Patient Education Series

Knee Osteoarthritis (OA)

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

1 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.

2 Why did I get this?

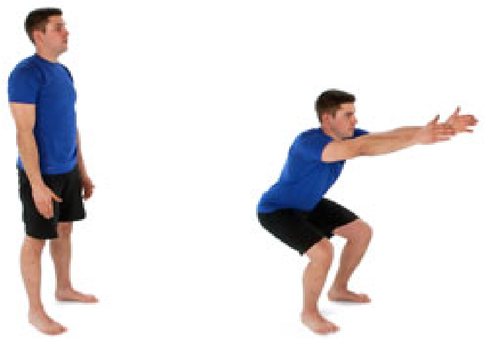
It is difficult to isolate one explanation for the development of knee OA. Age-related loss of cartilage is something that naturally occurs in all individuals. However, for some the progression of arthritis can be more severe and result in pain and loss of function. There are many factors that can contribute 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.

3 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: Squat
Goal: Strength



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1. Stand with your feet slightly more than shoulder-width apart.
2. Engage your core. Maintain this activation while continuing to breathe normally.
3. Bend your knees into the squat until reaching 90 degrees of knee bend. It should feel like you are sitting back into a chair.
4. Press through your heels to come back up, dropping your arms to your sides as you stand. Keep your knees in line with your second toes.
5. To increase difficulty, you can hold a small weight in each hand down by your side for the duration of the movement.

Parameters: 3 sets of 10 repetitions. Perform once per day, every day.

Exercise: Side Plank
Goal: Stability

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1. Lie on your side with the knees bent to 90 degrees and the legs in line with the body.
2. Make sure the elbow is directly under the shoulder as you support your upper body on your elbow.
3. Engage your core. Maintain that activation while continuing to breathe normally.
4. Lift your pelvis so your shoulder, hip and knee make a straight line and maintain this position.
5. To make this more challenging, you can support yourself using your feet instead of your knees.

Parameters: Hold for 30 seconds on each side, repeat three times. Perform once per day, every day.

Exercise: Elevated Bridge
Goal: Strength

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1. Place a chair against a wall or a sturdy object.
2. Lay on your back with your hips and knees bent at 90 degrees. Place your heels on the seat of the chair.
3. Engage your core. Maintain this activation while continuing to breathe normally.
4. Squeeze the buttocks and press your hips up into a bridge position. Your knees, hips and shoulders should form a straight line.
5. Slowly lower to the starting position and repeat.

Parameters: 3 sets of 10 repetitions. Perform once per day, every day.

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