



Are you living with pain?



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MIC specializes in pain management.

MIC's expert musculoskeletal (MSK) radiologists treat people whose pain interferes with their daily lives. For instance, they may have pain coming from a joint, tendon or ligament due to arthritis or inflammation. They may be feeling pain in their back or neck, or they may have pain associated with nerves.

MIC radiologists have been offering pain management procedures in hospitals and community-based clinics for over 30 years. These treatments are:

- Minimally invasive and very safe.
- Proven to reduce or relieve pain for most patients.
- Often an effective alternative to surgery.

We hope you use the information in this booklet and on mic.ca to learn more about our pain management services.



Our goal is to find the best possible pain management solution for you.



MIC is a leader in effective pain management solutions.

MIC's expert radiologists and technologists perform thousands of pain management injections and procedures each year.

Our radiologists use the most advanced techniques.

MIC uses the safest and most accurate techniques during every pain management procedure.

To deliver a precise, targeted treatment, our radiologists perform each procedure using an advanced form of image guidance such as:

- Fluoroscopy which is live x-ray imaging.
- Ultrasound.
- Low-dose Computed Tomography (CT) scanning.

We do our best to make you comfortable.

We use local anesthetic to keep you comfortable during the procedure. You may feel sore or stiff when the anesthetic wears off. You may still notice some pain but this should go away once the treatment begins to work.

Pain relief varies from patient to patient.

Some patients may have pain relief lasting for weeks, months or years after their procedure, while others may not notice any significant change.

The amount of pain relief you experience depends on factors such as:

- The severity of your condition or injury.
- The amount of inflammation in your joint or soft tissue.
- Whether we have been able to pinpoint the exact source of your pain.

You are the expert when it comes to your pain.

You are the best person to assess whether your pain improves after your procedure. At your appointment, we will give you a Results Tracker and encourage you to record your pain on a scale of 1-10 at specific intervals. Even a small reduction on the pain scale is clinically significant and a sign the pain management procedure is making a difference.

Your healthcare team will use this information to help find long-lasting pain management solutions.

Repeat procedures.

If you experience pain relief and then your pain returns, your healthcare team may recommend repeating the procedure. You can ask your healthcare practitioner about a 'standing order' which allows you to book repeat procedures directly with MIC.

Our goal is always to find the best possible outcome for you.

If you haven't noticed any improvement 2-4 weeks after your procedure, this may mean the area treated is not the source of your pain. If this happens, your healthcare team will consider whether a different pain management procedure might work for you.



Managing your joint and soft tissue pain.

MIC offers pain management procedures such as:



- Joint or Soft Tissue Injections
- Viscosupplement (Hyaluronic Acid) Injections
- Epidural Injections
- Facet and Sacroiliac Injections
- Medial Branch Blocks and Radiofrequency Ablation
- Nerve Root Blocks



Joint or Soft Tissue Injections

Cortisone is an anti-inflammatory steroid medication which decreases inflammation and reduces pain. Cortisone injections have been used to treat painful joint diseases such as osteoarthritis and soft tissue injuries for many years.



MIC's radiologists offer cortisone injections to help relieve:

- **Joint pain** caused by conditions such as osteoarthritis or inflammatory arthritis.
- **Soft tissue pain** caused by inflammation and swelling of a bursa (bursitis) or around a tendon (tenosynovitis).

During this procedure, your radiologist will:

- Give you a local anesthetic to numb the treatment area.
- Use fluoroscopy or ultrasound to position the needle accurately and safely.
- Inject anesthetic and cortisone once the needle is in the right spot.

What will happen to my pain?

Every patient's experience following a cortisone injection is different.

You may notice a slight increase in pain, numbness, or weakness as the anesthetic or freezing wears off and before the cortisone starts to take effect.

It can take up to 2 weeks for the injection to work. During this time, you can take pain medications until the pain subsides. Your healthcare practitioner may recommend physiotherapy to ensure you obtain the best results.

If you have more than one area needing a cortisone injection, your MIC radiologist can help determine whether you need to book an appointment for each injection.



