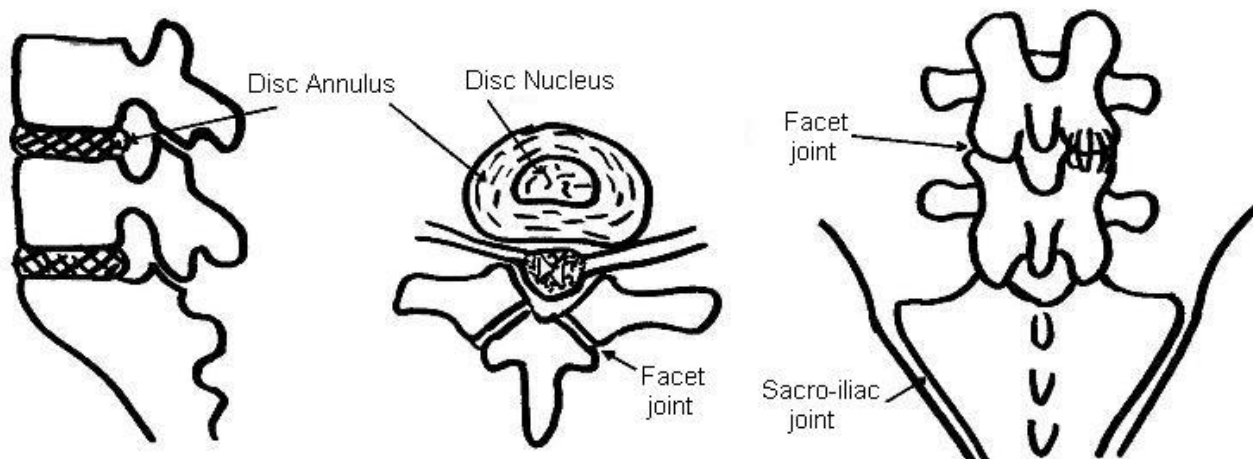


LOW BACK PAIN ORIGIN



Pain originating from the lower back may spread to other adjacent areas. The pain may spread up the back, or more commonly down to the buttocks, to the sacrum and coccyx area, and also down into the legs. Pain spreading into the legs may not necessarily be due to pinching or irritation of nerves, but may come from deeper structures in the back that tend to produce a deep dull aching type of pain spreading elsewhere. The pain may spread down as far as the feet. It often may be difficult to determine where the pain is coming from, but sometimes the pain may be reproduced by pressing on various tender spots in the lower back and pelvis area. Thus there are two types of referred pains; radicular (nerve irritation) and somatic.

1. Nerve Root Pain (Radicular Pain)

Typical nerve pain is a shooting, electric shock like pain that runs down to the lower leg or foot. It is often associated with pins and needles (paraesthesiae), numbness and weakness in the lower leg. The pain comes from a chemical inflammation of the nerve and does not cause local back pain. Usually the leg pain is much more severe than the local back or buttock pain. Squashing or compressing a nerve initially is not painful at all, until inflammation sets in. The lower lumbar nerves are associated with pain around the ankles and foot. Upper lumbar nerve irritation may cause shooting pain into the groin or thigh.

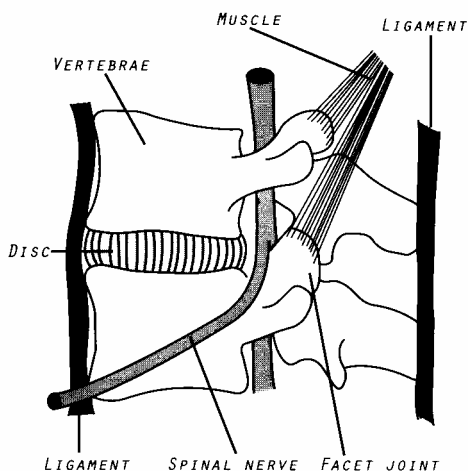
2. Somatic Referred Pain

This is the most common form of pain derived from spinal structures. Somatic referred pain is characteristically a deep, vague, diffuse pain, usually felt in the buttocks or hip area but may be felt further down the leg. The pain is usually worse in the back, closer to the origin of pain, and less severe in the thigh or leg. The pain may be brought on by local pressure over the painful structure in the back, but sometimes it is only brought on by prolonged sitting or standing.

This type of pain can arise from any structure that contains a nerve supply. It can come from inside the disc, the facet joint or the muscles. It does not come from pressure or pinching of spinal nerves. Thus referred pain is often difficult to localize as it comes from deep in the back. Sometimes the only way to be sure where it comes from is to perform local injections to block the pain.

Comprehensive spinal and joint care

As the disc and other structures are located deep inside the back, it is not possible to palpate the disc or diagnose disc pain purely from the symptoms or any particular pattern of movement. It used to be thought that pain on bending forwards was most likely due to disc pain and that pain on bending backwards and twisting was more likely to be due to facet joint pain. This generalisation has been found not to be true.



Disc

It is thought that the majority of chronic pain arises from the discs. Pain that is located in the midline is more likely to be discogenic in origin. The pain may spread out to both sides and down both buttocks and thighs (somatic referred pain). Alternatively pain may only be on one side radiating down one leg. There is no reliable definitive test to determine if a disc is painful. In the past discograms were used. These consist of an injection into the centre of the disc to try and provoke or reproduce the pain. These typically are very painful – even if the disc is not causing the present problem. Currently there is no curative treatment if the disc is found to be painful. Spinal fusions have a variable success rate and one recent trial found that the results were no better than an exercise program. A new procedure called Intra-Discal Electrothermal Therapy (IDET) or Intradiscal Thermal Annuloplasty (IDTA) was trialed in America and Australia in 2002 to 2004 and although initially held great promise, it has now been found not to be effective.

Facet joint (Zygapophyseal joint)

Pain from the facet joint is usually on one side radiating down one leg, however both sides may be involved. The joints are closer to the surface and thus tenderness is more localised. Facet joint pain accounts for possibly 10% of chronic back pain in young people and up to 40% over the age of 50 years. Pain may be blocked with intra-articular injections or by blocking the nearby nerves under X-ray control. Radio-frequency denervation is a proven therapy that may give relief for up to 12 months in 90% of cases where blocks are positive.

Sacro-iliac joint

The sacro-iliac joints may be injected to block the pain under X-ray control also. Cortisone may provide relief of pain for several weeks, but no long term cure is available at this time. A pelvic brace may give relief by stabilising the joints and sclerosing type injections (prolotherapy) into the posterior ligaments may help strengthen the area and relieve pain.

Muscles and fascia

Treatment for muscle pain includes stretching, massage and heat. Local anaesthetic injections and acupuncture provide short term relief. Combinations of therapy are often more effective and Botox injections may relax the muscles for up to 3-6 months at a time. Percutaneous neuromyotomy (rhizotomy – making a small stab incision) can sometimes give longer lasting relief. For pain involving ligaments or muscle attachments Prolotherapy involving injections of glucose can help strengthen and desensitize the local area.

All these options should be discussed with your treating doctor.