

FORWARD MOTION
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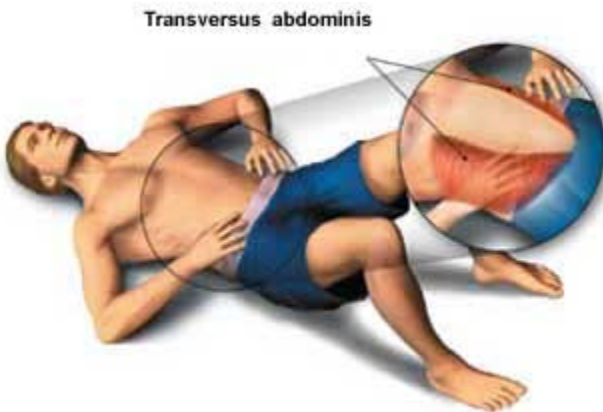
Core Conditioning Exercises

The core, or trunk, of your body is your center of gravity. Core muscles — abdominal, back and pelvis — provide primary support to your spine which aides in movements of the extremities. Core conditioning teaches your body how to activate important stabilizing muscles and coordinate the use of these muscles with other muscles in sport-specific movements. Most of us are unable to functionally activate some of our most important stabilizing muscles.

What will core conditioning do for me? In the sport of triathlons, swimming, cycling, and running are the 3 disciplines. A weaker core reduces efficiency of movement and contributes to overuse injuries. It doesn't take great strength to use the key stabilizers correctly. It simply requires coordination between the brain and muscles.

The key to core conditioning is to train progressively. In order to benefit, basic exercises must be completed before going on to more difficult ones. You have to bring them along step by step. Going directly into an advanced core exercise is like running 20 miles on your first day of marathon training. Needless to say, core conditioning requires patience and a willingness to perform exercises that may not look like they're doing much.

We will break this down into 3 phases. The first phase is based upon isolation exercises that are meant for the brain to communicate with the proper muscles. The second phase includes exercises that allow for core activation in coordination with other muscle movements. The third phase will train the body to incorporate core activation with sport specific activities. In this case, similar exercises to kayaking, cycling, and running will be incorporated. Remember, master the basic exercises before attempting the advanced ones.



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Before you start to exercise your body's core, locate your deepest abdominal muscle — the transversus abdominis — by coughing once. The muscle you feel contracting is your transversus abdominis.

Focus on keeping this muscle contracted while doing each of these exercises, and the rest of your core muscles get a workout, too. Once you know how to contract your abdominal muscles, begin the core muscle exercises.

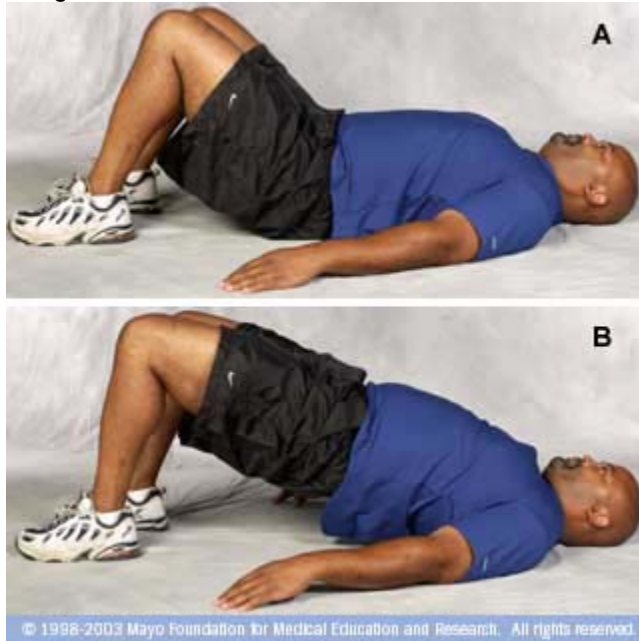
Abdominal Hollowing – to further enhance the exercise, hollow your abdomen by pulling your bellybutton towards your spine. This can be done by sucking in your stomach and tilting your pelvis. This will isolate the abdominal muscles.

