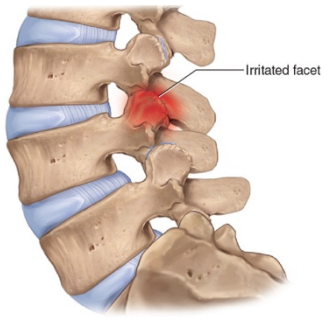
TWIN CITIES ORTHOPEDICS

Facet Arthropathy

Dr. Jonathan Reid

BACKGROUND



Facet arthropathy represents one of the primary components of lumbar spondylosis, the broader umbrella term for age-related degenerative changes affecting the discs, facet joints, and vertebral bodies of the lower spine. Facet arthropathy specifically refers to the degeneration of the facet joint cartilage and the subsequent inflammation that develops. Pathophysiologically, facet arthropathy begins with degeneration of the intervertebral disc, which reduces disc height and shifts more axial load onto the posterior zygapophyseal (facet) joints. This abnormal loading causes progressive breakdown of the articular cartilage, synovial inflammation, subchondral sclerosis, capsular laxity, and osteophyte formation, which can produce hypertrophy of the joint and narrowing of the central canal or neural foramina. Pain arises from nociceptive and inflammatory signaling through the medial branches of the dorsal rami, which richly innervate the facet capsule and synovium. Patients typically report axial low back pain, often worse with extension, rotation, or prolonged standing and relieved by flexion, with referred pain to the buttock, hip, or posterior thigh that generally stops above the knee.

As the facet arthropathy process progresses, specific injury patterns or subtypes can emerge:

- **Degenerative spondylolisthesis:** Cartilage loss and capsular laxity weaken the joint's ability to resist shear forces, so one vertebra can slip forward on another, most commonly at L4-L5. This can worsen stenosis and cause segmental instability.
- **Spinal stenosis:** Facet hypertrophy and osteophytes can narrow the central canal, lateral recesses, and neural foramina. This leads to neurogenic claudication with symptoms of leg pain and heaviness with walking or standing, relieved by sitting or bending forward, and lumbar radiculopathy from nerve root compression.
- **Synovial cysts:** Chronically inflamed facet joints can form synovial or ganglion cysts that protrude into the spinal canal, sometimes causing acute radiculopathy or, rarely, cauda equina syndrome.

INITIAL MANAGEMENT

Conservative management of facet arthropathy typically begins with activity modification, short-term relief through anti-inflammatory medications or other analgesics, and a structured physical therapy program focused on core stabilization, flexibility, and posture correction to reduce mechanical stress on the affected segment.

Oral OTC Medications

- **Ibuprofen** (Advil) — For adults and children over 12, 200–400 mg every 4–6 hours (not exceeding 1200 mg per day)
- **Acetaminophen** (Tylenol) — For adults and children over 12, 325-650 mg every 4-6 hrs, (not exceeding 4000 mg per day)
- **Lidocaine patches** (Lidoderm 4%) — Recommended to wear for 12 hours, with 12 hours in between applications
- **Voltaren gel** — Apply 3-4 times per day to the area of inflammation

Oral Prescription Medications

- **Meloxicam** (Mobic) — Take one tablet as prescribed with food, do not take this with any other NSAID (e.g., Ibuprofen)

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- **Oral Prednisone** — Tapered 12 day course: First four days at 60 mg, next four days at 40 mg, last four days at 20 mg
- **Cyclobenzaprine** (Flexeril) — Take one tablet as prescribed at night as this medication can cause sedation
- **Tramadol** — For adults, patients are started on 50 mg every 4-6 hours as needed (not exceeding 300 mg/day)
- **Gabapentin** — For adults, patients are started on 300 mg once at night, titrated if tolerated/necessary to 300 mg twice daily

Transcutaneous Electrical Nerve Stimulation (TENS) — An order will be placed through our partnership with Zynex for the NexWave TENS unit and you will be contacted by a representative by telephone to get set up. This product is often not covered by insurance, however Zynex offers complimentary setup and customer support, as well as a 1-month free trial

Heat/Cold therapy — Neither is universally "better" — they serve different purposes and are often most effective when used strategically depending on the situation.

