
GETTING YOUR GLUTES INTO THE GAME

It can be argued that the main difference between average runners and cyclists and *good* runners and cyclists is found in the functionality of the feet, as well as the strength and development of the glute musculature, for it's the glutes that are mainly responsible for exceptional *horsepower*.

Non-developed Glutes

There are some great athletes who don't look very strong and you wonder where they get their power. These small but powerful athletes will likely have very powerful glutes in relationship to their overall size and body musculature.

Due to their natural strength and the leverage advantage they have over your legs, the gluteal muscles should always be the primary muscles that drive lower body movement. Not only does this include more ballistic activities like running and jumping, but also walking.

There are 2 main factors that contribute to ineffective glute activation:

Inhibited glutes: In this situation, the glutes are on permanent shutdown mode. For those who spend most of their day sitting, the glutes may not contract enough during the day and therefore aren't used when they walk, stand, or get out of a chair.

Overshadowed glutes: Here the glutes **DO** fire correctly, but are not as strong as other lower body muscles (like the quadriceps), thus the body will use other muscles to do what the glutes *should* be doing, resulting in inefficient performance and often some type of pain or injury over the long haul. Whenever you perform a movement such as a squat, lunge, deadlift, jump, sprint, or any exercise that involves several different muscle groups, the majority of work will tend to be done by the strongest muscle in the group (your natural body structure will also influence this to an extent).

For example, if you have long arms and strong triceps your chest will do little of the work during a bench press. If you have naturally strong biceps and triceps, they will take over for the lats during chin-ups and pull-ups. Technique will also have a substantial impact on all of this. Athletes who have proportionately more strength and natural muscle cells in muscles their quads and hamstrings relative to their glutes, will experience under-utilization of the glutes during lower body movement.

Glute dominance is a good thing from an athletic perspective, but developing strong glutes can be problematic. Athletes who don't have great glute activation patterns and/or don't have good muscle balance (ie. quads are relatively stronger than glutes) do exercises designed to strengthen their glutes, but they end up strengthening their quads even further. In an athletic environment, their bodies will naturally use the strongest muscles to control movements, so now their quads will want to do what the glutes should be doing. The problem for an endurance athlete is that the quads will tire, and if the glutes aren't developed to take the workload, often the joints (hips and knees) and ligaments will suffer.

Developing Strength in The Right Places

For athletic purposes, exercises like the squat are, and should be, used primarily as glute strengtheners. Yes, other muscles like the quads and hamstrings can be developed, but the glutes should always be dominant. However, it is possible to be relatively *strong* and be able to move a lot of weight without using your glutes effectively.

With the proper posture and the right muscle balance used during exercise you will achieve the goals of creating strength balance throughout the lower body and core. The key thing is getting your body working efficiently so that **the correct muscles drive all of your movements.**

Using the muscles controlling the hip correctly is the keystone to getting this right. To have your glute-activation patterns maximized, you want the muscles that attach your thigh high on the hip controlling movement of your legs, rather than muscles that attach low on the hip. The hip flexors are also important.

The hip flexors (psoas) are the most important muscle for hip flexion (moving your leg forward). The most important muscle for extending your hip (moving your leg back) is the gluteus maximus. Both of these muscles obviously attach high on the hip and control the femur bone (upper thigh). When they are in balance, you inherently have good glute activation patterns.

Occasionally, people will have weak hip flexors, thus, when they flex their hip, the muscles that attach low on the hip and thigh (such as the tensor fascia lata and rectus femoris), end up doing what the hip flexors should be doing. This also can lead to a posterior pelvic posture (flat-arsed posture) that negates good glute and hip flexor activation in favor of hamstring and TFL activation, and allows the head of the femur to slide slightly out of the socket, often causing hip pain.

