



# Understanding Spine Pain

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FRANKLIN SQUARE HEALTH GROUP – SPINE PAIN ASSOCIATES

[www.spinepainfs.com](http://www.spinepainfs.com)

## Back Pain

Back pain can be acute or can become chronic if it lasts more than several months. Up to one-third of back pain patients experience long term symptoms and it is the most common cause of disability in advanced industrial nations.

### Risk factors

- jobs with heavy lifting
- cigarette smoking
- obesity
- spine deformities
- genetics and emotional issues

### Common causes

The anatomy of the spine is complex. It consists of bony support structures (vertebral bodies), intervertebral discs, muscles, ligaments, cartilage and joints. Because of this complex structure the source(s) of back pain are not always easy to isolate and treat.

Causes of back pain can include infections, cancers and referred pain from other parts of the body, but these etiologies are rare.

Most back pain originates from **sources in or near the spine and are mechanical** such as herniated discs, slippage of one vertebral body over another, stenosis (narrowing) of the spinal canal or foramen causing nerve root compression, facet joint arthropathy, sprains or strains, scoliosis and fractures.

### Diagnosis

**X-rays** allow the visualization of bony structures. They are reliable for aiding in the diagnosis of fractures, vertebral slippage or other bony deformities. However, x-rays cannot adequately visualize soft tissue disruption such as herniated discs, nerve compression and cancer.

**Bone scans** are useful for detecting infections, cancer and small fractures.



**CT, MRI and bone scans** are also used to diagnose causes of back pain depending on what is suspected.

### Treatments


Back pain treatment includes rest and physical therapy.

**Medications** include over-the-counter pain medications such as Motrin, narcotic pain medications, muscle relaxants and steroids.

**Epidural steroid injections** can be performed for herniated discs and other degenerative changes of the spine that cause neuropathic pain.

**Facet joint injections and sacroiliac injections** can be performed for their respective pathologies. These typically involve injection of small amounts of steroid under x-ray guidance.

**Trigger point injections** can be performed for myofascial pain. These injections can be performed without x-ray guidance.

**Surgery** is reserved for cases where pain is severe and is not relieved by more conservative measures or when there is weakness in one or both legs and/or loss of bowel or bladder control. 

# Neck Pain

## Common causes and diagnosis

Neck pain has numerous causes, some mild and self-limited and some serious and persistent. The duration, nature of the pain, origin and associated symptoms such as weakness, numbness and tingling are important in pinpointing a cause. Alleviating or aggravating factors also help determine the cause of the neck pain.

One of the most common causes of neck pain is **injury**. A very common neck injury is **whiplash syndrome** resulting from an automobile accident, especially a rear end collision. Whiplash occurs due to hyperextension of the neck from an indirect force. Neck pain and stiffness typically result and the neck pain may radiate to the arms. A fair number also develop headaches and shoulder pain. Other associated symptoms include nausea, dizziness and ringing in the ears. Long term complications can include a condition known as complex regional pain syndrome.

The diagnostic work up of neck trauma may involve **X-rays, CT scans, MRI and electromyography**.

## Myofascial pain

Myofascial pain syndrome is a common cause of chronic neck pain. It results in pain that is referred from **trigger points**, which are tender knots in the muscle. These trigger points restrict full lengthening of muscles and can weaken them. Pressing on a trigger point can cause pain at the site as well as in a referred pattern, resulting in an acute episode of muscle stress or strain. The muscle contracts, decreasing blood flow to the area, resulting steady, deep, aching pain.

Myofascial pain can be **exacerbated** by

- viral illness
- exposure to cold
- strenuous exercise

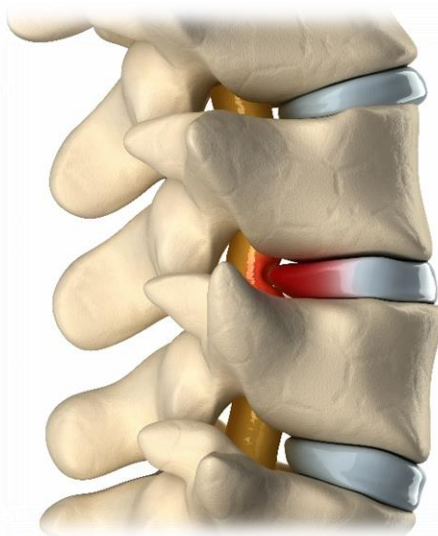


- typing, driving
- carrying heavy shoulder bags
- certain sleeping positions

Management of myofascial pain involves **non-steroidal anti-inflammatory drugs** and certain types of **anti-depressants** known as tricyclic anti-depressants, or TCAs. Procedures performed on trigger points include **injection of the trigger points with local anesthetics**.

## Cervical spondylosis

Cervical spondylosis involves degenerative changes in the joints and intervertebral disks of the cervical spine. These changes include



- dehydration of intervertebral disks resulting in disk bulging
- leakage of disk material
- inflammation and compression of nerve roots
- bone spur formation

## Nerve root compression

Nerve root compression can result in **numbness or tingling in the arm and in severe cases, weakness or paralysis of the arm**.

Treatment includes **conservative therapy** such as NSAIDs and physical therapy. **Cervical epidural steroid injections** and other specific nerve blocks may be warranted. **Surgery** is reserved for cases where significant symptoms such as worsening arm weakness or paralysis develop.

## Cervical myelopathy

Along with nerve roots, the spinal cord itself can be compressed. **Ligament and joint hypertrophy or enlargement**, can also lead to nerve compression and irritation. The neck pain can become worse with movement and is often accompanied by muscle spasm.

