



BUTTS ON BIKES

THE PILATES WAY

If you're into cycling then you know how much difference a great bike makes to your performance.

What you may not know is how much difference good pelvic and core stability makes to your cycling performance. Whilst it's great having an awesome bike, it's far cheaper to work on your body and your core stability than it is to buy the latest \$15,000 lightweight bike frame from Italy.

By Jade Winter

Next time you're out on your bike and you're riding behind someone or you're in a pack, have a look at the hips and pelvis of the cyclists in front of you. Look very closely - what you're looking for is movement of the pelvis or hips. What you may see is that the hips will shear, dip, drop or twist ever so slightly, or even a lot. This movement usually appears each time pressure is applied to the pedal. It might be subtle, but look closely...can you see it?

A shift of even half a centimetre is too much movement. If there is movement present you need to strengthen your core and most importantly your pelvic or gluteal stability. This is done by strengthening specific stabilising muscles to decrease the movement, which not only helps to decrease your chance of a chronic injury or muscular tightness, it also helps increase the power of your cycling.

Movement through the pelvis is the most common sign of a lack of pelvic and core stability on the bike. However, another sign can be the knee rolling inwards instead of having good alignment and pressing down in line with the hip joint and the pedal.

If you're a cyclist or triathlete, or if you're a trainer or coach and you're training someone who is a cyclist then you need to get 'smart' about your cycle training. 'Training smart' in cycling is the same as training smart with any sport and in simple terms can be described as working on the weakest link in the chain. So often this weakest link is core and pelvic stability.

After all there is no point doing the same thing over and over again and expecting a different result right? So let's 'break the cycle' so to speak and examine what needs to be done.

WHY DOES GOOD CORE AND PELVIC STABILITY MATTER, AND WHAT DOES IT MEAN TO ME?

The consequences of pelvic instability are that it puts an incredible amount of extra wear and tear on the lumbar spine discs; this is never a good thing. It also means that because the stabilising muscles of the buttocks are weak, other muscles need to work overtime to try to stabilise the pelvis. On the bike these muscles include the lumbar extensors and the quadratus lumborum (amongst others). This extra work leads to a tightening up of the muscles mentioned, in addition to the hip flexors.

Poor pelvic and core stability on the bike usually leads to a sore back, knees, tight ITBs (iliotibial band) and much more. These are often overuse injuries and are far from pleasant; often taking a long time to fix to get the body back to normal.

There is not only an increased risk of overuse injuries if the pelvic and core stability isn't addressed, but power is lost every single time pressure is applied to the pedal. This completely robs you of the speed you just bought with that new \$15,000 Italian bike frame....

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WELL IF I CYCLE MORE, WON'T MY BUTT AND CORE JUST GET STRONGER?

No. The Gluteus Maximus may get stronger (and that's only a maybe) but the stabilising muscles of the buttocks and core definitely won't. When you cycle, it's those stability muscles that you really need to control the pelvis. These muscles need to be trained specifically and targeted individually without using the larger more dominant ones. Doing this decreases injury risk and at the same time enhances your performance on the bike.

WHAT DO I NEED TO DO TO GET MYSELF SORTED?

The first step is to check your bike is set up correctly. Take your bike to a good physiotherapist or biomechanist who specialises in cycling and bike set ups. They will assess any weakness and tightness in your body, at the same time as looking at your bike. An experienced bike mechanic will also be able to help with your set up.

Another alternative is you might like to talk with an elite cycling or triathlon coach. To get a recommendation try your state high performance sporting association - for example the Queensland Academy of Sport, the New South Wales Institute of Sport - for advice on where to go and who to see.

Basically you need to focus heavily on doing specific strengthening exercises to target the core and pelvic stabilising muscles in different ranges of motion to enhance your performance.

WHAT MUSCLES AM I SUPPOSED TO BE TRAINING TO INCREASE MY CORE AND PELVIC STABILITY?

The specific abdominal muscles to focus on to help increase your core stability are the transversus abdominus, obliques and the pelvic floor.

The gluteal or buttock muscles you need to focus on include the Gluteus Medius, Gluteus Minimus, and the deeper smaller hip rotator muscles (Quadratus Femoris, Gemellus Superior, Gemellus Inferior, Obturator Internus and Obturator Externus).

The most effective way to train these muscles is not in the gym, it's Pilates. For those that know their anatomy, this list of muscles shouldn't sound like another language. You may also notice I have left out the Rectus Abdominus the Gluteus Maximus from the list of muscles on which to focus.

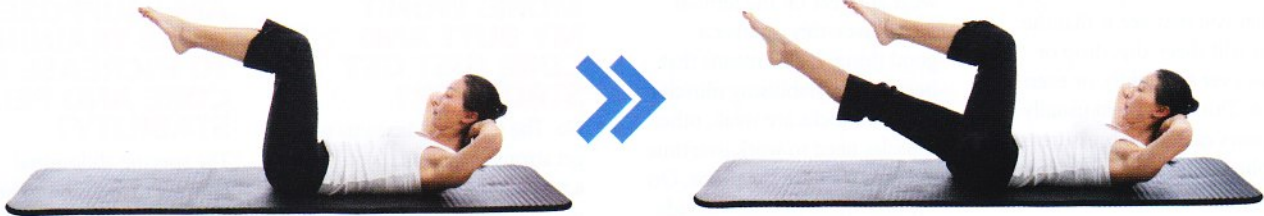
This is because these are not considered stabilising muscles. Whilst it's important that these two muscles are strong, training these over and over again is not 'smart'. These muscles are often too strong and are dominant 99% of the time, causing muscle imbalances and actually decreasing your core and pelvic stability. What we want is **more** stability and we are all about 'training smarter' remember?

