

Core and Pelvic Stability



Jim Leppik
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Benefits of Core Stability

- Increased muscle tone
- Reduced pain
- Optimised postural control
- Injury prevention
- Increased flexibility
- Increased circulation
- Available to all



Pilates Box...Hips, transverse abdominis, glutes and upper back.

I look at core and pelvic strength in a number of phases

- * Basic activation

- * Core control, which I use basic floor pilates exercises. Important you learn how to control your core

- * Fitball and harder floor exercises, which provide strength and balance

- * Pilates reformer, Pilates against resistance.

- * Functional Core stability, where you're often working on one leg, initially with body weight, then with resistance. Often this can involve regular exercise routines



Very important that that one learns to actually activate these muscles before going too far into future phases.

While it's ok to go into higher phases to develop strength the focus early on is to learn how to control movement with your core.

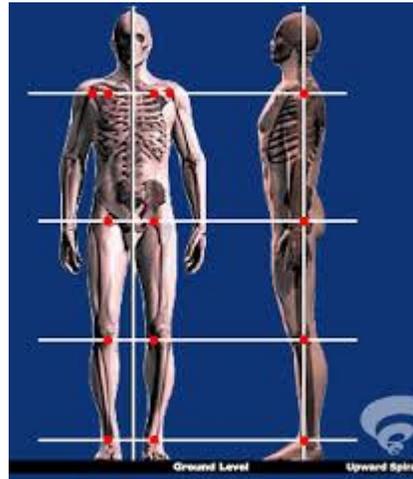
Otherwise, without that control you're liable to use compensatory muscles that are not designed to do the job.

Hence you miss the muscles you are targeting , which could lead to early fatigue (muscle force falls 25-40% during prolonged, intense exercise), muscle imbalances and causing possible injury

*** Technique is paramount!!!!!!!



Very Important to be posturally correct so the muscles can activate down the right kinetic chain as you walk.



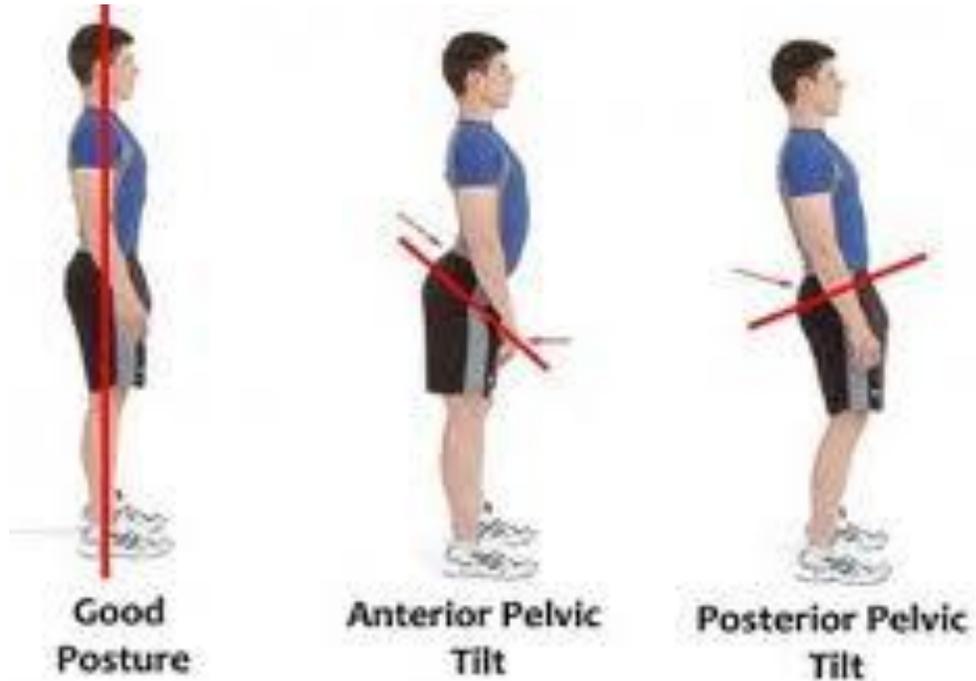
It's very easy to get strong in the right muscles but still not have them fire due to poor posture and then, by extension, poor biomechanics.



Bad posture is characterised by two types of hip tilts.....

*posterior

*anterior



Both “tilts” can produce pain, spasm and injury in compensating muscles due to those muscles over activating. Often it’s the lower back, hamstring or knee.



Hard to produce the right biomechanics with either of these tilts as in either case the glutes are in no position to fire.

Hence they have a negative effects of the mechanics of a walking technique causing compensatory muscles to substitute.