Compression of the cervical spinal cord is called **cervical myelopathy**. The compression can be secondary to enlarged ligaments, herniated discs, radiation treatment, a diminished blood supply, cancer or infection. The spinal

cord compression can initially be painless but can result in **foot numbness and unsteadiness while walking**.

In cervical myelopathy that results from spondylosis, spinal stenosis, herniated disc(s), arthritis or myofascial pain, **cervical epidural steroid injections** have found to be effective. **Surgery** is reserved for worsening neurologic deficits.

### Facet joint pain

Facet joints are the connections between the vertebral bodies of the spinal canal. They provide structural support to the spinal column and allow limited motion. Cervical facet joint disease can cause localized symptoms or radiating pain. It can be difficult to differentiate from disk disease and can often occur with disk disease.

Facet arthropathy can arise from **acute injury** but most commonly occurs secondary to **chronic changes in the facet joints** brought on by disk degeneration, spondylosis, repetitive stress and strain and weight bearing.

Cervical facet joint irritation may be associated with **muscle spasms and headaches**. Facet joint symptoms may also be like those of cervical disk nerve root irritation resulting in neck pain and radiating pain to the shoulders and arms.

Initial treatment of facet symptoms is **conservative**. **Nonsteroidal anti-inflammatory drugs, tricyclic antidepressants, physical therapy and transcutaneous electrical nerve stimulation** may afford relief. **Facet joint injections** with local anesthetic and steroid may be beneficial if conservative therapies fail. 🏠

## Arthritis of the Knee

Arthritis, or osteoarthritis, of the knee is a degenerative process that results in pain, stiffness, inflammation and swelling. Affecting mostly people over the **age of fifty**, it can also be found in younger patients. OA of the knee can limit daily activities such as walking and climbing stairs.

### Causes

The knee is both the largest and strongest joint in the body. The bones that make up the knee joint include the **femur, the tibia and the patella**. The point of contact where the three bones

meet are covered with **cartilage**, which protects and cushions the bones during motion. The knee joint is surrounded by a **synovial membrane** which releases fluids that lubricates the cartilage.



In OA, the cartilage wears away and the space in the knee joint decreases. The bones rub against each other and cause painful bone spurs to form.

### Additional symptoms and findings

- Difficulty bending and straightening the knee due to swelling and stiffness
- Symptoms can be worse in the morning or after resting
- Activity can make OA worse
- The knee may lock, creak or make a grinding noise
- The knee may become weak or buckle
- Increased pain with rainy weather

### Diagnosis

The diagnosis of osteoarthritis of the knee is typically made by history, physical exam and x-rays.

Typical **x-ray** finding include a narrowing of the joint space and bone spur formation.

An **MRI scan** may be needed to further evaluate the knee joint, especially the soft tissues.



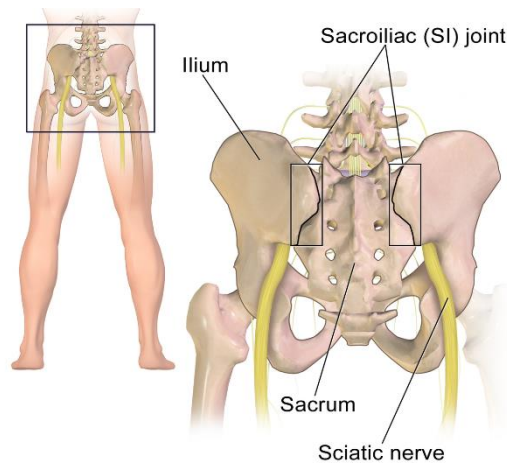


## Treatments

OA of the knee does not have a cure; however, its treatment starts with **conservative measures** such as activity modification, physical therapy, assistive devices and knee braces, ointments, ice and heat and over the counter pain medications.

**Injections** under x-ray or ultrasound guidance performed by properly trained physicians such as interventional pain management physicians, can help those patients whose symptoms are not relieved by conservative measures but don't need surgical knee replacement. The injectate can be steroid, to reduce inflammation, or viscosupplementation to improve the quality of the fluid in the joint space.

Total or partial **knee replacement** can be considered in situations where pain and other symptoms persist despite conservative measure and/or injections. However, there can be a **considerable amount of pain afterwards and a prolonged recovery period**. The potential risks associated with knee surgery can be quite significant as well. 🏥



Sacroiliac Joint

of causes. The pain of sacroiliitis can be felt in

- the buttocks
- the lower back
- one or both legs
- one or both feet

Often, but not always, there is a **low grade fever**.

## Causes

The **hormonal changes of pregnancy** create changes in the ligaments in the body, including those that are part of the SI joint. This is a natural mechanism by which the body prepares for birth.

Causes of sacroiliitis other than pregnancy include

- trauma/car accident
- arthritis
- an inflammatory arthritis known as ankylosing spondylitis
- infection
- gout

## Diagnosis and treatments

The diagnosis is typically made through a careful history and physical as well as x-rays.

Treatment involves **conservative measures** at first such as rest and **over the counter pain medication** i.e. advil. However, if the pain is not significantly

better, an interventional pain management doctor can perform an **x-ray guided injection** into the SI joint. If the pain is relieved after local anesthetic is injected into the area, it strongly suggests the diagnosis of sacroiliitis. **Injecting steroid** can provide significant and prolonged relief in those with sacroiliitis. 🏥

## ABOUT US



Conservative measures  
Non-surgical procedures

Board-certified interventional spine pain physicians  
Friendly staff



Comfortable environment  
Convenient weekend hours

Most insurance plans accepted  
Little to no out-of-pocket cost

# Sacroiliitis and Pregnancy

## SI joint pain

Sacroiliitis is inflammation of the sacroiliac joint. The sacro-iliac joint connects the sacrum with the pelvis.

The SI joint, as it is often called, can become inflamed secondary to a variety

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