



## Core Stability programme

Your Core Stability is essential in sports performance and in the prevention of injuries. The body's core muscles are the foundation for all movements. The muscles of the torso stabilize the spine and provide a solid foundation for movement in the extremities.

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These core muscles lie deep within the torso. They generally attach to the spine, pelvis and muscles that support the scapula. When these muscles contract, we stabilize the spine, pelvis and shoulders and create a solid base of support. We are then able to generate powerful movements of the extremities.

Training the muscles of the core also corrects postural imbalances that can lead to injuries. The biggest benefit of core training is to develop functional fitness - fitness that is essential to both daily living and regular activities.

Power is derived from the trunk region of the body and a properly conditioned core helps to control that power, allowing for smoother, more efficient and better co-ordinated movement in the limbs. Moreover, well-conditioned core muscles help to reduce the risk of injury resulting from bad posture. The ability to maintain good posture helps to protect the spine and skeletal structure from extreme ranges of movement and from the excessive or abnormal forces acting on the body.

Abdominal bracing is the main technique used during core exercise training. It refers to the contraction of the abdominal muscles. To correctly brace, you should attempt to pull your navel back in toward your spine or cough once. This action primarily recruits the transverse abdominus muscle. Be careful not to hold your breath – you should be able to breathe evenly while bracing.



**The following exercises are all designed to help strengthen your core muscles. Perform 3 sets of 10 repetitions on each exercise primarily and increase this as your core increases in strength.**



### **Focus on your core**

Before you start to exercise your body's core, locate your deepest abdominal muscle — the transverse abdominus — by coughing once. Focus on keeping this muscle contracted while doing each of these exercises, and the rest of your core muscles will get a workout too. With each exercise, breathe freely and deeply and avoid holding your breath. Coordinate your breathing with the activation of your transverse abdominus to get the maximum benefit.

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### **Leg Extentions**

- a) Lie on your back. Raise your legs and bend them so that you form a right angle at your hips and knees.
- b) Keeping your hips completely still, lower and straighten out one leg so that your heel is about 4 inches from the floor. The movement should be slow and controlled.
- c) Return to the original position and repeat on the other leg.

### **Lowering and Raising Legs**

- a) Lie with your back flat on the floor and your legs raised above your hips.
- b) Lower your legs for 30 seconds until the heels are about 4 inches from the floor. Without allowing your heels to touch down, raise them for another 15 seconds.
- c) Return to the original position and repeat.

### **The Plank**

- a) Assume a front-support position resting on your fore-arms with your shoulders directly over your elbows.
- b) Straighten your legs out behind you and lift up your hips to form a dead-straight line from your shoulders to your ankles. You should be balanced on your fore-arms and toes, with your lower abdomen and back working to keep your body straight. Hold for 30 seconds.



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### Crunches on the ball

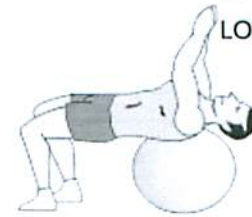
- Lie back on the ball with your knees bent and your feet flat on the floor.
  - “Crunch” or curl your stomach to lift your shoulders just off the ball and slowly lower yourself.
- Try not to use your hip flexor muscles to carry out this movement, or use your arms to pull up your head.



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### Russian Twists on ball

- Lie back on the ball with your knees bent and feet flat on the floor. The ball should be on your upper back.
- Keeping your hips and body parallel to the floor rotate your shoulders to the right with your arms extended.
- Now rotate towards your left and repeat.



### Back Extensions on ball

- Lay face down with your body curled around the ball.
- Lower your upper body towards the floor until your head is almost on the floor and then pull yourself back up until the torso forms a straight line with the legs.



### Gluteal Lifts on ball

- Lie back on the ball with the head, neck and shoulders supported, knees bent and body in a table-top position.
- Lower the hips towards the floor without rolling on the ball.
- Squeeze the gluteal muscles to raise hips until body is in a straight line like a bridge.



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