

Relief for Your Osteoarthritis Knee Pain



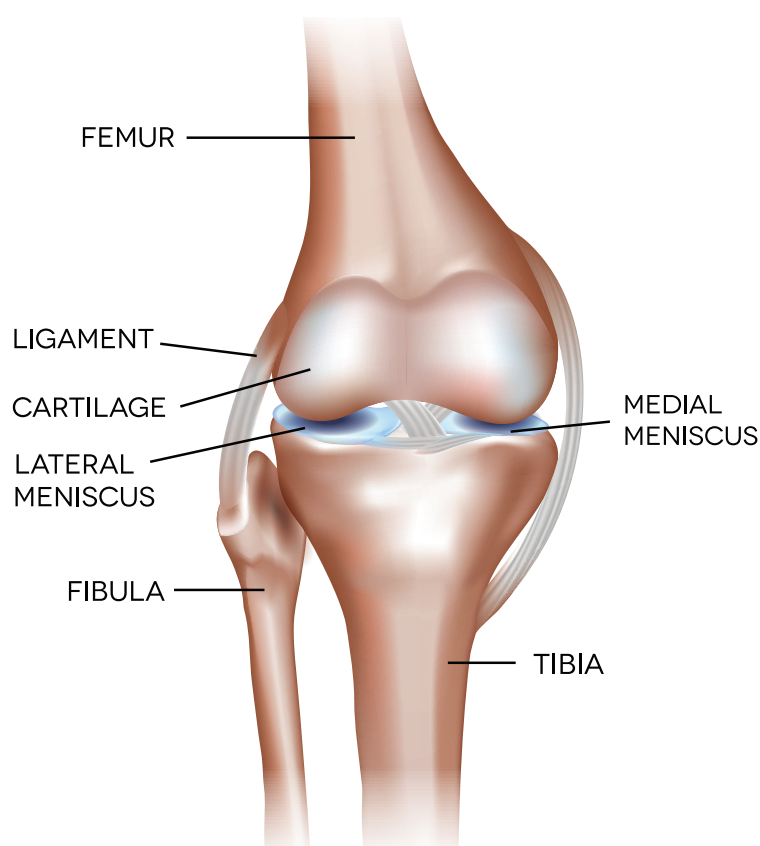
**AN EDUCATIONAL TOOL TO HELP PATIENTS
BETTER UNDERSTAND OSTEOARTHRITIS**

What Is Osteoarthritis?

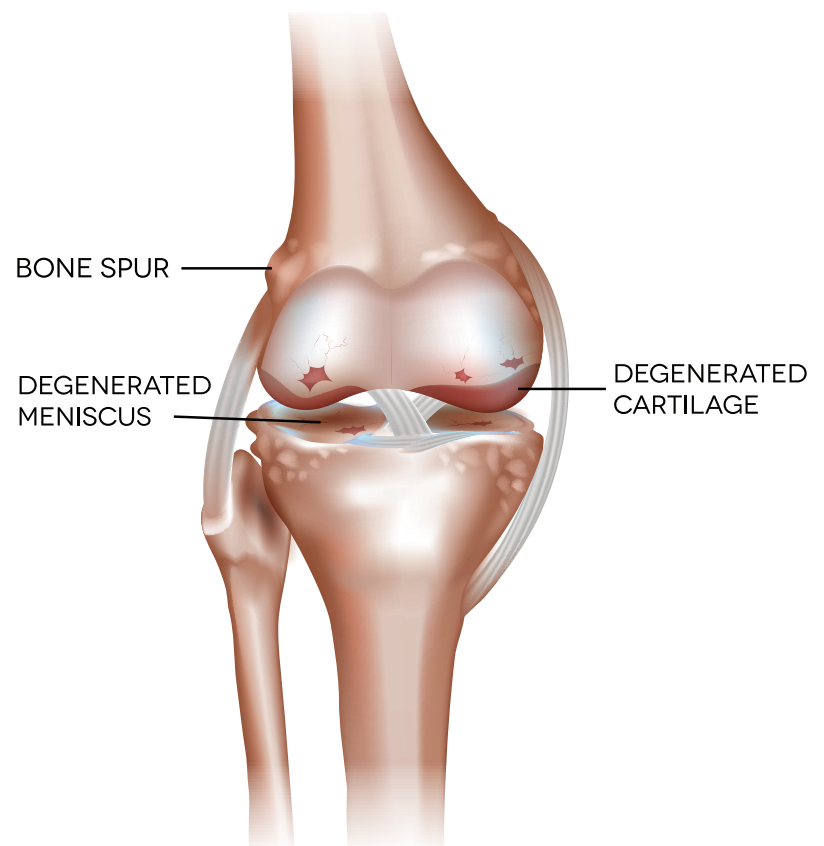
OSTEOARTHRITIS

Osteoarthritis (OA) of the knee is a progressive, non-inflammatory degenerative joint disease characterized by the breakdown of the joint's cartilage. OA is the most common form of chronic arthritis, and is often a result of aging, a joint injury, repeated joint stress, a joint malformation, or a genetic defect in joint cartilage.