Pain relief

- Pain relief may last for weeks, months, or years and varies from patient to patient.
- If the injection helps to relieve your pain, you can receive up to four injections each year.

Viscosupplement (Hyaluronic Acid) Injections

A viscosupplement or hyaluronic acid injection can help reduce pain caused by osteoarthritis.



Hyaluronic acid is a gel-like substance. When it is injected into your affected joint, it can help:

- Lubricate the joint.
- Reduce inflammation.
- Improve shock absorption and mobility.
- Restore function to the joint.

What is hyaluronic acid?

Hyaluronic acid is a key component of the synovial fluid found in healthy joints and acts as both a lubricant and a shock absorber.

When you have osteoarthritis, this fluid becomes diseased and stops protecting your affected joint(s). The cartilage covering the ends of the bones can also break down, becoming worn and frayed. These changes may result in inflammation, swelling, tenderness and pain in the joint which sometimes causes reduced mobility.

Your viscosupplement prescription:

Your healthcare practitioner will decide which viscosupplement will work best for you.

If your healthcare practitioner requests Durolane, you can purchase this from MIC at cost. We will give you a receipt which you can submit to your extended benefits plan for reimbursement.

For other brands, you will need to fill your prescription and bring the medication to your appointment.

During this procedure, your radiologist will:

- Give you a local anesthetic to numb the treatment area.
- Use fluoroscopy to position the needle accurately and safely.
- Inject anesthetic and viscosupplement once the needle is in the right spot.

What will happen to my pain?

Every patient's experience following a viscosupplement injection is different.

You may notice a slight increase in pain, numbness, or weakness as the anesthetic or freezing wears off and before the viscosupplement starts to take effect.

It can take up to 2 weeks for the injections to work. During this time, you can take pain medications until the pain subsides. Your healthcare practitioner may recommend physiotherapy to ensure you obtain the best results.



Pain relief

- Pain relief may last for weeks, months, or years and varies from patient to patient.
- If the injection helps to relieve your pain, your healthcare practitioner may order repeat viscosupplement injections as often as needed.



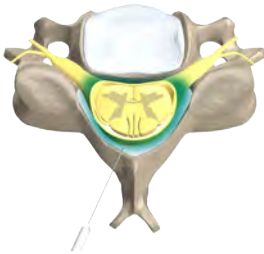
Epidural Injections

MIC radiologists perform epidural injections to help patients who suffer from chronic pain in their lower back caused by spinal canal narrowing, nerve compression due to a herniated disc and bone spurs or a degenerative disease.



Epidural injections are a safe, non-surgical approach to diagnosing and managing lower back pain which radiates to the leg(s). These injections may reduce the need for more invasive procedures.

MIC recommends you have an MRI before the procedure so the radiologist can evaluate your anatomy. Your healthcare practitioner will need to provide a referral for you.



During this procedure, your radiologist will:

- Give you a local anesthetic to numb the treatment area.
- Use fluoroscopy or low dose CT to position the needle accurately and safely.
- Inject anesthetic and cortisone once the needle is in the right spot.

What will happen to my pain?

Every patient's experience following an epidural injection is different.

You may notice a slight increase in pain, numbness, or weakness as the anesthetic or freezing wears off and before the cortisone starts to take effect.

It can take up to 2 weeks for the injections to work. During this time, you can take pain medications until the pain subsides. Your healthcare practitioner may recommend physiotherapy to ensure you obtain the best results.



Pain relief

- Pain relief may last for weeks, months, or years and varies from patient to patient.
- If the injection helps to relieve your pain, you can receive up to six epidural injections each year.

Facet and Sacroiliac Joint Injections

MIC radiologists perform injections to help relieve pain caused by the facet and sacroiliac joints. This pain is often felt in your neck, back, buttock or leg.

Facet joints are small joints linking vertebrae together. These joints help stabilize the spine and allow movement. Injury or damage to the facet joints is a very common cause of pain in the lower back and neck.

Sacroiliac joints are a pair of small, thin joints which connect the pelvis to the spine.



