



# Understanding Knee Osteoarthritis

## Anatomy

The knee is comprised of three bones, the femur (thigh bone), the tibia (shin bone), and the patella (kneecap). The ends of these bones are covered in a cartilage that allows them to glide smoothly over each other. Additionally, the menisci cushion these bones and prevent painful bone on bone rubbing. Over time, the menisci and cartilage can wear down. This can lead to bone on bone contact, which results in further wear, pain and bone spurs.



## Symptoms

Patients with osteoarthritis (OA) typically go through a progression of symptoms. Initially, the knee becomes stiff and painful with certain movements. Over time, swelling and painful grinding develops. The severity of these symptoms fluctuates and may continue to worsen. Patients with severe OA may have difficulty with any of the following: standing or walking, getting out of a chair, sitting for an extended length of time and achieving a full range of motion.

## Diagnosis

A thorough physical exam and x-rays are crucial to diagnosing knee OA. X-rays allow your physician to see the bony anatomy of the knee and determine the extent of your OA.

## Treatment

The severity of your OA will determine the most appropriate course of action. For early stage OA, physical therapy and anti-inflammatories can be effective treatment. In more advanced cases, the following can be effective at relieving your symptoms:

- **Activity Modification:** Patients with arthritis typically have to undergo some lifestyle modifications. If specific activities make your symptoms worse then avoiding those activities can provide relief.

## CLINIC LOCATIONS

Columbia Heights  
Eagan  
Forest Lake  
Downtown St. Paul - Gallery  
Downtown St. Paul - Ritchie  
Hastings  
Maplewood  
Vadnais Heights  
Woodbury - Allina  
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## CONTACT INFORMATION

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- **Unloader Braces:** Your physician may prescribe an unloader brace. This brace acts to apply a force on the knee in such a way that the pressure on the worn area of the joint is relieved. You will need to wear this brace when participating in such activities as walking, hiking, etc. For some, this brace provides significant symptomatic relief and allows them to enjoy physical activity again.
- **Steroid Injections:** A steroid injection allows your doctor to place anti-inflammatory medication directly inside the joint. This can result in dramatic and potentially long-term relief of pain and swelling. If this does provide relief, you can safely have repeat injections done every three to four months without any harmful effects.
- **Joint Fluid Therapy:** The only joint that the Food and Drug Administration has approved for this type of treatment is the knee. This medication is injected into the knee in three doses typically spaced one week apart. The substance injected is hyaluronic acid, which helps to reduce friction between rough cartilage while cushioning the joint. This treatment can be done every six to nine months if your symptoms warrant it. Further information regarding this medication can be provided to you upon your request.

Finally, in the case of severe OA, surgery may be the best treatment option.

- **Arthroscopy:** In this scenario, the physician will use a miniature video camera and tools to remove any loose cartilage. The result is a smooth joint surface free of loose tissue and minimal internal derangement that can cause irritation. This can provide significant relief and allow the joint to flow freely through its range of motion.
- **Total Joint Replacement:** In advanced cases of arthritis you may be a candidate for a total knee replacement. The techniques and prosthetics used in this surgery have made significant advances over the past decade. Patients who undergo a total joint replacement are living longer and getting more use out their new joint than ever before.

Together, you and your doctor will decide on the most appropriate treatment.

For additional educational materials regarding this topic please visit our website, [www.summitortho.com](http://www.summitortho.com) and click on the "Patient Education" quick link at the bottom of the page.

Ice is a convenient and inexpensive treatment option for knee pain. Placing a bag of ice directly on the knee for twenty minutes prevents swelling and inflammation from occurring inside the knee.



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