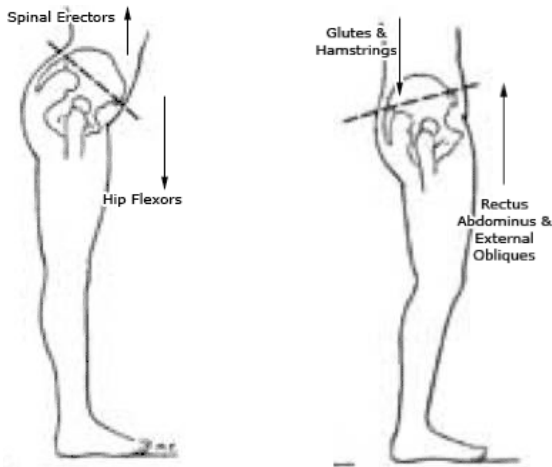
Excessively tight hip flexors with an anterior rotated pelvis, or a posture where the butt protrudes can also inhibit glute function. It's definitely better to have tight hip flexors than weak hip flexors, as it's rather simple to correct the tightness issue. For more detail on this, check out the book, "Movement Impairment Syndromes" by Shirley Sahrmann.

Evaluations

First let's assess your ability to activate your glutes in isolation. Lie face down on your stomach with your legs straight. Have someone either observe or actually place one hand on your hamstring and the other hand on your glute. Lift your leg up and see which muscle tenses up first.

Here is a video of the movement: [Prone Hip Extension](#)

If your hamstrings fire first you need to re-teach the body how to fire the glutes. A simple way to do that is to actively squeeze your *abs* as you extend your hip.



Next, evaluate your pelvic tilt. The natural position your hips determines which muscles control the leverage of the hip. This is trainable. The hip flexors pull down on your pelvis while the lower back pulls up. The Abs pull up while the glutes pull down.

We want to determine whether you have more of an *anterior* (butt sticking out), *posterior* (butt sucking in), or *neutral* posture.

Anterior pelvic tilt means that the top of the pelvis is tilted forward, and the lower back is arched. Posterior pelvic tilt means that the top of the pelvis is tipped back, and the pelvis is tucked under the body. Ideally you want a neutral posture.

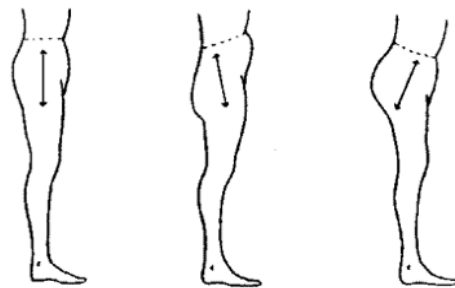


Fig. 1

If You Have an Anterior Tilt

If you're in anterior tilt you'll want to loosen the muscles that pull down on your pelvis, the hip flexors, and strengthen the muscles that pull up, the abs. You'll likely only need a bit of hip flexor lengthening and some ab work. Here is a short video that shows you how to test for tightness of your hip flexors:

[Modified Thomas Test](#)

Even if you pass the test you can probably still benefit from hip flexor stretches if you have anterior tilt. Here is one: [Hip Flexor Stretch](#)

If You're In Posterior Tilt

In contrast, *strengthening* the hip flexors can be advantageous for people in posterior tilt as strengthening them will put your pelvis at a position that is more advantageous to engage your glutes. See if you have sufficient strength in your

---Neutral-----Posterior Tilt-----Anterior Tilt

hip flexors. Stand on one leg and bend the other. Raise the bent knee towards your chest and hold it for 20 seconds without bending your support leg or squirming around.

If this test is at all difficult you could probably benefit from stronger hip flexors. To strengthen them, simply incorporate that test for a couple of sets 3 days per week. Another exercise I've found very helpful for posterior tilt is something I call a "hip suck". Lie down on your back with your legs straight and touch the area where your upper thigh inserts into the hip. Next, without bending your knee, attempt to draw the hip into the socket of the hip joint. You should feel this deep in the groin. Try to relax your thigh while doing this. Hold the position for 10 secs. Repeat for 10 contractions. You can also do this standing up just make sure you don't compensate by bending your planted leg and leaning sideways.

Ab strength

Regardless of your hip posture, another key is to have abs that are strong enough to stabilize your spine and maintain optimal position of the hips as the hip flexors and glutes work. To assess your ab strength do the leg-lowering test below.

