

WHO CARES ABOUT PELVIC ALIGNMENT?

As runners, we tend to be aware of our muscles when things start to go wrong – that familiar tweak in the IT band, the pain in the butt associated with Piriformis syndrome, the list goes on. The question is, why do we get these problems? Often it is our body's way of compensating for a misaligned pelvis.

What is a misaligned pelvis? To understand this, we need a basic background in anatomy. In its simplest form the pelvis is comprised of the sacrum, ilium, ischium and pubis (the three bones are fused and commonly known as the 'hip bone'). The major muscles that act around the pelvis are the glutes (maximus, medius and minimus), hip flexors (iliacus and psoas), piriformis, hamstrings and low back muscles (including quadratus lumborum). (Figures 1, 2, 3, 4)

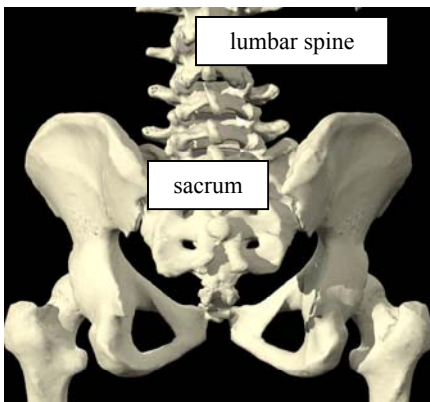


Figure 1: Posterior View of the Pelvis

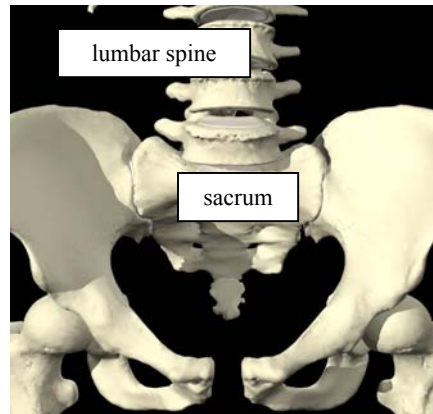


Figure 2: Anterior View of the Pelvis

'Hip Bone'
ilium
pubis
ischium



Figure 3: Posterior Muscles of the Pelvis

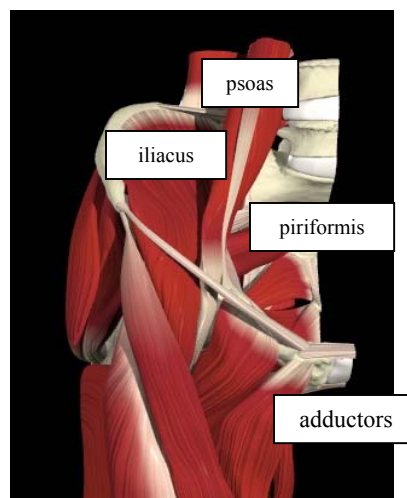


Figure 4: Anterior Muscles of the Pelvis

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.

If you ever notice that you stretch and stretch and stretch but can't seem to get a muscle to relax, chances are you have a misalignment. If the bones that the muscles attach to aren't in the proper position, there is no way the muscles can relax – they will be overactive. Once proper pelvic mechanics are restored (often through chiropractic adjustments), the muscles can relax and be stretched effectively. Injuries are minimized and function is maximized.

It is incredible what a dynamic biomechanical machine our bodies are. With every step we place, our bodies go through a series of coordinated movements – the foot plants, the muscles in the foot and lower leg help stabilize contact with the ground, the muscles in the thigh help stabilize the knee joint, the muscles in the butt help stabilize the hip, the discs in the spine help absorb shock transmitted from the ground – you get the idea. Although the pelvis is only one link in this chain, it is a link that we as runners should not forget.

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