Posterior tilt is often caused by tight hamstrings.

The nervous system often activates through the most tight, over-active muscles, in this case the hamstrings, which, in turn, inhibits the glutes.

So often you end up with hamstring and back problems. It cause a “flat back” and for some it causes a problematic very low back curve near the base of the spine



Activating the lower abdominals will aid in pulling the pelvis back to it proper position. The puts the posture into a position to allow the glutes to activate and work properly biomechanically



Anterior Tilt is a forward tilt of the hips often due to an over-active psoas. It's where your butt stick out behind you. Gives you that "sit" on the hips



Psoas and gluteals are opposing muscles so an over-active psoas and inhibit the firing of the gluteus maximus and the all important gluteus medius.

For us walkers that causes more “side to side” movement rather than forward and back. Hence a much greater hip drop than necessary.

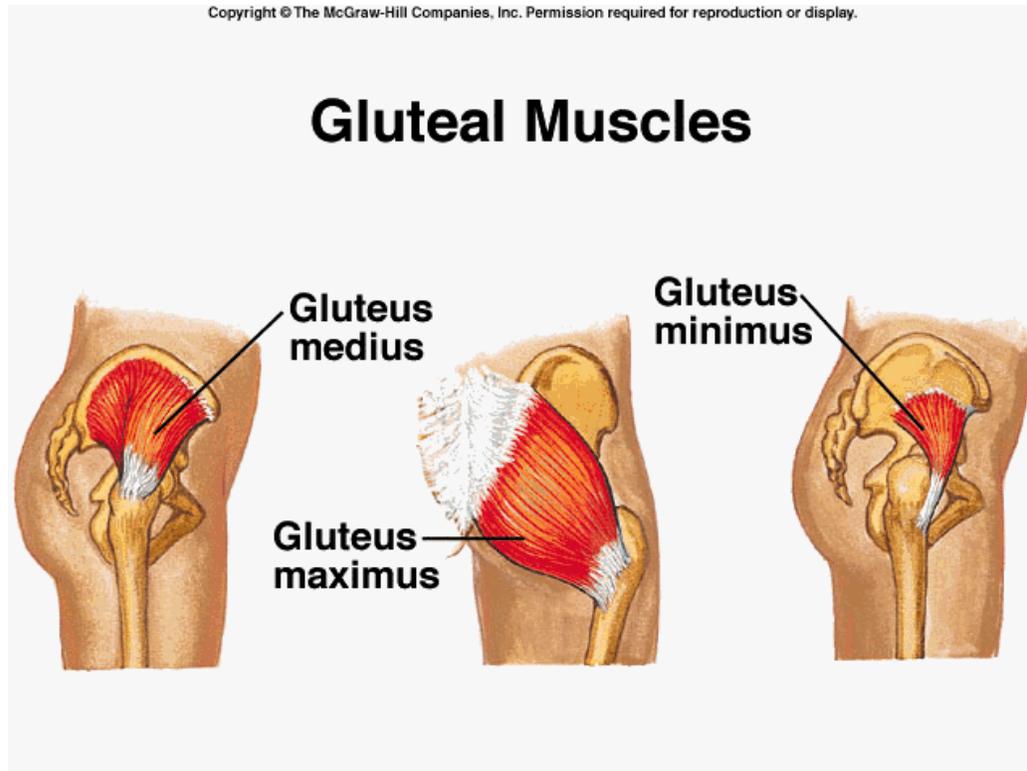
Forces the back, piriformis to totally over-compensate and stresses weak hamstrings leading in time to soreness, referred pain and injury

Puts the stomach on stretch making it tough for the core to fire

Again that's sorted by activation work on the lower core as well as the gluteus maximus and medius.



Gluteus medius is a most important muscle.



Function of the gluteus medius is to both stabilise the opposing hip through it's swing phase, and to abduct the hip.

It is involved in most injuries. I see a lot of walkers with knee soreness or other injuries due to the lack of strength and/or the ability to fire



One of the first compensations for a weak gluteus medius is for the knee to drift slightly inwards. That's one of the main causes of knee injuries. I have a good article on the gluteus medius online.

Often due to the TFL and the inward rotators compensating. Often causes the hips to be rotated and is often evident in back pain

By extension piriformis works overtime to try to externally rotate the hips producing pain as in many people the sciatic nerve passes straight through that muscle.

So if that muscle is stressed too much it'll often produce pain in the back and hamstrings.

As I said, a non-firing gluteus medius causes excessive hip drop from changing the mechanics of a walking technique as it is unable to stabilise the pelvis as during its swing phase