STILL UNSURE OF HOW TO INCREASE YOUR CORE AND PELVIC STABILITY AND WORK THE RIGHT MUSCLES?

Follow this simple routine on a regular basis and boost your cycling performance. >>

BICYCLE LEGS

Lie on the back, with your legs bent up at right angles, held hip distance apart with your hands behind your head with the elbows wide. Curl the ribs to the hips lifting the head and shoulders and hold this position. Slowly extend one leg away at a 45 degree angle without letting the abs pop out or the lower back arch and then draw the leg back to the starting position. To challenge further, extend the leg lower, to make it easier extend the leg higher. *Repeat 50 times-25 each side.*



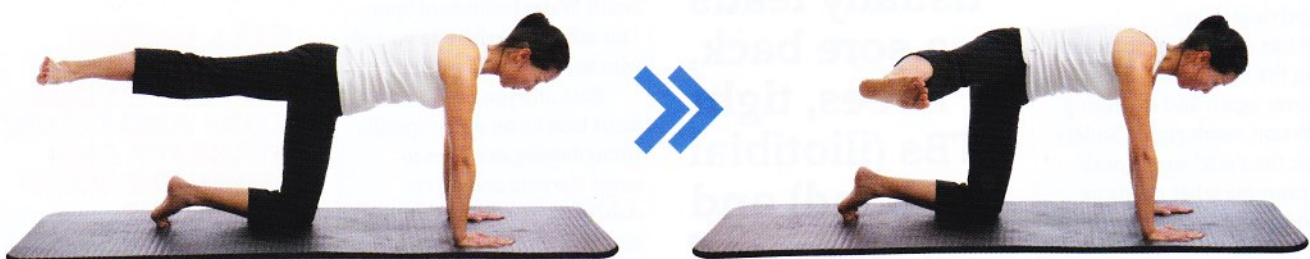
CRISS CROSS

Lie on the back, with your legs bent up at right angles, held hip distance apart with your hands behind your head with the elbows wide. Curl the ribs to the hips lifting the head and shoulders. Slowly rotate the upper body drawing one ribcage towards the opposite hipbone and extend the other leg out straight. Return back to the centre maintaining the curl and swap to the other side. *Repeat 50 times-25 each side*



LATERAL HORSE KICK

Kneeling on all fours, extend one leg out behind you without dipping or arching the back. Keep the hips parallel to the floor and turn the foot and leg outwards. Keeping the body still, EXHALE and slowly sweep the leg out to the side maintaining the height of the leg and the turnout as well. Then INHALE and draw it back to the centre again. *Repeat 20 - 50 times slowly and then change sides.*



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for more

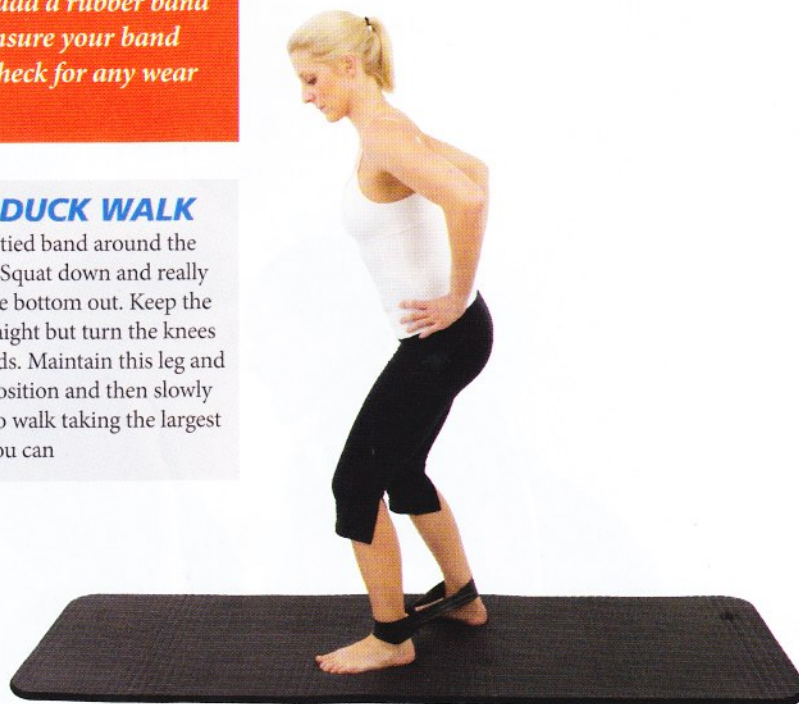


When performing these next exercises you can add a rubber band just above the knees to challenge as pictured. Ensure your band is tied tightly before use to prevent injury and check for any wear and tear of your band before each use. ⇓

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THE DUCK WALK

Place a tied band around the ankles. Squat down and really stick the bottom out. Keep the feet straight but turn the knees outwards. Maintain this leg and body position and then slowly begin to walk taking the largest steps you can



PELVIC CURL + OPENINGS

Place a tied band around or just above the knees and lie on your back with your knees bent and your heels close to your buttocks. Slowly curl the vertebrae up off the floor one at a time until your shoulders hips and knees are in one straight line. Squeeze the buttocks without arching the back and hold this position. Keep squeezing the buttocks and maintaining the height of the hips as you open the knees and close the knees. Repeat 50 times slowly. This exercise can also be done without a band.



LEG CIRCLES

Lie on your side with a tied band around your knees or just above. Your underneath arm is extended long and is used as a pillow for the head. Knees are bent half in front half behind. Roll the hips and body forward slightly and keep them rolled forwards. Extend the leg and keeping it straight proceed to circle the leg, keeping tension on the band the whole time. Do 25 circles one way and 25 the other. This exercise can also be done without a band. **ufm**