- **Ice**: Acute flares, or pain within 24-72 hours, situations of active inflammation, or with post-activity soreness
- **Heat:** Chronic, ongoing stiffness or muscle tightness, before activity, or for alleviation of deep, aching pain

Home Exercise program

- **Knee-to-chest stretch:** Lying on your back, gently pull one knee (or both) toward your chest, holding for 20-30 seconds
- **Bird dog:** On hands and knees, extend one arm forward and the opposite leg straight back, keeping the spine neutral, then switch sides. This builds core and spinal stabilizer strength without placing excessive load on the discs
- **Bridges (glute bridges):** Lying on your back with knees bent, feet flat, lift the hips toward the ceiling by squeezing the glutes, then lower slowly.

Physical therapy: Appointments are scheduled by patients calling the location specific scheduling phone number, which can be found on the provided physical therapy card or by going online.

ADVANCED IMAGING (MRI)

Patients that continue to experience low back pain with or without referred pain despite conservative management will often require advanced imaging in the form of a MRI of their lumbar (low back) spine. Advanced imaging confirms the clinical diagnosis of facet arthropathy and assesses for additional soft tissue disease patterns or subtypes while also allowing for preprocedural planning for interventional modalities, as indicated.

- Please reach out to Rhodora **(952-456-7209)** to have an MRI ordered if the prescribed conservative management fails to improve your symptoms adequately. MRI's are typically performed at our TCO Edina, Eden Prairie, or Waconia sites and you will be contacted by our MRI schedulers by telephone once insurance approval has been obtained.

When you are contacted by our MRI scheduling team, you will also be scheduled to see Dr. Reid in office to go over the MRI

FACET MEDIAL BRANCH BLOCK → RADIOFREQUENCY ABLATION

Lumbar medial branch blocks (MBBs) and radiofrequency ablation (RFA) are sequential procedures used to diagnose and then treat facet-mediated pain. For an MBB, the patient lies prone, the skin is cleansed and anesthetized, and under fluoroscopic guidance a needle is advanced to the junction of the transverse process and the superior articular process, where the medial branch of the dorsal ramus crosses; because each facet joint is supplied by two medial branches (from the level above and the same level), both nerves are typically targeted, and a small volume of local anesthetic, sometimes with a steroid, is injected. **The patient then records their pain relief in a diary over the following hours**, and because false-positive responses are common, many guidelines recommend two separate blocks, with at least 80% relief required to confirm the diagnosis before proceeding. In patients with a positive response, RFA is performed using a similar fluoroscopic approach, but with an insulated radiofrequency cannula placed parallel to the nerve; sensory stimulation (to reproduce familiar discomfort) and motor stimulation (to confirm there is no activation of the nearby nerve roots or multifidus twitching in unsafe patterns) are used to verify placement, local anesthetic is injected, and the electrode is heated to roughly 80°C for 60-90 seconds to coagulate the nerve and interrupt pain transmission. Patients often

experience temporary soreness at the treatment site for a few days to weeks, with pain relief typically lasting 16-22 months or longer before the nerve regenerates, at which point the procedure can be repeated.

For scheduling, you will be called by the tasked health care team once insurance approval has been obtained.

FACET JOINT CORTICOSTEROID INJECTION +/- CYST RUPTURE

Intra-articular facet corticosteroid injections (CSIs) are performed under fluoroscopic guidance by placing a needle directly into the facet joint and instilling a small volume of local anesthetic mixed with a corticosteroid, which reduces synovial inflammation and can provide weeks to months of relief. They are also used to treat symptomatic synovial cysts, which arise from degenerated facet joints and can compress the thecal sac or nerve roots. In this setting, the injection serves two purposes: the steroid reduces inflammation, and the pressure of the injected fluid can distend the joint capsule until the cyst ruptures, decompressing the neural structures. This technique is called percutaneous cyst rupture or cyst aspiration. Success rates vary widely across studies, and recurrence is common

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Notes

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