

# Knee Osteoarthritis (OA)



Exploring the what, why and how with STRIVE Sport & Exercise Medicine



## What is Knee Osteoarthritis?

Knee osteoarthritis (OA) is a common condition that occurs in both males and females, often over the age of 45. Within the knee joint, there is cartilage that lines the surface of our bones which helps to ensure the knee joint is sliding smoothly throughout its range of motion. Normal age-related changes can impact the structural integrity of the joint. As we age our cartilage can thin and become less effective at allowing the joint to move fluidly. For some, this can result in pain, stiffness and loss of function.



## Why did I get this?

It is difficult to isolate one explanation for the development of knee OA. Age-related loss of cartilage is something that naturally occurs in all individuals. However, for some the progression of arthritis can be more severe and result in pain and loss of function. There are many factors that can contribute to the development of symptomatic OA including: obesity, family history, congenital defects, traumatic or repetitive stress injuries to the knee, metabolic disorders, and abnormal biomechanics or alignment of the lower limb.



## How can I get better?

There is currently no cure for OA, but there are many steps that can be taken to help slow progression. First, a well-balanced exercise program targeting strength, mobility and mechanics of the lower limb has the potential to provide significant reduction in pain and improvement in overall function. Performing regular exercise can help prevent the need for more extreme interventions like total knee replacement. Lifestyle modifications such as weight loss can help reduce the load being placed on the knee joint. Smoking cessation also has a positive impact on joint health.

## 4 Exercises for you

**Exercise:** Bridge  
**Goal:** Strength



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1. Lie on your back with your knees bent.
  2. Engage your core. Maintain that activation while continuing to breathe normally.
  3. Contract your buttocks while lifting your buttocks off the ground until your trunk is aligned with your legs.
  4. Slowly return to the initial position and repeat.
  5. To increase the challenge, you can place a band around your thighs. Make sure you keep the band tight by not allowing your knees fall in.
- Parameters:** 3 sets of 10 repetitions, Perform once per day, every day.

**Exercise:** Sit to Stand  
**Goal:** Strength



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1. Place a chair against a wall or a sturdy object.
  2. Make sure to put the brakes on if your walker has this function.
  3. In a controlled manner lower yourself to a seated position in the chair. If needed, you can hold onto the walker for support.
  4. Push through your legs to lift yourself up out of the chair. Keep your knees in line with your second toes.
- Parameters:** 3 sets of 10 repetitions. Perform once per day, every day.

**Exercise:** Heel Slides  
**Goal:** Mobility



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1. Lie on your back with your legs straight.
  2. Put a towel under the heel of the affected leg.
  3. Slide your heel towards your buttock to bend the knee as far as you can. Maintain the position for 3 seconds.
  4. Straighten your leg slowly and repeat.
- Parameters:** 3 sets of 10 repetitions. Perform once per day, every day.