NORMAL HEALTHY KNEE JOINT



OSTEOARTHRITIC KNEE JOINT



Normal Healthy knee joint

Healthy cartilage allows bones to glide over one another and absorbs energy from the shock of physical movement.

Osteoarthritic knee joint

The surface layer of cartilage breaks down and wears away. Bone under the cartilage rubs together, causing pain, swelling, and loss of motion of the joint. Over time, the knee may lose its normal shape. Small deposits of bone, called bone spurs, may grow on the edges of the knee joint. These can break off and float inside the joint space, causing even more pain and damage.

The MONOVISC® Solution

THE SINGLE-INJECTION HYALURONIC ACID TREATMENT FOR KNEE OSTEOARTHRITIS

MONOVISC® is a single-injection hyaluronic acid (HA) treatment approved for the treatment of pain caused by osteoarthritis of the knee.

How MONOVISC works

MONOVISC restores essential properties absent from the synovial fluid of an arthritic knee joint. With one simple injection directly into the joint space, MONOVISC lubricates, cushions and protects the knee, bringing pain relief that lasts 6 months.

MONOVISC single-injection benefits

- » Pain relief within 1 week of injection
- » Pain relief for 6 months
- » Increases mobility
- » Decreases office visits compared to multi-injection products
- » Reduces the risk or difficulty associated with multiple injections

Safe natural source

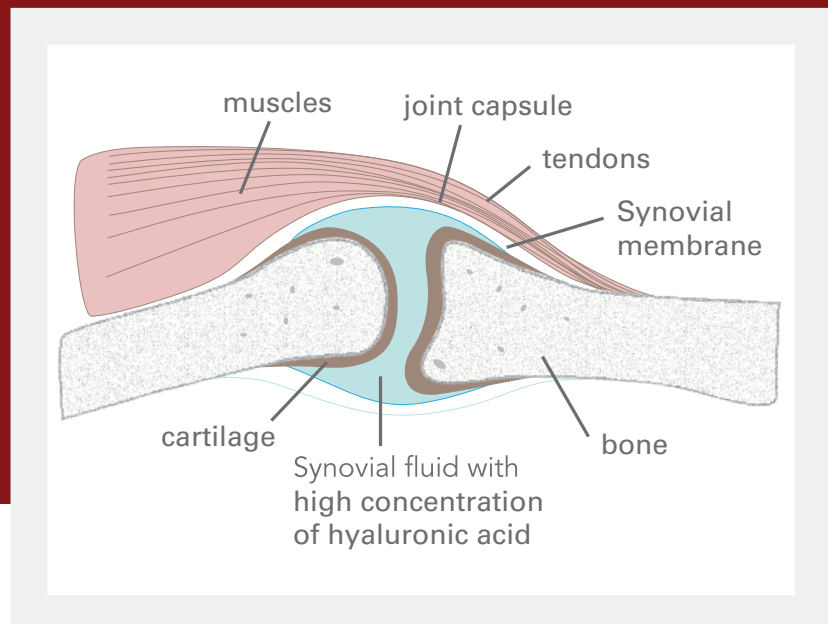
MONOVISC is made from a highly purified, non-animal, natural substance called sodium hyaluronate, also known as hyaluronic acid (HA), which has been used in medicine for over 25 years.

Discuss Monovisc with your doctor

You and your doctor can decide if MONOVISC is right for you. Ask for more information about the benefits of this pure and simple way to relieve osteoarthritis pain and enhance physical function.

