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Meet Bruny Surin, Canadian Olympic gold medalist, world champion, and Team Canada's Chef de Mission for Paris 2024.

In 2013, four-time Olympian Bruny Surin first experienced unusually severe joint pain in his knee. Tests showed he had osteoarthritis of the knee, the result of years of intense training as a sprinter and long jumper.

His doctor recommended Synvisc-One® to help reduce his pain. After his first treatment, Bruny experienced pain relief for a little over six months. He was able to enjoy his usual activities, like walking, long bike rides, training at the gym, swimming, and travel.

Learn more at synvisc.ca

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Important Considerations

SYNVISC® (hylan G-F 20) is an intra-articular injection used to treat pain associated with osteoarthritis of the knee, hip, ankle and shoulder. SYNVISIC® contains small amounts of avian protein and should not be used in patients with related hypersensitivities. Adverse events involving the injected joint: transient pain and/or swelling and/or effusion in the injected joint may occur after intra-articular injections of SYNVISIC®. Cases of acute inflammation, characterized by joint pain, swelling, effusion and sometimes joint warmth and/or stiffness, have been reported following an intra-articular injection of SYNVISIC®. Hypersensitivity reactions including anaphylactic reaction, anaphylactoid reaction, anaphylactic shock and angioedema have been reported. The post-marketing experience has identified the following systemic events to occur rarely with SYNVISIC® administration: rash, hives, itching, fever, nausea, headache, dizziness, chills, muscle cramps, paresthesia, peripheral edema, malaise, respiratory difficulties, flushing, and facial swelling. If venous or lymphatic stasis is present in the relevant limb, SYNVISIC® should not be injected into the joint. SYNVISIC® should not be used in infected or severely inflamed joints or in patients having skin diseases or infections in the area of the injection site. SYNVISIC® should not be injected intravascularly, extra-articularly, or into the synovial tissues and capsule. Do not concomitantly use disinfectants containing quaternary ammonium salts for skin preparation because hyaluronan can precipitate in their presence. Some cases of skin necrosis have been reported after intra-articular use of hyaluronic acid. Patients should be instructed to contact their treating physician if signs of skin disorder (such as change of colour or open sores) appear.⁴

Synvisc-One® (hylan G-F 20) is an intra-articular injection used to treat pain associated with osteoarthritis of the knee. Synvisc-One® contains small amounts of avian protein and should not be used in patients with related hypersensitivities. Adverse events involving the injected knee: transient pain and/or swelling and/or effusion in the injected knee may occur after intra-articular injections of Synvisc-One®. Cases of acute inflammation, characterized by joint pain, swelling, effusion and sometimes joint warmth and/or stiffness, have been reported following an intra-articular injection of Synvisc-One®. Hypersensitivity reactions including anaphylactic reaction, anaphylactoid reaction, anaphylactic shock and angioedema have been reported. The post-marketing experience has identified the following systemic events to occur rarely with SYNVISIC® administration: rash, hives, itching, fever, nausea, headache, dizziness, chills, muscle cramps, paresthesia, peripheral edema, malaise, respiratory difficulties, flushing, and facial swelling. If venous or lymphatic stasis is present, Synvisc-One® should not be injected into the knee. Synvisc-One® should not be used in infected or severely inflamed knees or in patients having skin diseases or infections in the area of the injection site. Synvisc-One® should not be injected intravascularly, extra-articularly, or into the synovial tissues and capsule. Do not concomitantly use disinfectants containing quaternary ammonium salts for skin preparation because hyaluronan can precipitate in their presence. Some cases of skin necrosis have been reported after intra-articular use of hyaluronic acid. Patients should be instructed to contact their treating physician if signs of skin disorder (such as change of colour or open sores) appear.⁵

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Have osteoarthritis-related pain? Get to know your pain treatment options

Osteoarthritis affects each person differently. For some people, it is a relatively mild condition that does not affect daily activities, while for others it may cause significant pain and disability.¹

Treatment may involve steps you can take on your own under the guidance of a healthcare professional, including becoming educated about osteoarthritis and ways that you can manage symptoms, such as osteoarthritis-related pain, on your own.²



Efficacy. Evidence. Experience.



