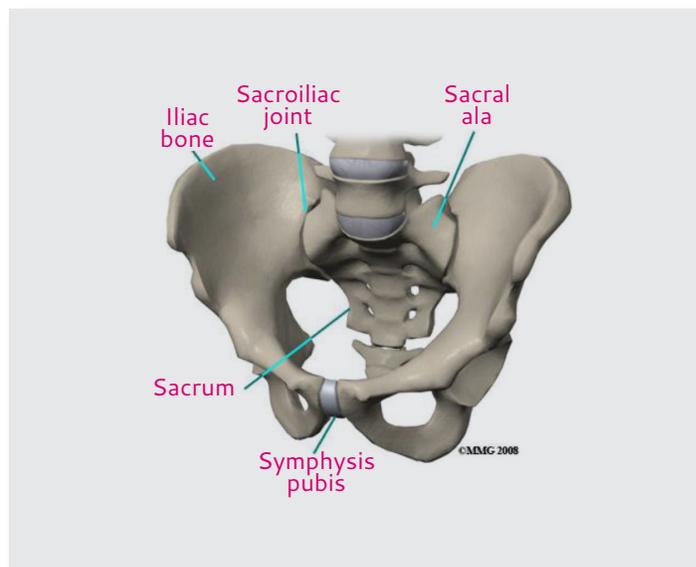


Pelvic Neutral

The most important concept of spinal stability is pelvic neutral (aka functional neutral). Pelvic neutral cannot be accomplished without first achieving full pelvic range of motion through pelvic tilts. Pelvic tilts allow you to become aware of pelvic movement and then pelvic neutral in order to retrain your normal core function. True core function begins in the position of pelvic neutral. The majority of core muscles either originate or insert on the pelvis. To function efficiently, muscles must be at their optimal length. When the pelvis is in neutral the musculature is in its most efficient and functional position. Pelvic tilts will take your pelvis through its complete range of motion.

Several joints are required to move to create proper pelvic motion. The most important to note are those that make up your pelvis (both left and right sacroiliac (SI) joints and the symphysis pubis). Improper movement in any of these joints negatively influences our body's ability to properly stabilize our spine.



POSTURE

Posture is a simple way to identify joint restriction or dysfunction.

- From the front, is one hip higher than the other? This indicates pelvic rotation and joint restriction.
- From the side, does your belly protrude and your butt stick out? This indicates increased anterior pelvic tilt which increases stress on the lumbar spine and SI joints resulting in restrictions.



Performing Pelvic Tilts



Anterior Pelvic Tilt



Posterior Pelvic Tilt

- Begin by lying on your back, knees bent and feet on the ground. Draw an imaginary line through your hips. All movement rotates around this axis.

ANTERIOR PELVIC TILT

Increase the curve of your low back by pushing your butt bones into the floor. Your tummy moves forward and space is created between your low back and the ground. If you experience pain it indicates something is wrong and treatment is warranted. Always complete pain free movement.

POSTERIOR PELVIC TILT

Tuck your bum under and flatten your back. Your pubic bone will move forward and your back will lie against the ground. Again, complete pain free movement.

- The movement between these 2 end positions is the functional range of your pelvis. The middle, between *anterior pelvic tilt* and *posterior pelvic tilt*, is your *pelvic neutral* (aka functional neutral). Proper joint motion and the pelvic neutral position are the foundation of all spinal stability and spinal stabilization exercises. Once achieved, pelvic neutral should be maintained throughout your day in any position you are in and during all movement. This includes seated and standing.
- Pelvic tilts should always be performed in a pain free range. Why? Pain is an indicator that something is functioning incorrectly and changes the way our body moves. It alters the sensory input our body receives which then alters the output of motor control and teaches us improper movement. But can improper function occur without pain? Of course it can! Pain is typically one of the last signals our body sends out to tell us something is wrong.

Spinal Stability

Traditional spinal stability exercises are described as spinal tracks. They include a progression of similar exercises of various levels of difficulty. All tracks start with easy spinal challenges and sequentially increase their difficulty. Once you have mastered a level, that means you have performed it perfectly by maintaining pelvic neutral throughout the movement, you progress to the next level and there is no need to repeat the level below. The next time you perform these exercises you simply start at the level you left off from.

CAMERA CUE

When it comes to spinal stability imagine filming your pelvis, just your pelvis. If anyone were to watch this video it would be boring! It would look like you weren't doing anything. Your pelvis would not move! That's how you know you are performing the exercises correctly.