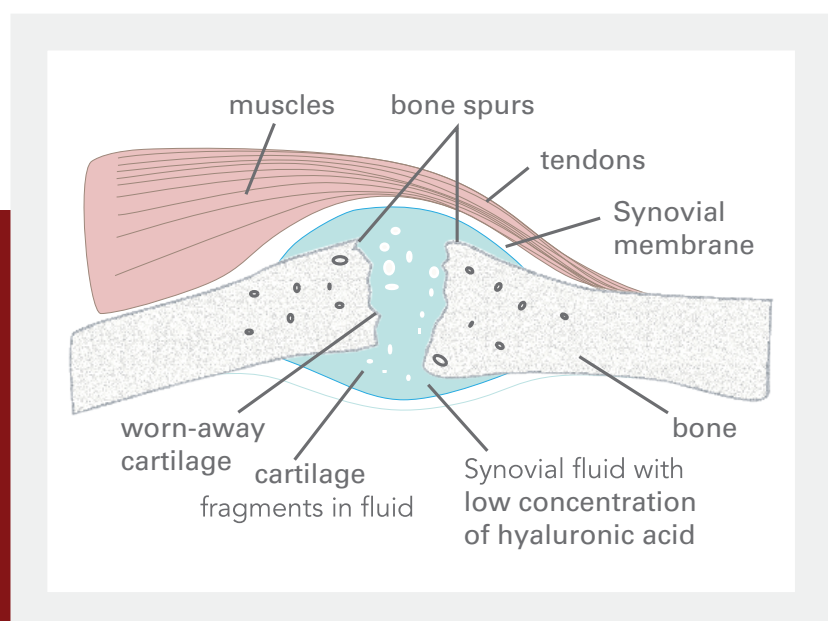
Knee Osteoarthritis

A HEALTHY KNEE



In a healthy knee, the ends of bones are covered with smooth cartilage and protected by a joint capsule filled with synovial fluid. Hyaluronic acid (HA) is naturally found in high concentrations in the synovial fluid and helps lubricate and cushion the knee, allowing the bones to glide smoothly against each other, and absorbing the shock and friction from physical movement.

A KNEE WITH SEVERE OSTEOARTHRITIS



With osteoarthritis, the natural hyaluronic acid breaks down leaving lower concentrations of HA in the synovial fluid surrounding the knee.² The synovial fluid becomes less effective at cushioning, lubricating, and protecting the knee.^{2,3} As a result, the cartilage covering the bones begins to deteriorate, and the unprotected bones rub together, causing pain, stiffness and decreased mobility.³

2. Brandt K., Block J., Michalski J., Moreland L., Caldwell J., Lavin P. Efficacy and safety of intra-articular sodium hyaluronate in knee osteoarthritis. *Clinical Orthopaedics and Related Research* 2001;(385): 130-143. 3. Hangody L., Szody R., et al. Intraarticular injection of a cross-linked sodium hyaluronate combined with triamcinolone hexacetonide (Cingal) to provide symptomatic relief of osteoarthritis of the knee: a randomized; double-blind; placebo-controlled multicenter clinical trial. *Cartilage*. 2017;doi: 10.1177/1947603517703732.

Osteoarthritis Treatment

TREATMENT APPROACHES TO OSTEOARTHRITIS

- » **Exercise** - to keep strong and limber, improve cardiovascular fitness, extend your knees' range of motion, and reduce your weight
- » **Weight control** - can reduce stress on the knee, limit further injury, and increase mobility
- » **Rest and relief from stress on knee** - know when to stop or slow down to prevent pain caused by overexertion
- » **Nondrug pain relief techniques** - including massage therapy, physical therapy, acupuncture and other alternative treatments
- » **Medications to control pain** - to eliminate or reduce pain and to improve function
- » **MONOVISC®** is a single-injection hyaluronic acid treatment that significantly reduces knee pain for 6 months, improves physical function and protects the surface of articular cartilage^{3,4}. MONOVISC can be administered by your physician.
- » **Surgery** - to remove bone spurs and cartilage, reposition bones or perform a total knee replacement



Goals of Osteoarthritis Treatment Options

- » to control pain
- » to improve physical function
- » to maintain normal body weight
- » to achieve a healthy lifestyle

4. Masuko K., M. Murata, K. Yudoh, T. Kato, H. Nakamura. Anti-inflammatory effects of hyaluronan in arthritis therapy: Not just for viscosity. Int J Gen Med. 2009; 2: 77–81.



Indications

MONOVISC® is indicated as a viscoelastic supplement or a replacement for synovial fluid in human knee joints. MONOVISC is well suited for treatment of the symptoms of human knee joint dysfunctions such as osteoarthritis. The actions of MONOVISC are lubrication and mechanical support.

Side effects

Most common side effects are injection-site pain, burning, swelling or redness.

Contraindications

MONOVISC is composed of cross-linked sodium hyaluronate and may contain trace amounts of gram positive bacterial proteins. The following pre-existing conditions may constitute relative or absolute contraindications to the use of MONOVISC:

- » Known sensitivity to any of the materials contained in MONOVISC
- » Pre-existing infections of the skin region of the intended injection site
- » Known infection of the index joint
- » Known systemic bleeding disorders



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