During this procedure, your radiologist will:

- Give you a local anesthetic to numb the treatment area.
- Use fluoroscopy to position the needle accurately and safely.
- Inject anesthetic and cortisone once the needle is in the right spot.

What will happen to my pain?

Every patient's experience following a facet or sacroiliac injection is different.

You may notice a slight increase in pain, numbness, or weakness as the anesthetic or freezing wears off and before the cortisone starts to take effect.

It can take up to 2 weeks for the injection to work. During this time, you can take pain medications until the pain subsides. Your healthcare practitioner may recommend physiotherapy to ensure you obtain the best results.

If you do not notice any improvement in your pain, your healthcare team may recommend other treatments such as radiofrequency ablation or a nerve root block.



Pain relief

- Pain relief may last for weeks, months, or years and varies from patient to patient.
- If the injection helps to relieve your pain, you can receive up to four injections each year.

Medial Branch Blocks and Radiofrequency Ablation

MIC radiologists perform medial branch blocks to diagnose the source of chronic pain in the back, neck, hip, buttocks, groin, or thigh. The best way to test which facet joint is the source of your pain is to block the pain signal from the medial branch nerve.

If you experience pain relief after the medial branch block, you may be a good candidate for radiofrequency ablation.



Medial Branch Blocks

A medial branch block is the injection of an anesthetic near the small medial nerves which emerge from the spinal cord. These nerves are connected to a facet joint in your spine and send pain signals to your brain.

During this procedure your radiologist will:

- Give you a local anesthetic to numb the treatment area.
- Use fluoroscopy to position the needle accurately and safely.
- Inject anesthetic once the needle is in the right spot.

What will happen to my pain?

You will be given a pain diary to record your pain for several hours after the medial branch block. Based on how you respond to the treatment, our radiologists will determine if you are a good candidate for radiofrequency ablation and MIC will contact you to book an appointment. MIC will send a report to your healthcare practitioner.



Radiofrequency Ablation

Radiofrequency ablation is a minimally invasive, safe procedure which targets the nerves causing your pain, based on the results of your medial branch block.

Radiofrequency ablation is performed by placing a small needle next to the nerve, then passing an electrical current through the needle. This creates heat at the needle tip which interrupts the pain signals to the brain.

During this procedure, your radiologist will:

- Give you a local anesthetic to numb the treatment area.
- Use fluoroscopy to position the needle accurately and safely.

- Send an electrical current through the needle to create a tiny burn and interrupt the nerve signals to the brain.

What will happen to my pain?

Every patient's experience following radiofrequency ablation is different.

Since radiofrequency ablation works by disrupting pain signals, you should notice an immediate improvement in your pain, although it can take 2-4 weeks after the procedure.

The location and cause of your pain will determine the amount of pain relief you experience.



Pain relief

- Pain relief may last for weeks, months, or years and varies from patient to patient.
- If radiofrequency ablation helps to relieve your pain, it can be repeated in the same location if the pain returns.

Nerve Root Blocks

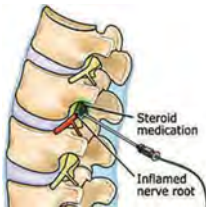
A nerve root block is a safe, non-invasive procedure performed by MIC radiologists to help diagnose and/or manage chronic pain conditions associated with nerve roots.



What are foramina?

Your spine has several foramina or holes through which nerve roots emerge from your spinal cord. These nerves help you to feel and move your limbs.

If the foramina are partially closed due to bulging discs, bone spurs (osteophytes), misalignment of vertebrae or other issues, the nerve root can be pinched. This can cause pain in your arm or leg along the path of a single or multiple nerve.



During this procedure, your radiologist will:

- Use a local anesthetic to freeze the skin.
- Use fluoroscopy to position the needle accurately and safely.
- Inject anesthetic and cortisone once the needle is in the right spot.

What will happen to my pain?

Every patient's experience following a nerve root block is different.

