

FIT TO PLAY & PERFORM — CORE STABILITY

Basework & Supine Bridging by Carl Petersen

To hold your pelvis, lumbar spine and hips in a neutral position, a strong upper and lower core is fundamental. The core muscles act as stabilizers for the upper and lower extremities and pelvis and help transfer energy from the legs through the core to the upper body and arms. A strong core is important for people of all ages especially if they practise rotational or asymmetric sports and activities.

The core muscles form the stable support base for the body. The lower core consists of 'the inner unit': the transversus abdominus (TA) (lower abdominals), multifidus (deep, small muscle of the back), the pelvic floor muscles and the diaphragm. These muscles work together to support the back and pelvis. Learn to switch on your core to a low level, like turning up the dimmer switch on a light.

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LOWER CORE BASE WORK

Begin all of the following exercises by lying on your back with your knees bent to 90 degrees. Tighten your lower abdominals/TA lightly by switching on your core like the dimmer switch on a light. You should feel a light tension in your lower abdominal area.

(adapted after Richardson et al, 1999)



1. 'Switch on Your Core' with Leg Fall Out

Once you have mastered isolating and tightening your lower core with a normal breathing pattern, progress to sliding out one leg at a time.

- Keeping the lower core switched on (under tension) during the entire exercise, slowly let one leg fall out to the side. Then bring it back up on a count of 10. Repeat 10 times on each leg.
- This helps connect the upper and lower core.
- Repeat with the other leg being sure to keep your lower core switched on the entire time and continuing to breathe. Repeat 10 times on each leg.



2. 'Switch on Your Core' with Leg March

- Find and switch on your lower core while lying on your back, knees bent up.
- Now march your feet up and down several inches for a count of 10 seconds.
- Don't raise your knees too high (not over 90 degrees).
- Repeat 10 times.

3. 'Switch on Your Core' with Limb Movement (Dying Bug)

- Find and switch on your lower core while lying on your back, knees bent up.
- Bring opposite arm and knee to 90 degrees, and then lower them on a count of 10.
- Alternate sides doing 10 repetitions on each.



RULES OF CORE STRENGTH

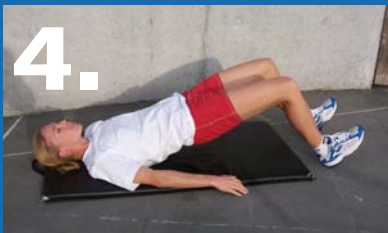
1. Always start with the 'switching on your core' routine to reeducate the lower abdominals to work in a pre-anticipatory way. This is especially important after a lay off, after an injury or when you have been malaligned, have low back pain, hip pain or stiffness.

2. Approach traditional sit-ups with caution as the elbow-knee movement places great strain on the low back.

3. Core exercises should be done at the end of strength workouts so that they can adequately function as stabilizers during the exercise.

SUPINE BRIDGING EXERCISES

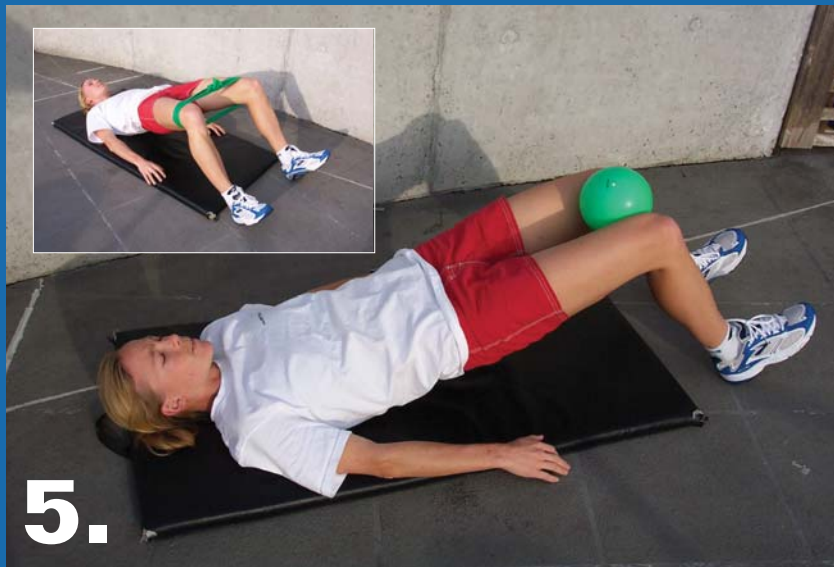
Now that you are able to switch on your core while performing different leg movements, it's time to connect the core to the extremities (arms and legs) with supine bridging exercises. The following exercises help develop the upper and lower core and strengthen specific larger muscles in a dynamic and functional way. They are functional in nature and reflect the current research that shows that our muscles and fascial tissue link together to form sling systems connecting the upper and lower core. As well, by adding external resistance from a ball and bands you partially close the kinetic chain. By adding a balance challenge you further augment the upper and lower core.



4.

Supine Bridging (face up)

- Lie face up on a mat with your feet on the floor and knees bent to 90 degrees.
- Keep your head and arms relaxed and switch on your core.
- Lift your hips and low back (from tail bone to rib cage) until your trunk is level.
- Hold for 4 seconds. Do 2-3 sets of 10-15 repetitions.
- Strengthens core and hips.



5.

Supine Bridging (with ball or band resistance)

- Lie face up on a mat with your feet on the floor and knees bent to 90 degrees.
- Push your knees apart against the resistance of a stretch cord, and lift your hips as above. This can also be done by squeezing a ball between knees for resistance.
- Hold for 4 seconds. Do 2-3 sets of 10-15 repetitions.
- Strengthens core and hips.



6.

Physio Ball Bridges (with resisted arm extension)

- Start in a supine position with stretch bands in a diagonal pattern around your thighs and held in your hands.
- Place feet on a physio ball, and squeeze a ball between your knees.
- Switch on your core, and raise your hips up to a neutral spine while squeezing the ball and raising the stretch cords overhead in a diagonal pattern.
- Hold for 4 seconds. Do 2-3 sets of 10-15 repetitions.
- Strengthens upper and lower core and hips and arms.



7.

Physio Ball Bridges (with arm extension & torso rotation)

- Start in a supine position with stretch bands in a diagonal pattern around your thighs and held in your hands.
- Place feet on a physio ball for an unstable base.
- Switch on your core, and raise your hips up to a neutral spine with stretch cords overhead in a diagonal pattern.
- Now try rotating the ball, and hold for 4 seconds. Do 2-3 sets of 5-10 repetitions.
- Strengthens upper and lower core and hips and arms.