



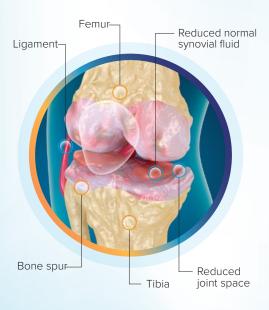
## What leads to OA knee pain?

A healthy knee contains synovial fluid, a viscous liquid that is responsible for lubricating the joint and absorbing shocks. Synovial fluid also has anabolic anti-inflammatory and analgesic effects.

Hyaluronic acid is a major component of normal synovial fluid and contributes to the fluid's viscoelastic properties.

Changes in the synovial fluid and degeneration of joint structures may lead to OA knee pain. Pain from OA of the knee may be worse during weight-bearing activities, particularly when climbing stairs or bending. For some people, pain may be present even at rest.

# OA knee pain is caused by changes in synovial fluid and joint structures



PATIENTS MAY EXPERIENCE DIFFERENT LEVELS OF KNEE PAIN

## How can Cingal™ provide relief from OA knee pain?

Cingal<sup>™</sup> is the first and only single-injection treatment that quickly relieves your OA knee pain while providing sustained pain reduction. It is used for patients who do not get adequate pain relief from simple pain relievers like acetaminophen or from exercise and physical therapy.

Cingal™ combines the benefits of a trusted anti-inflammatory with Monovisc® to relieve OA knee pain. The anti-inflammatory component offers fast pain relief generally beginning 24 hours after administration and the hyaluran in Monovisc® offers effective OA pain relief for up to 6 months. Cingal™ was generally well tolerated; no serious adverse events were reported.



### How is Cingal™ administered?

Cingal™ is administered by your doctor as a single intra-articular injection.

## Can exercise help my OA knee pain?

Arthritis could be a perfect excuse not to exercise, but in reality, an exercise program developed and supervised by a professional who is specialized in patients with OA knee pain could help decrease pain while improving your flexibility and fitness level.

For people with OA, three types of exercises are recommended:

- » range of motion exercises (also known as flexibility exercises)
- » endurance or aerobic exercises
- » strengthening exercises

Each plays a role in maintaining flexibility and improving movement and function.

#### Low-impact activities

Exercises such as biking, swimming and water aerobics are easy on your knees.

- Exercising in water takes weight off your painful joints. Inquire about classes for people with arthritis at your local community and hospital wellness centres, gyms and pools.
- Losing weight by being active also reduces pressure on your joints.

To safely participate in activities such as golf, which involves movements that may hurt your joints, speak to your doctor or physical therapist.

### 30 minutes of exercise a day is an ideal goal

- Start slowly, about 10 minutes a day. If you are pain free, gradually increase the frequency and intensity until you reach your goal.
- It is normal to have mild muscle soreness. Speak to your doctor before using over-the-counter pain relievers such as acetaminophen, ibuprofen, or naproxen to ease muscle pain. Ice can also help. Mention any joint pain to your doctor.

It is recommended that you add simple exercises to your routine, specifically exercises that will help strengthen your quadriceps, hamstrings and glutes – the muscles that help your knees function.

VISIT **KNEEPAINRELIEF.CA** FOR EXAMPLES OF EXERCISES AND OTHER TIPS TO HELP RELIEVE YOUR OA KNEE PAIN.

### Treatment options for OA knee pain

There are several things you can do to help reduce knee pain due to OA.

#### Lifestyle changes

- » Practicing low-impact exercises (e.g., walking, biking, swimming) to strengthen your muscles
- » Resting when you experience any pain or swelling in your knee
- » Applying heat or ice to reduce knee pain
- » Losing a bit of weight, if you are overweight, to alleviate some of the stress on your knees

#### Medications

Over-the-counter painkillers like acetaminophen can help reduce pain. Your doctor might also recommend ibuprofen or topical medications to soothe aching knee joints. If your condition escalates, non-steroidal anti-inflammatory drugs (NSAIDs) such as aspirin may be prescribed to relieve the pain and inflammation.

#### Viscosupplementation

Viscosupplementation, such as Cingal™, Monovisc® or Orthovisc®, is the injection of a clear gel-like substance containing hyaluronic acid. A single injection of Cingal™ and Monovisc® or three injections of Orthovisc® can help alleviate OA knee pain for up to 6 months. In addition, the corticosteroid found in Cingal™ can relieve pain rapidly. Hyaluronic acid is a naturally occurring substance found in the synovial fluid of the knee joint. The injection of hyaluronic acid into the joint is thought to lubricate the cartilage (much like oil lubricates an engine), thereby reducing friction and pain.

#### **Corticosteroid injections**

The injection of a corticosteroid, such as triamcinolone hexacetonide which is present in Cingal\*\*, may be used to relieve pain from OA of the knee by reducing swelling of the joint. Relief is often felt quickly following an injection and can last from a few days to a couple months, depending on individuals. Most injections typically take 24–48 hours to take full effect.

### Combination of viscosupplementation and corticosteroid injection

A corticosteroid and viscosupplementation combination treatment like Cingal™ is a single intra-articular injection that provides the quick pain relief of a corticosteroid with the long-term pain relief of a viscosupplement (a clear gel-like substance containing hyaluronic acid). Cingal™, the one and only combination treatment, offers the best of both worlds

#### Surgery

Knee replacement surgery is a last resort option for patients with OA pain that cannot be relieved by the above-mentioned options. The decision to perform surgery depends on many factors, including pain tolerance, disability and the risks and benefits of surgery.



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### CINGAL





Cingal™ is indicated for the treatment of pain in OA of the knee in patients who have failed to respond adequately to conservative non-pharmacologic therapy and to simple analgesics (e.g., acetaminophen). Cingal™ includes an ancillary steroid to provide additional short-term pain relief.

Monovisc®, a viscosupplement, is administered by your doctor as a single intra-articular injection. Monovisc® is indicated in the treatment of pain in OA of the knee in patients who have failed to respond adequately to conservative non-pharmacologic therapy and to simple analgesics e.g., acetaminophen.

Orthovisc® is another viscosupplement option. It is administered as three intra-articular injections over the course of three visits. Orthovisc® is indicated for the symptomatic treatment of OA of the knee.

#### For more information:

Cingal", Monovisc® and Orthovisc® may not be suitable for everyone. Talk to your doctor if you have questions regarding these products, or for more information on pain associated with OA of the knee.

To obtain further information on Cingal™, Monovisc® and Orthovisc®, please contact the Medical Information Department at 1-888-550-6060 or send an email to medinfo@pendopharm.com.

### Knee pain checklist

Please fill out this checklist and discuss it with your health care professional.

Never  Monthly  Weekly  Daily  Always	
During the last week, how much pain did I experience during the following activities?	
Twisting/pivoting on your knee  None  Mild  Moderate  Severe  Extreme	At night while in bed  None  Mild  Moderate  Severe  Extreme
Straightening knee fully  None  Mild  Moderate  Severe  Extreme	Sitting or lying  None  Mild  Moderate  Severe  Extreme
Bending knee fully  None  Mild  Moderate  Severe  Extreme	Walking on even surfaces None Mild Moderate Severe Extreme
Going up or down stairs  None  Mild  Moderate  Severe  Extreme	Standing upright  None  Mild  Moderate  Severe  Extreme
I have already tried some treatments to help with my knee pain.  Yes  No	
I would like to discuss the following points with my doctor:	



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CINGAL



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