Leg Lowering Test

Lie on your back and raise your legs towards the ceiling, with your knees slightly bent. Press the small of your back into the floor to eliminate the arch in your lower back. Try to keep your back glued to the floor as you take 3 to 5 seconds to lower your legs to the floor. Stop the test as soon as your back arches up off the ground. You should be able to get all the way to the floor. This test assesses the strength of your abs to resist the natural pull into an arched back posture. Here is a description of the test with pics and rankings: [Leg Lowering Test](#)

If you test weak, perform the leg-lowering drill 3 days a week, going down as far as you can until your back begins to arch off the ground. Perform 2-3 sets of six to 10 repetitions, resting for 30 seconds between sets.

Core Stability

You'll also want to test your basic core stability. (see below)

TEST #1



PERFORM A PLANK: Get into a pushup position, then rest your forearms on the floor. Your body should form a straight line from your head to your feet (don't let your hips sag). Hold the position as long as you can. You pass if you can hold it for two minutes or longer. You fail if you collapse

before the two-minute mark, or if your hips dip at any point within that time frame.

TEST #2



PERFORM A SIDE PLANK: Turn onto your side and, keeping your body in a straight line (just as in the plank described above), rest your weight on your forearm. Hold the position as long as you can, then repeat on the other side. You pass if you can hold the position for

90 seconds or longer. You fail if you collapse before the time is up, or if your hips dip at any point within that time frame.

Fortunately, if you fail at either of those tests you can remedy the problem with the same exercises you used in the tests. For the next 3-4 weeks, perform both tests 3 times per week, doing 2-3 sets of 30-second holds for each, and working up from there.

Here are a few more exercises that will help you with the "leg lowering" aspect of ab strength. Pick one and perform 2-3 sets of 15-20 reps 3 days per week:

[Swiss Ball Jackknife](#)

[Incline Leg Raise](#)

[Dragon Flag](#)

Quadri-cep Flexibility



Tight/overactive quads can also inhibit glute function and are **EXTREMELY** common. Additionally, if you have knee pain chances are this is one of your major issues. I recommend many

of my athletes do this quad/hip flexor stretch every day. Hold for 2 sets of 20-30 seconds.

Quad dominant individuals sometimes run back on their heels, their 10 and 20 yard sprints are relatively faster than their 40's, they often jump better than they sprint, their bilateral jumps tend to be ahead of their unilateral jumps, and their strength tends to be ahead of their reactivity.

Note that if you are quad dominant you will probably always *test* quad dominant to a certain extent. A lot of this is due to genetic structural and muscular qualities. However, shifting attention to your weaknesses can balance you and increase your performance on movements that you don't naturally do well on while continuing to push up your performance on those movements that you do.

A Word On Testing

Note also that it is possible to pass all these tests with flying colors and still have substantial imbalances. The tests will identify **EXTREME** weaknesses or imbalances, but often imbalances are relative. Thus, you may appear to have decent glute activation, ab strength, and hip flexor length when tested on an isolated test. If in doubt seek a qualified professional for a full evaluation.

Glute Drills

If you feel you could benefit from more isolated glute activation and awareness, I recommend you do at least 1 of these exercises before every strength training session.



[Cook Hip Lift](#)



[X-band or mini-band side steps](#)

You can also do some more advanced drills. Walk forward with your hands on hips for proprioception and aim to feel the glutes working. Try to walk normally and keep the rest of your lower body muscles relaxed. Next, do the same thing but this time come up on the balls of your feet and off your big toe as you stride forward - again aiming to feel the glutes. You practice being light on your feet while at the same time practice engaging the muscle group that will give you the most horsepower.

Next, pick up the pace and run some buildups. After doing these drills, you should have increased glute activation when you run.

Pay attention to how minor changes in your posture increase the amount of glute activation you get. When doing the glute activation test, notice what happens if you squeeze your abs. Also notice what happens to your perceived gluteal recruitment with minor changes in your posture. Small things can help build glute awareness. As you walk around throughout the day make a concerted effort to engage your glutes at heel strike. Dedicate yourself to glute training for the next few weeks. When your glutes do their share of work, your injury frequency will drop and watch your performance improve!