

Medicine for Managers

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Sacroiliac Joint Pain

Low back pain is extremely common and is linked with the vertebrae and the intervertebral discs in most people's minds. However, it is not always due to spinal disorders. Sometimes the sacroiliac joints are the culprit and can be problematic for all sorts of reasons.

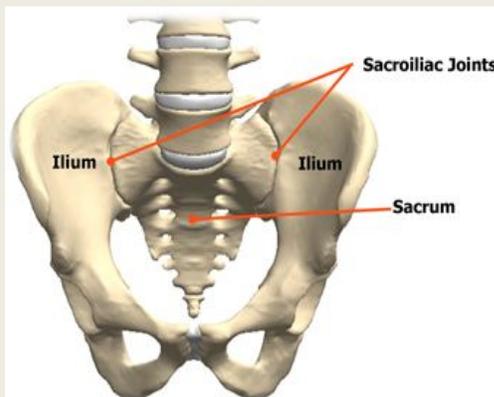
The sacroiliac joints join the ilium of the pelvis to the sacrum of the spine. The joints are held together by tough fibrous tissue. The joint is important because the sacrum supports the spine and the weight of the upper half of the body is carried to the pelvis through the joints.

The sacroiliac (SI) joints themselves have only approximately two to four millimetres of movement in any direction. In women they are less stiff than those in men, which allows some additional movement to assist with motility during childbirth.

From a physiological point of view the joints are important as shock absorbers for the base of the spine.

The joints may be affected by **sacroiliitis** which is a painful inflammatory condition which can affect one or both joints.

The result can be the development of pain and stiffness in the buttocks or in the lower back. Sometimes the pain may radiate down one or both legs.



Symptoms

The symptoms can be hard to relate to the sacro-iliac joints, which can make the diagnosis difficult.

Not only does the possible radiation of the pain around the pelvis and possibly down the legs complicate the ability to diagnose but movement and change of position can make the pain easier.

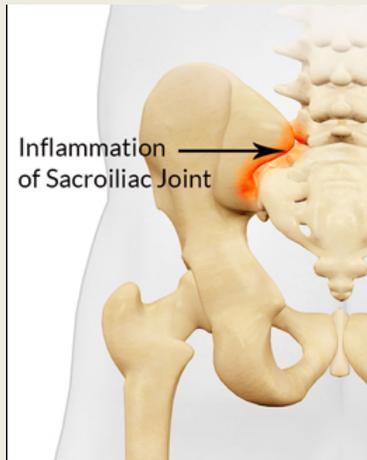
Activities which can induce or aggravate the symptoms are:

- Lying down, sitting or standing for a long period
- Taking more weight on one leg for a period
- Climbing stairs
- Running
- Taking large steps when walking .

Causes of sacro-iliac joint symptoms

The pain associated with sacroiliitis (inflammation of one or both SI joints) may be the result of a number of predisposing or causative factors which can result in erosion of the cartilage covering the bones of the joints.

It is often difficult for clinicians to distinguish between SI joint pain, pain associated with the lower vertebrae or pain derived from the ligaments and muscles which stabilise the area.



Causes include:

- **Injury.** The joints may be damaged by any accident impacting the joint, such as a fall, landing heavily on the sacrum, or a motor vehicle accident. Sometimes athletes can suffer stress fractures. If there is a discrepancy in leg length, pain may be felt in the SI joint.
- **Arthritis.** Normally arthritic symptoms are associated with **osteoarthritis** in older patients. In addition **ankylosing spondylitis** may also be associated with the pain, and is a long term form of arthritis which may involve the SI joints. The cause is not known but is believed to be associated with a particular **gene variant** called **HLA-B27**

- **Infection.** Rarely an SI joint may become infected and present as pain.
- **Pregnancy.** during pregnancy, the joint becomes more lax to permit some additional movement during passage of the head through the pelvis to facilitate childbirth. In addition, during pregnancy, the joints will support additional weight and the manner of walking may change, resulting in stressing and stretching which may be painful.

Risk Factors

As outlined above, conditions such as arthritis may result in sacroiliitis. It is also associated with the presence of inflammatory bowel diseases including **Crohn's Disease** and **ulcerative colitis**. Pregnancy is a clear risk factor for pain of sacroiliitis.

Other factors that may contribute to the presence of SI pain include poor lifting technique, bending awkwardly and having a poor posture.

The pain itself may be mild, moderate or severe. It may be felt in the low back or the buttocks and may radiate down the thigh and upper leg. It may be aggravated by walking, twisting, bending, stepping up or down and even by coughing. Classically the pain may become worse and feel sharp when standing up from a chair.

Diagnosis

This may be difficult and will be made initially clinically by examination of the affected area. It may be possible to distinguish SI pain from low lumbar back pain by the site of the pain, the nature of movements that cause the pain and tenderness over the SI joint.

The diagnosis may be assisted by blood tests to exclude associated bone and joint diseases, together with pelvic and lower back radiography which might show SI damage.

If the diagnosis is not clear, then an MRI scan of the lower back and SI area should show the joints clearly.

Another test which can be used if the diagnosis is unclear is to administer a local anaesthetic injection into the sacroiliac joint to see whether the pain is abolished. If so, then the pain is likely a sacroiliitis.

Treatment

Sacroiliac pain will often settle spontaneously. It is certainly helped by rest and avoidance of the movements which induce the pain.

The doctor may also prescribe an anti-inflammatory analgesic such as ibuprofen (Brufen), diclofenac (Voltarol) or naproxen (Naprosyn) and sometimes additional pain relief such as co-codamol or occasionally a stronger analgesic.

After the initial phase of the pain, heat is very helpful to relieve any muscle spasm and to improve local blood flow. Exercises to stretch and strengthen the muscles in the area are also valuable. If the symptoms do not subside, or if the problem is more chronic, steroid injections may be used into the SI joint to ease the inflammation and ultrasound or interferential (radiowave treatment) may be employed.

Severe sacroiliitis may be treated using a TNF (Tumour Necrosis Factor) alpha Inhibitor. TNF is a type of protein in the body which can cause inflammation, and disturbances in immunity causing high blood levels of TNF may lead to inflammation of joints and ligaments.

This class of drug may be very effective in treating ankylosing spondylitis, although it is estimated to be effective on only about half of sufferers, suggesting various aetiologies for the cause of the disorder.

The drugs authorised in the UK are adalimumab, certolizumab (Cimzia), etanercept (Enbrel), golimumab (Simponi) and infliximab (Remicade). They are normally initiated and monitored by a specialist clinician.

Other rarely used treatments are long-acting **local anaesthetic injections** into the joints or occasionally **joint fusion** procedures.

Once the SI joint has recovered, care should be taken to prevent a recurrence.

Regular exercise helps to strengthen the muscles which stabilise the joint, care should be taken with bending and, particularly with lifting and a good posture is essential.

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