacement (replacing damaged cartilage and bone with metal and plastic) can help people who have bad OA but there are risks of more serious medical problems (like a blood clot). These serious medical problems are not common but are more likely to happen than without surgery.

### **Why is this important?**

People will live with knee OA for the rest of their lives.

Treatments that can help without causing any new problems should be the first choice. This information can help decide what treatments to try. Exercise and losing weight have very little risk and can help with problems like pain and doing daily activities.



EXERCISE



WEIGHT LOSS



PRP



HYALURONIC ACID



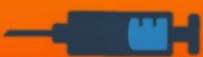
GLUCOSAMINE & CHONDROITIN



TYLENOL



ALEVE



CORTISONE



KNEE SURGERY

HIGHER ← RISK → LOWER