

## A comprehensive approach to osteoarthritis by our experts at AXiO

Led by an experienced interdisciplinary team in elite sports medicine, AXiO Physiotherapy and Sports Medicine Clinic emphasizes health education and knowledge transfer to its clients, helping them achieve their health and fitness goals, whether at work, in sports, artistic performance, or everyday life.



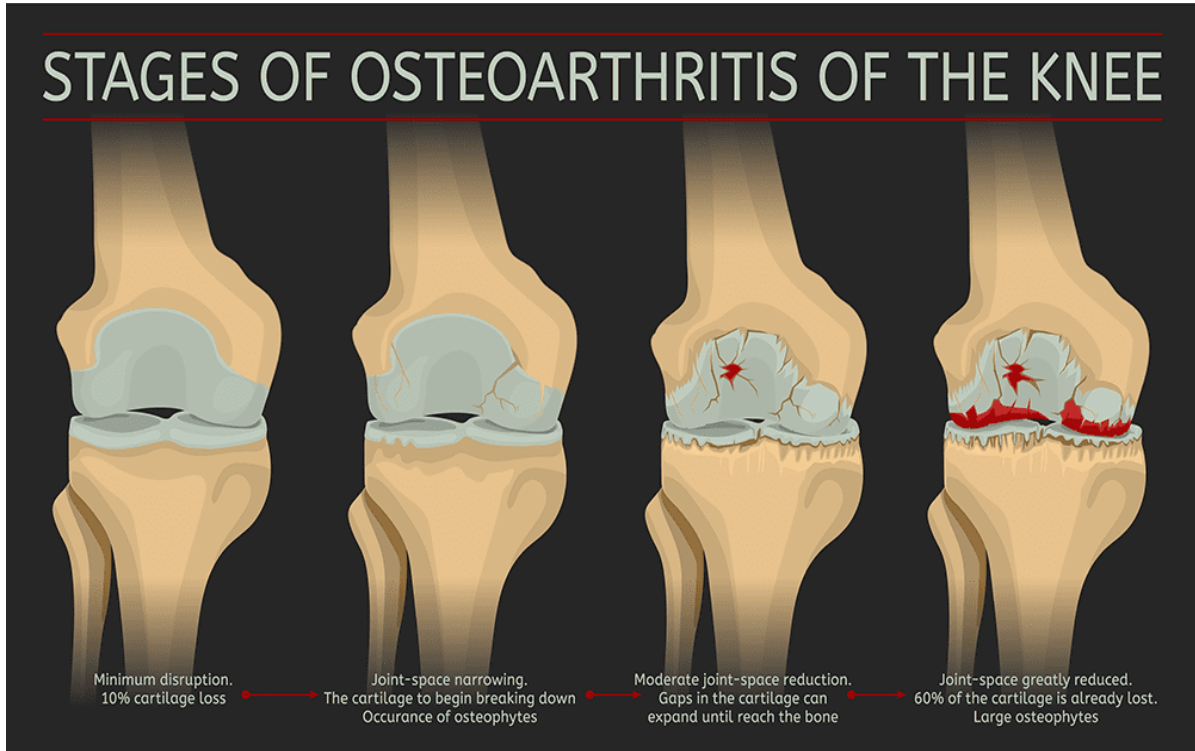
### **Do you suffer from osteoarthritis?**

Our clients who regularly engage in sports and physical activity sometimes suffer from joint pain and stiffness caused by osteoarthritis.

### **What is osteoarthritis?**

Osteoarthritis is a degenerative disease that affects the joints, most commonly the knees, hips, hands, feet, shoulders, and spine. Although associated with aging, osteoarthritis is primarily the result of the body's inability to repair joint tissues damaged by injury or excess weight. Chronic inflammation causes the degradation of joint cartilage and the underlying bone. Therefore, osteoarthritis is a frequent cause of joint pain and stiffness, leading to a loss of mobility in individuals who were previously very physically active, both at work and in sports.

Although the process of osteoarthritis cannot be reversed, some treatments (such as exercise and maintaining a healthy weight) can relieve symptoms and limit its progression. Treatments aim to reduce pain and stiffness, control inflammation and swelling, and improve functional capacity.



### First-Line Treatments

- Analgesic pharmacological treatment :** Taking analgesics (acetaminophen) and non-steroidal anti-inflammatory drugs (ibuprofen) can be useful to reduce pain associated with osteoarthritis.
- Physiotherapy:** Our physiotherapists are experts in creating tailored programs to help clients improve their functional capacity reduced by osteoarthritis, specifically by increasing their strength, flexibility, range of motion, coordination, and balance. Additionally, using treatment modalities such as manual therapy, ice, heat, electrotherapy, and ultrasound help reduce the pain caused by osteoarthritis.

Our physiotherapists can also analyze clients' activities and movements in daily life at home, work, and during leisure, offering methods, tools, and equipment (canes, orthotics, splints) to protect their joints and maintain their autonomy.



- c) **Massage therapy:** Our certified massage therapists help clients suffering from osteoarthritis reduce anxiety through manual treatments that relieve muscle tension, reduce muscle fatigue, and improve blood circulation to alleviate pain.

### Second-Line Treatments

If osteoarthritis symptoms persist despite consistent and appropriate duration of first-line treatments, intra-articular injections may be considered. The doctors at AXiO Health Group stand out for their expertise in sports medicine and are well-equipped to guide clients through their intra-articular injection options.

Traditionally, intra-articular injections were performed using anatomical landmarks. However, in recent years, ultrasound has proven useful for injections into deeper anatomical structures, particularly for shoulder, hip, and ankle joints. Ultrasound may be less relevant for knee injections and more superficial anatomical structures.