SYNVISC® and Synvisc-One® are the most widely used viscosupplements across Canada³

SYNVISC® (hylan G-F 20) is an intra-articular injection used to treat pain associated with osteoarthritis of the knee, hip, ankle and shoulder.⁴
Synvisc-One® (hylan G-F 20) is an intra-articular injection used to treat pain associated with osteoarthritis of the knee.⁵

Want more information?
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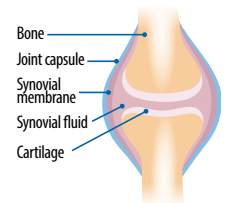


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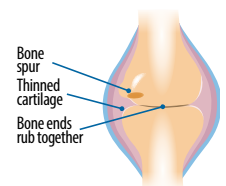
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Osteoarthritis is a progressive disease of the whole joint⁶

A healthy joint has cartilage that covers and protects the ends of bones^{6,7} and synovial fluid that reduces friction and wear and tear of the synovial joint.⁷



Normal Knee Joint⁸



Knee Joint with Osteoarthritis⁸

- **Cartilage** is a smooth, protective tissue that covers the ends of bones to reduce friction during joint movement.⁹
- **Synovial fluid** acts as a lubricating and shock absorbing layer.⁷
- Synovial fluid contains **high molar mass (high molecular weight) hyaluronan** which gives it the viscosity to function as a lubricant.⁷
- Other areas of a joint include the synovium (joint lining), soft tissues (including tendons and ligaments), and menisci (in the knee).¹

- Osteoarthritis occurs when the cartilage that cushions the ends of bones in the joints gradually deteriorates. Eventually, as the cartilage wears down completely, bone will rub on bone.¹⁰ Osteoarthritis affects the whole joint, causing changes in the bone, deterioration of the connective tissues that hold the joint together and attach muscle to bone, and inflammation of the joint lining.¹⁰
- Symptoms can usually be managed, although the damage to joints cannot be reversed.¹⁰

What causes osteoarthritis?

It is not clear what triggers or starts the breakdown of the tissues in a joint.¹ However, certain risk factors may increase your risk of osteoarthritis, including but not limited to older age, female gender, genetic predisposition, previous joint injury, obesity (extra body weight), and certain metabolic diseases.¹⁰

The joints most commonly affected by osteoarthritis include the **knee, hip, shoulder, hands, back**, and others.¹¹ Symptoms of osteoarthritis may come and go, but the intensity of pain can increase over time.¹¹

- Joint pain (the intensity of pain can increase over time, as OA is a progressive disease)¹¹
- Joint stiffness after not moving it for a while (such as when you wake in the morning)¹¹
- Joint swelling¹¹
- Joint dysfunction (due to pain or reduced movement)¹¹
- Joint crepitus (grinding sensation or creaking sound when the joint moves)¹¹

Did you know?

Weather and climate can have a significant effect on arthritis and painful joints.¹² Although the connection between weather and joint pain is not well understood, some research has suggested a correlation between pain and relative humidity, air pressure, wind speed, cold weather conditions, and seasonal fluctuations.¹²

Pay attention to your personal osteoarthritis experience to better understand how weather patterns may affect you.

Is it osteoarthritis?

If you experience joint pain, swelling, or stiffness, or if you have difficulty moving a joint or doing daily activities, make an appointment with your doctor if your symptoms last three or more days, or if you experience several episodes of joint symptoms within a month.¹³ To help your doctor better understand your symptoms, it is important to communicate details, including how severe your pain is (for example, mild pain, severe pain, or the worst pain possible), and which joints are hurting.¹⁴ Also describe how your pain impacts your quality of life, including your physical activity, sleep, mental health, relationships, and work life.¹⁴

Diagnosing osteoarthritis

There is no single test used to diagnose osteoarthritis.¹⁵

Some of the ways your doctor may diagnose osteoarthritis and rule out other conditions, include:¹⁶

- Physical exam to check the affected joint for swelling, redness and flexibility¹⁶
- Joint fluid analysis to test for inflammation and to rule out other causes of joint pain¹⁶
- X-ray to help determine cartilage loss¹⁶
 - For hips and knee joints: weight bearing X-rays provide the actual joint space with good observer accuracy in mild to moderate knee osteoarthritis¹⁷
- Magnetic resonance imaging (MRI) isn't commonly needed to diagnose osteoarthritis, but it may help provide more information in complex cases¹⁶

Which healthcare professionals support patients with osteoarthritis?