Pelvic movement during an exercise means that the level you are attempting is too difficult. Your body is unable to stabilize the movement and you cheat by recruiting muscles other than your core to help out. Training through the failure leads to dysfunctional movement. It is much like strengthening instability, you're just asking for injury. Never train the dysfunction. Simply peel back to the level immediately below and complete the exercise perfectly at that difficulty.

We all have good and bad days. Your spinal track levels will change, preferably for the better, but there may be days you need to drop back to the less challenging level. The most important aspect of spinal stability training is that you train the hardest level in which you can maintain pelvic neutral and that you continue to challenge where that top level is.

An asterisk has been added to each spinal stability track description. *Indicates the level most people train at. You will notice that the asterisk for the dead bug is near the end of the track while the asterisk for the bridge track is near the beginning. Not all tracks will feel the same.

All 3 of the tracks progress to alternating legs or arms. Of course you will have to shift your weight when you move from left to right but there should be no pelvic movement. Focus on an internal shift that no one can see.

Why don't I just start at the top (the hardest spinal stability level)? Great question. It is one that gets asked a lot! The levels were designed for a reason. For example, it was not until I performed the dead bug track with just my arms that I realized my shoulders were so tight. I always blamed the arch of my back to tight hip flexors and a weak butt, but my lack of shoulder movement also played a role in my dysfunctional core. Starting from the top means you are more likely to perform the track incorrectly which means you are training the dysfunction and teaching your body that wrong movement is normal. This is the very opposite of what we are working towards. We don't reward bad behaviour. Don't even think about rewarding bad movement!

Make the spinal stability tracks a part of your workout or simply do them at home. Because they are technique based you can perform them daily. Your muscles won't need a day to recover. Consistency will make the biggest change on your stability.

Spinal stability is a part all movement. Take what you learn and feel while performing the spinal stability tracks and incorporate it into your daily movement and different exercises. This is spinal stability mastery! And for those of you who become masters – Great Job!

The 3 most common spinal stability tracks are found on the following pages. Play with them. They will teach you a lot about how your body moves. And if you have any questions, don't hesitate to ask.

Dead Bug



Dead Bug – level 5 starting position



Dead Bug – level 5 movement

- Begin on your back with your knees bent and feet on the ground. Relax neck and shoulders and lay arms by your side.
- Track progression (*begin with level 1, perform a few reps and if performed correctly move to level 2*)

1. Pelvic tilts/pelvic neutral.
 2. Raise arms individually over head while maintaining pelvic neutral.
 3. Raise both arms at the same time overhead.
 4. March, alternating legs.
 5. Start in dead bug position. See picture. Extend opposite arm and leg towards the ground.
- Perform 15 perfect reps each side.

Bridge Track



- Begin on your back with your knees bent and feet on the ground. Relax neck and shoulders and flip hands, palms facing up so you don't cheat by using your arms to lift.
- Track progression (*begin with level 1, perform a few reps and if performed correctly move to level 2*)

BUTT STABILITY

When you lift your left leg off of the ground it is your right butt cheek that fires to hold your pelvic stable. Place your hands on the front of your pelvis. If your pelvis shifts or drops when you lift your leg your butt isn't doing it's job.

1. Pelvic tilts/pelvic neutral.
 2. Bridge up and down while maintaining pelvic neutral. *Be aware if you shimmy on the way down and stop it. Slow and controlled movement.
 3. Bridge up and hold. Alternate heel raises. Feet do not come off the ground.
 4. Bridge up and hold. Alternate marching. Foot comes off the ground. Shift weight before you lift your leg.
 5. Bridge up and hold. March with knee extension. Lift leg and straighten. Bend and return to start.
 6. Bridge up and hold. March with knee extension and bum dips.
- Perform 15 perfect reps.

Quadruped Track



- Begin on all fours, shoulders and hips at 90 degrees. Keep neck in line with your spine and maintain the natural curve of your mid-back, don't hunch.
- Track progression (*begin with level 1, perform a few reps and if performed correctly move to level 2*)

Many lose **pelvic neutral** when raising and lowering their arms and legs (*level 4*). Instead of lifting, push out and pull in. Your knee may even drag on the ground for part of the movement.

Another common failure is opening up or rotating your hip when you extend it. I call this **'the fire hydrant'**. By rotating your hip you lose core engagement. Suck that hip back in and down and you will feel your abs again (*and also maintain pelvic neutral*).

1. Pelvic tilts/pelvic neutral.
 2. Alternating arm raises.
 3. Alternating leg raises.
 4. Opposite arm & leg raises, together.
 5. Add lateral shift.
- Perform 15 perfect reps each side.