Doctors at AXiO Health Group are proficient in performing injections using anatomical landmarks and ultrasound guidance.

- a) **Corticosteroid Injections (cortisone):** According to the Canadian Arthroscopy Association's position statement, intra-articular corticosteroid injections provide quick but moderate pain relief and short-term joint function improvement (about 6 weeks) in osteoarthritis patients. These injections are commonly used to treat joint swelling and are very inexpensive.

It is important to note that studies have shown that multiple repeated intra-articular injections in the same joint increase the risk of cartilage damage.

- b) **Hyaluronic Acid Injections (viscosupplementation):** According to the Canadian Arthroscopy Association's position statement, high-molecular-weight hyaluronic acid

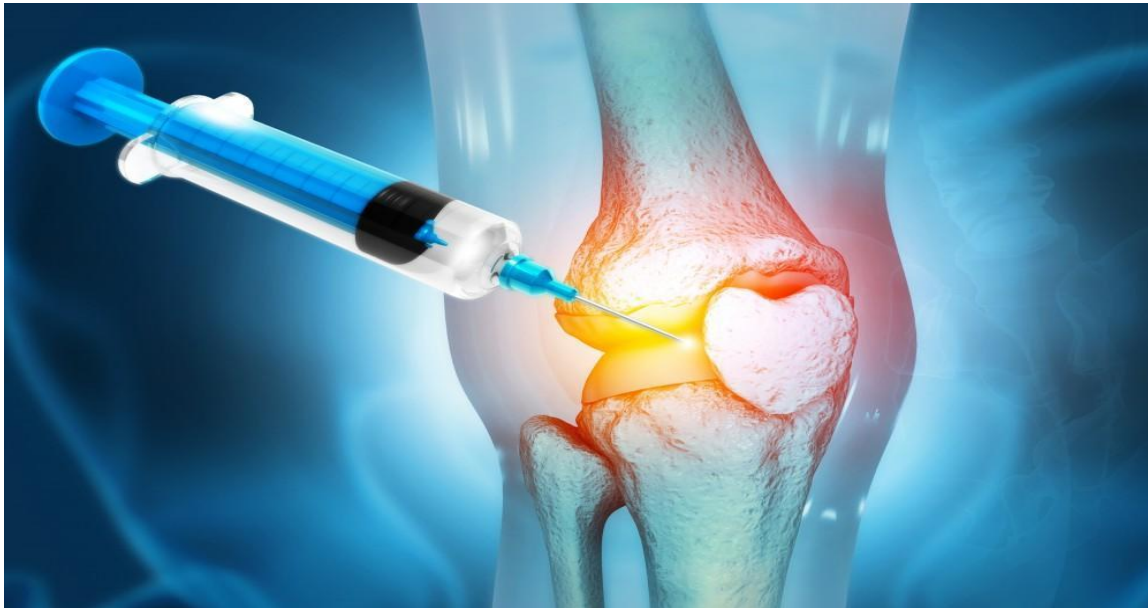
injections provide moderate long-lasting pain relief (more than 3 months) and improve joint function. These injections may be considered for patients with mild to moderate osteoarthritis. However, these injections are expensive.

Some studies have shown that combining intra-articular hyaluronic acid injections with corticosteroids may provide faster and longer-lasting relief than either injection used alone.

- c) Platelet-Rich Plasma (PRP):** Platelet-rich plasma (PRP) is a cell therapy that involves drawing a small amount of your blood, centrifuging the sample to separate the platelets from the red blood cells. The plasma and concentrated platelets are then injected into the osteoarthritic joint to stimulate healing and regeneration. Platelets contain proteins, cytokines, and growth factors that help regulate the inflammatory process and stimulate cell proliferation.

According to the Canadian Arthroscopy Association's position statement, PRP injections provide moderate long-lasting pain relief (more than 6 months) and improved joint function. These injections may be considered for patients with mild to moderate osteoarthritis. However, PRP injections are more costly.

It is important to note that due to conflicting studies on the efficacy of PRP for osteoarthritis treatment and the variety of PRP preparation methods, further high-quality clinical research is necessary to clarify the efficacy of PRP injections.



***If you suffer from osteoarthritis and are considering intra-articular injections to reduce pain and improve joint function, we recommend discussing evidence-based research, benefits, potential side effects, and the cost-effectiveness of these treatments with our sports medicine doctors.***

### Third-Line Treatments

Surgical interventions are recommended for patients with osteoarthritis who have not responded to conservative treatments. The goals of surgical treatments are to reduce or eliminate pain, minimize disability, and improve quality of life.

- a) Arthroscopic Debridement:** According to the Canadian Arthroscopy Association's position statement, arthroscopic debridement (or joint lavage) would not have a beneficial effect on the natural course of osteoarthritis and is not indicated as a primary treatment for osteoarthritis.

However, judicious use of arthroscopic surgery may be appropriate to manage a symptomatic concomitant pathology, such as a meniscal tear (knee), labral tear (shoulder or hip), or free osteo-cartilaginous fragments in affected joints.



- b) Joint Replacement:** Joint replacement (total arthroplasty) is the treatment of choice for patients with severe symptomatic osteoarthritis who have not responded to conservative treatments and have significant impairment in their quality of life due to osteoarthritis.

Other surgical procedures may be considered for certain patients, such as uni-compartmental arthroplasty (knee), osteotomies (knee and hip), and resurfacing (hip).

***The doctors at AXiO Sports Medicine Clinic are distinguished by their advanced expertise in sports medicine and physical activity. They are well-equipped to guide you through treatment decisions concerning osteoarthritis and refer you to their orthopedic colleagues if you are considering surgical solutions.***