Sacroiliac Joint Dysfunction in Athletes
P. Gunnar Brolinson, DO, FAOASM, FAAFP*, Albert I. Kozar, DO, and Greg Cibor, DO
Because of the unique nature of sport and the tremendous demands that most sporting activities place on the spine and pelvis, SIJD is well recognized by athletes and athletic medical practitioners. In fact, some authors describe SI dysfunction as a common problem in elite athletes, but a clinical entity that has been largely unstudied in the medical literature. One study evaluating members of the United States Senior National Rowing Team indicated a prevalence of SI dysfunction in 54% of team members, and more common in sweep rowers (66%) than scullers (34%).

Sports Medicine & Rehabilitation
Taras V. Kochno, M.D
With enough force to the pelvis, the ileum bone will shift or sublux against the sacrum, leading to pain and secondary gluteal muscle tightness. The consequences of a subluxed sacral-iliac may lead to secondary muscle strains in addition to the gluteals and commonly involve the erectors of the lumbar spine, multifidus, piriformis and hamstring muscles. - If there is shortening of a leg length, that may indicate that there is pelvic asymmetry. Most athletes will experience a functional leg length discrepancy rather than a true leg length discrepancy, which is based on anatomical length differences.

Malalignment Syndrome
Wolf Schamberger, M.D
The Malalignment Syndrome describes a recently defined syndrome that is present in many people and which can affect everyday activities and may result in injury. It is now recognised that the malalignment syndrome is frequently a predisposing factor in sports injuries. It may also underlie biomechanical problems in less active members of the population.

Sacroiliac Joint Injury
Andrew L Sherman, MD, Associate Professor, Departments of Neurological Surgery, Orthopedics, and Rehabilitation, University of Miami Miller School of Medicine
...studies have documented that motion does occur at the (sacroiliac) joint; therefore, slightly subluxed and even locked positions can occur.

The Stretching Institute
Brad Walker, leading stretching and sports injury consultant
Pain in the sacroiliac joint may be a result of a subluxation of the joint. This is a partial dislocation. The bones are slightly displaced, which stresses the ligaments that hold it together. It also puts pressure on the surrounding structures.

Sports Medicine
Irwin Abraham, MD
Sacroiliac Joint Dysfunction is the most common cause (80%) of low back pain. The hipbone meets the lower end of the spine, called the sacrum, where they form a joint. The hip can rotate forward at this joint and can get very painfully "stuck" in an abnormal position.

USA Volleyball Players
Ronda Wimmer, PhD, MS, LAc, ATC, CSCS, CSMS, SPS
For example, a player is right arm-/left leg-dominant. The compensation pattern will show up with sacroiliac joint subluxation with pain on the dominant side. However, if the hip flexors are tight on the opposite side, then the compensation will pull to the nondominant side, due to a pelvic tilt and/or rotation. This dramatically affects the efficiency in athletic performance, even with just a little compensation. So, the key becomes to identify compensation patterns as quickly as possible and counterbalance them.
**discrepancy is usually the result of SI joint and/or pelvic dysfunction.** Assess posture for increased lumbar lordosis, which can result from sacral torsions.

**Sports Medicine & Rehabilitation**
Doctor Taras V. Kochno MD

**Subluxations for the sacroiliac** junctions are best done by chiropractic or osteopathic manipulation, and once the manipulation is successful, functional range of motion of the gluteal and lumbar muscles can be restored quickly through various myofascial release techniques.

**Osteitis pubis in athletes. Infection, inflammation or injury?**
Summary: Medical records of 59 patients (9 females and 50 males)
Evidence of pelvic malalignment and/or sacroiliac dysfunction was frequently seen in both men and women.

**Adjunctive Therapies to the Adjustment Pelvic Unleveling**
Kim Christensen, DC, DACRB, CCSP, CSCS

Much more common in the pelvis is a biomechanical source of pelvic unleveling, with sacroiliac joint subluxations. This condition can be caused by work postures, recreational habits, or just a broken-down chair at home. Muscle imbalances are frequently part of this syndrome, with weakness of the hip extensor muscles being most common. Tightness of a psoas muscle, or shortening of the hamstrings from excessive sitting can also contribute to pelvic unleveling.

**Personal Journey -- For the Love of Running**
Phil Bevins, running coach
From the start, Bevins suspected that I had a partial dislocation in my left sacroiliac joint, which connects the tailbone to the pelvic bone. That and scoliosis were both to blame for a short left leg; to compensate, my spine leaned to the right. This misalignment stretched the ligaments around the hip joint, causing inflammation and pain, and the curvature in my spine compressed the joints along the right side of my body. "When that happens for a day, it's no big deal," says Bevins. "But over a lifetime, it causes arthritic changes."

**New York Times**
Wednesday, October 17, 2007
In running his startling world record at Atlanta, Johnson injured his left hamstring muscle. Against Bailey in 1997, he injured the thigh muscle in his left leg. It was later determined that the sacroiliac joint in his pelvis was slightly rotated, which threw out of alignment the muscles in his left leg, making them less efficient.

**Sports illustrated**
The first two rounds of the 200 exacted a price. Johnson's left Achilles tendon was aching. The tendon behind his left knee, already sore coming into the Games, was worse, and he needed repeated adjustment of his sacroiliac joint.
Sports illustrated
He says his problems began not in Toronto but in Atlanta. In the 200 that cemented his place in
history, Johnson says, he strained his sacroiliac as the result of the immense torque applied to
his torso as he blazed through the turn.