There are different types of healthcare professionals who treat and support osteoarthritis patients, depending on each person's unique therapeutic needs. Some of these include:¹⁸

- Orthopedic surgeon¹⁸
- Sport and exercise medicine specialist¹⁹
- Physiatrist (physical rehabilitation specialist)²⁰
- Rheumatologist¹⁸
- Family physician¹⁸
- Physical and occupational therapists¹⁸
- Orthotic and bracing specialists (for supportive devices)¹⁸

As up to 87% of adults with osteoarthritis are estimated to have at least **one other significant chronic condition**, you may see other healthcare specialists as well.²¹

The most common conditions to co-exist with osteoarthritis are cardiovascular disease, diabetes mellitus (Type II diabetes), and hypertension (high blood pressure).²¹

How is pain associated with osteoarthritis treated?

There are treatments that may help reduce pain associated with osteoarthritis.¹⁶

Self-management

An important step is to become educated about osteoarthritis and what you can do to manage symptoms on your own. Your doctor may or may not recommend developing a self-management plan under their guidance, which may include therapeutic exercise, physical activity, and weight management (if appropriate).²

Did you know?

It is a common misperception that painful joints require rest. On the contrary, not enough movement can cause muscles to weaken and worsen pain and stiffness.² Physical activity strengthens the muscles and connective tissues around your joints, helping to support joints that have been damaged by osteoarthritis.² It also helps reduce pain and fatigue, and improve mobility.² Light to moderate physical activity that doesn't place stress on affected joints may provide protection by strengthening muscles around them, increasing blood flow to the joint, and helping to promote joint regeneration.² Ask your doctor about seeing a physiotherapist or occupational therapist to help you with an exercise plan or assistive devices.²

Medicinal therapies

Medications that may help relieve osteoarthritis pain are available in topical (creams or rubs) and oral (pills) forms.²²

Over-the-counter nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen and naproxen sodium, taken at the recommended doses, may help relieve osteoarthritis pain. Stronger NSAIDs are available by prescription.¹⁶

Speak to your doctor about what medications are most appropriate for you.²²

Always follow your doctor's instructions when taking medications.

Cortisone injections

Injections of a corticosteroid directly into the joint may help relieve pain for a few weeks. This medication can worsen joint damage over time, which limits use to generally 3-4 injections per year.¹⁶

Viscosupplements

Viscosupplementation is a procedure where a gel-like material called hyaluronate or hyaluronic acid is injected into a joint.^{23,24}

High molecular weight hyaluronic acid is a naturally occurring substance found in the synovial fluid surrounding joints.⁷ When hyaluronic acid (as viscosupplement) is injected into a joint, it provides lubrication that may help provide pain relief.²³ It may also allow for more extensive movement of the joint.²⁴

SYNVISC® and **Synvisc-One®** are two examples of viscosupplements.^{4,5} They are biologically similar to hyaluronan. Hyaluronan is a component of synovial fluid which is responsible for its viscoelasticity.^{4,5} They are also high molecular weight viscosupplements, which are recommended for providing pain relief and in helping to decrease discomfort, allowing more extensive movement of the knee.^{4,5,25}

- **SYNVISC®** is used to treat pain associated with osteoarthritis of the knee, hip, ankle and shoulder.⁴
- **Synvisc-One®** is used to treat pain associated with osteoarthritis of the knee.⁵

These products may not be right for you. Talk to your healthcare professional.

When is surgery recommended?

There are different surgical procedures depending on what joints are affected, how advanced your osteoarthritis is, the severity of your pain and disability, and other variables that your doctor can talk with you about.²⁶

Looking for a healthcare professional to help you with joint pain?
Find a clinic near you using the clinic locator on synviscne.ca.