

## Managing Knee Osteoarthritis Pain: Medications, Injections, and Surgery

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### ABOUT THE STUDY

Knee Osteoarthritis (OA) is a common type of arthritis that affects millions of people worldwide. It is a chronic degenerative joint disease that occurs when the protective cartilage on the ends of bones wears down over time. The knee joint is particularly vulnerable to OA due to its weight-bearing role in the body and its complex structure.

### Causes of knee osteoarthritis

There are several risk factors that can contribute to the development of knee OA. These include:

**Age:** The risk of knee OA increases with age, as the cartilage in the knee joint begins to wear down over time.

**Genetics:** Certain genetic factors can increase the risk of developing knee OA, such as having a family history of the disease.

**Obesity:** Being overweight or obese leads to additional stress on the knee joint, increasing the risk of OA.

**Previous knee injury:** A previous injury to the knee joint, such as a fracture or ligament tear, can increase the risk of developing OA later in life.

**Repetitive stress:** Jobs or activities that require repetitive knee movements, such as kneeling or squatting, can increase the risk of OA.

### Symptoms of knee osteoarthritis

The symptoms of knee OA can vary depending on the severity of the disease. Common symptoms include:

**Pain:** Pain in the knee joint, particularly when walking, climbing stairs, or bending down, is a common symptom of knee OA.

**Stiffness:** The knee joint may feel stiff, especially in the morning or after sitting for a long time.

**Swelling:** The knee joint may become swollen, especially after physical activity.

**Reduced range of motion:** The knee joint may feel like it has a limited range of motion, making it difficult to move the knee freely.

### Diagnosis of knee osteoarthritis

Diagnosing knee OA usually involves a combination of a physical exam, medical history, and imaging tests. During the physical exam, the doctor will check for signs of pain, swelling, and reduced range of motion in the knee joint. They may also ask about any previous injuries to the knee joint.

Imaging tests, such as X-rays, MRI scans, or CT scans, can help the doctor see the extent of damage to the knee joint. X-rays can show changes in the bone structure of the knee joint, such as the development of bone spurs. MRI and CT scans can provide more detailed images of the soft tissues in the knee joint, such as the cartilage and ligaments.

### Treatment of knee osteoarthritis

The treatment of knee OA is aimed at relieving pain, reducing inflammation, and improving joint function. There are several treatment options available, including:

**Lifestyle changes:** Making lifestyle changes, such as losing weight, avoiding repetitive knee movements, and doing low-impact exercise, can help reduce the stress on the knee joint and improve joint function.

**Physical therapy:** Physical therapy can help improve joint flexibility, strength, and range of motion. It can also help reduce pain and inflammation in the knee joint.

**Medications:** Over-the-counter pain relievers, such as acetaminophen or Nonsteroidal Anti-Inflammatory Drugs (NSAIDs), can help relieve pain and reduce inflammation in the knee joint.

**Injections:** Corticosteroid injections can help reduce inflammation and relieve pain in the knee joint. Hyaluronic acid injections can help improve joint lubrication and reduce pain.

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**Surgery:** In severe cases of knee OA, surgery may be necessary. Total knee replacement surgery involves replacing the damaged knee joint with an artificial joint.

### Prevention of knee osteoarthritis

While it may not be possible to completely prevent knee OA, there are several steps that can be taken to reduce the risk of developing the disease. These include:

**Maintaining a healthy weight:** Maintaining a healthy weight can help reduce the stress on the knee joint, reducing the risk of OA.

**Staying active:** Regular exercise can help improve joint function, reduce stiffness, and increase range of motion in the knee joint. Low-impact exercises, such as walking, swimming, or cycling, are particularly beneficial for the knee joint.

**Avoiding repetitive stress:** Avoiding activities that place repetitive stress on the knee joint, such as kneeling or squatting, can help reduce the risk of developing OA.

**Protecting the knee joint:** Wearing protective gear, such as knee pads, when engaging in activities that place stress on the knee joint can help reduce the risk of injury.

**Managing injuries promptly:** Promptly treating injuries to the knee joint, such as fractures or ligament tears, can help reduce the risk of developing OA later in life.

Knee OA is a common and debilitating condition that affects millions of people worldwide. While the disease cannot be cured, there are several treatment options available that can help relieve pain, reduce inflammation, and improve joint function.