Many patients report significant pain relief within 30 minutes of the nerve root block due to the local anesthetic. The true pain relief is from the cortisone and it can take up to 2 weeks for the injections to work. During this time, you can take pain medications until the pain subsides. Your healthcare practitioner may recommend physiotherapy to ensure you obtain the best results.

What if I don't notice any difference?

Some patients do not experience significant pain relief following the procedure. It can be very difficult to pinpoint the exact source of the pain given the number of nerves in the spinal area.

If this happens to you, your healthcare team will be able to eliminate the specific nerve root treated as being the source of pain. They may recommend another nerve root block.

Pain relief

- Pain relief may last for weeks, months, or years and varies from patient to patient.
- The nerve root block may be repeated when the pain returns.





Managing your tendon or ligament pain.

MIC offers pain management procedures such as:



- Tendon or Ligament Fenestration (Tenotomy)
- Barbotage (Tendon Calcification Therapy)





Tendon or Ligament Fenestration

Fenestration helps treat inflamed or torn tendons, fascia or ligaments through a process like acupuncture. This procedure is beneficial for non-retracted tendon tears, tendinopathy and ligament sprains.

Some common conditions that may benefit from fenestration include tennis elbow and plantar fasciitis.

During this procedure, your MIC radiologist will:

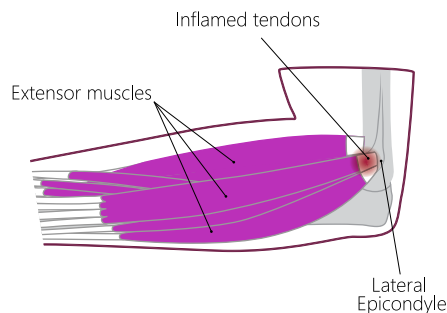
- Give you a local anesthetic to numb the treatment area.
- Use ultrasound to position the needle accurately and safely.
- Use the needle to make tiny holes in your tendon, fascia or ligament to stimulate local healing.

What will happen to my pain?

Many patients enjoy significant pain relief following fenestration. You will know within a few weeks if the procedure worked.

••••• Pain relief

- Pain relief may last for weeks, months, or years and varies from patient to patient.
- Some patients may require a second procedure in about 3–4 months.





Barbotage (Tendon Calcification Therapy)

Barbotage is a procedure used by MIC radiologists to dissolve and remove calcium which may cause pain. One example is the shoulder, where calcium can build-up on the tendons of the rotator cuff (calcific tendinitis). This procedure may help patients avoid surgery.

During this procedure, your radiologist will:

- Give you a local anesthetic to numb the treatment area.
- Use ultrasound to position the needle accurately and safely.
- Pass a small needle through the area to either aspirate (remove) or break up the calcium. This makes it easier for the body to reabsorb the calcium over time.
- Inject cortisone into the bursal lining around the tendon to reduce any existing inflammation.

What will happen to my pain?

Every patient's experience following barbotage is different.

The treated area may look or feel bruised for a few days. There are no specific restrictions after the procedure and once your discomfort eases, usually after 2-5 days, you can start gentle movements.

It can take up to 2 weeks for the procedure and injection to work. During this time, you can take pain medications until the pain subsides. Your healthcare practitioner may recommend physiotherapy to ensure you obtain the best results.



Pain relief

- You may notice a slight increase in pain, numbness, or weakness as the anesthetic or freezing wears off and before the cortisone starts to take effect.
- Most patients will experience pain relief and be able to resume their normal activities. Some patients may require a second treatment a few months later.

MIC is proud to be part of
your pain management team.

We look forward to working with you and your healthcare practitioner towards managing your pain.

Make MIC your choice for pain management.

MIC offers pain management procedures at nine locations in the Edmonton area. To book an appointment at a location near you, contact us at:



Central Booking

Ph: 780.450.1500

Toll Free 1.800.355.1755

Fax: 780.450.9551

When you call, please have available:

- Alberta Health Care card
- Exam requisition with your healthcare practitioner's instructions

Note: MIC accepts all medical imaging requisitions.

mic.ca