Sports Medicine & Rehabilitation
TARAS V. KOCHNO MD, Athletic Assessment
Assessing subluxations of the sacroiliac junctions can be made by having the athlete lie
supine with his legs extended. Visual inspection should assess for symmetry of the feet as well as
functional leg length. If there is shortening of a leg length, that may indicate that there is pelvic
asymmetry. Most athletes will experience a functional leg length discrepancy rather than a true
leg length discrepancy, which is based on anatomical length differences.

WHO CARES ABOUT PELvic ALIGNMENT?
Dr. Sue Ironside, ULTRA FITNESS
The sacrum and the ilium form the sacroiliac joint. If this joint is stuck or misaligned, it will
not be able to move in its normal pattern. This will create pull on the muscles that act around it.
Some muscles will compensate by becoming overactive. For example the piriformis will start to
contract or be overworked trying to help the joint. This will be felt as a pain in the hip or butt.
The piriformis muscle is not alone in compensating for lack of movement of the sacroiliac joint.
Any of the muscles that attach through the pelvis can be affected:
The hamstrings may become chronically tight
The adductors may get strained
The hip flexors may become chronically tight
The low back may become tight and sore.
The problems will also continue down the biomechanical chain: if the glute medius can't function
properly because the pelvis is misaligned, it will not be able to stabilize the hip. When heel strike
occurs, the knee will now rotate excessively because the hip is unstable leading to medial knee
pain.

Power Athletes magazine
John Iams & Steve Cotter
But in terms of the patterns that I see, more commonly than not, in most athletes, there is an
awful lot of problems in their pelvis, particularly their sacroiliac joint, because many of these
athletes are jarred, many times by falling. Many sports of course involve the athlete being off
their feet, coming down, and landing on their pelvis. So, many of them have restricted motion in
their SI joint.

Pain in the Butt - What Is the Cause?
Neil McLaughlin & Ron Kulik
For the Washington Running ReportThe sacroiliac (or SI) joints are very important joints in the
hip and gluteal region for runners. There is one on each side of the body where the lower back
meets the hips (see illustration). Smooth movement of both joints is required for efficient
running biomechanics and functioning of muscles around the gluteal and hip region. If a
restriction (or subluxation) of the SI joint occurs, pain may result from both the irritated
joint itself and from surrounding muscles that may be overworked due to the resulting
loss of movement. Trigger points and strains can often develop secondary to a sacroiliac
problem. SI problems have also been associated with leg length deficiencies (a short leg), which
can lead to other injuries.

Overuse injuries curb triathlon preparation efforts
Troy M. Smurawa, MD
The SI joint connects the back to the hips, making it a major joint in the body. A muscle or
structural imbalance there can lead to irritation, termed SI joint dysfunction. This is a
common cause of low back pain in triathletes. It was noted to be one of the three most
common injuries to competitors in Hawaii's Ironman Triathlon.
Biomechanics of running: From faulty movement patterns come injuries
Sports Injury Bulletin

An excessive or uncontrolled pelvic tilt increases the forces through the lumbar and sacroiliac joints, and forces the knee of the stance leg to internally rotate, which in turn may increase the pronation forces on the ankle. It is possible to observe a correlation between excessive pronation and excessive pelvic tilting in runners, and it is a good illustration of how one unstable link in the biomechanical chain can have an adverse knock-on effect and increase the risk of injury.

Get rid of Stubborn Hamstring Injuries!
Athletes Acceleration

Biomechanical issues are a huge reason for hamstring problems. Athletes that seem to break at the hips (anterior pelvic tilt) when they run are going to be prone to hamstring problems. This problem affects hamstring length since the hamstring is attached to the hip and if the hip is anteriorly tilted or rolled forward, the hamstring is going to be in a lengthened position.

PHYSIOTHERAPY ADVICE HIP, PELVIS AND GROIN INJURIES IN ATHLETES
Phil Sadler BSc (Hons), MCSP, LCSP (phys), ST Dip

...for example in long jumping if you take off unbalanced with the leg straight and back extended. This can result massive forces going through the SIJ causing joint bruising or ligament damage. This can cause pain in the lower back on one side, or pain into the buttocks and thigh. Sometimes the SIJ can “upslip”. Injury to this area requires physiotherapy assessment and normally manipulation to correct the problem.

Sports Injury Clinic
John Williams, registered Osteopath and Sports Injury Therapist

These joints can often get stuck or in some cases one half of the pelvis can glide forwards or backwards, which is often referred to as a twisted pelvis. When this occurs it often irritates the iliolumbar ligament which results in Inflammation.

15th FICS International Chiropractic Sports Symposium
November 19, 2001

Pelvic dysfunction can affect all athletes, from recreational to elite athletes, and in all age groups. It is involved in common conditions such as incontinence, osteitis pubis and stress fractures. It is also linked with acute and chronic low back pain.

A Review of the Literature
Sean M. Hannon, BA, DC


This is the story of a Canadian research team that included chiropractic care in the rehabilitation program of 16 injured female long distance runners. The runners recovered quickly and seven of them scored personal best performances under chiropractic care. Sixteen female distance runners presenting with sacroiliac subluxation were assessed by Grimston et al.

Subjects underwent 12 sessions of chiropractic adjustment (in conjunction with muscular rehabilitation) over a 4-week period. Compared to four control subjects, a statistically significant decrease in lumbo-pelvic asymmetry was observed. Following care, all 12 subjects with sacroiliac subluxation had reinstated their preinjury training mileage. Five of twelve subjects (> 40%) reported their personal best performance over the 10-kilometer distance run. Two subjects achieved personal best times over the marathon distance (42-kilometer). All (100%) subjects reported enhanced awareness of posture and flexibility in addition to reduced symptoms.