With each exercise, breathe freely and deeply and avoid holding your breath. Coordinate your breathing with the activation of your transversus abdominis to get the maximum benefit.

PHASE 1 CORE EXERCISES - Isometric

Perform these exercises 3 times per week. Repeat each exercise 10 times to make one set. Perform a total of 2-3 sets.

Bridge



Lie on your back with your knees bent (A). Keep your back in a neutral position — not overly arched and not pressed into the floor. Avoid tilting your hips up.

Cough to activate your transversus abdominis. Holding the contraction in your abdominal muscles, raise your hips off the floor (B).

Align your hips with your knees and shoulders. **Continue to hold this position by contracting your abdominal muscles.** Hold and take three deep breaths — or for about five to eight seconds.

Return to the start position and repeat.

*For a challenge, try alternately extending one knee while maintaining the bridge position.

Single Leg Abdominal Press



Lie on your back with your knees bent and your back in a neutral position (A). Cough and hold to activate your transversus abdominis.

Raise your right leg off the floor — so that your knee and hip are bent at 90-degree angles — and rest your right hand on top of your right knee (B).

Push your hand forward while using your abdominal muscles to pull your knee toward your hand. Hold for three deep breaths and return to the start position.

Repeat this exercise using your left hand and left knee. Keep your arm straight and avoid bending more than 90 degrees at your hip.

Single Leg Abdominal Press Variation



Start in the same position as the Single Leg Abdominal Press.

Opposite hand on opposite knee. Push your right hand against your left knee while pulling your knee toward your hand (A). You'll be pushing and pulling across the center of your body. Repeat this exercise using your other hand and leg.

Hand on outside of knee. Place your left hand along the side of your left knee (B). Use your hand to push your leg inward. At the same time, create resistance by pushing your knee away from the center. Repeat using your other hand and leg.

Double Leg Abdominal Press



Lie on your back with your knees bent and your back in a neutral position (A). Cough and hold to activate your transversus abdominis.

Raise your legs off the floor one at a time and rest your hands on top of your knees (B). Push your hands against your knees while using your abdominal muscles to pull your knees into your hands.

Keep your arms straight and don't let your hips bend more than 90 degrees. Hold for three deep breaths. Then return to the start position.

Modified Plank



Lie on your stomach. Raise yourself up so you're resting on your forearms and your knees.

Keep your head and back in line and imagine your back as a tabletop. Align your shoulders directly above your elbows.

Squeeze your core muscles. Create resistance by pressing your elbows and your knees toward one another. Neither should move from their positions on the floor.

Hold for three deep breaths, then return to the start position and repeat.

Side Plank



Side planks challenge your stability and work the muscles along the side of your body.

Starting on your left side, raise yourself onto your left forearm. Tighten your core muscles to keep your shoulders, hips and knees in alignment (A). Align your left shoulder directly above your left elbow. Rest your right arm along the side of your body.



Hold this position for three deep breaths before relaxing. Repeat this exercise on your right side.

For an added challenge, balance on your left hand, raise your hips off the floor and extend your right hand toward the ceiling (B). Hold for three deep breaths, relax and switch sides.

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PHASE 2 CORE EXERCISES – Muscle Coordination with Stabilization

Perform these exercises 3 times per week. Repeat each exercise 10 times to make one set. Perform a total of 2-3 sets.

Segmental Rotation



Lie on your back on the floor with your knees bent and your back in a neutral position. Cough and hold to activate your transversus abdominis.

Keeping your shoulders on the floor, let your knees fall **slowly** to the left (A). Go only as far as is comfortable — you should feel no pain, only a stretch.



Use your trunk muscles to pull your legs back up to the start position. Repeat the exercise to the right (B).

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Abdominal Crunch

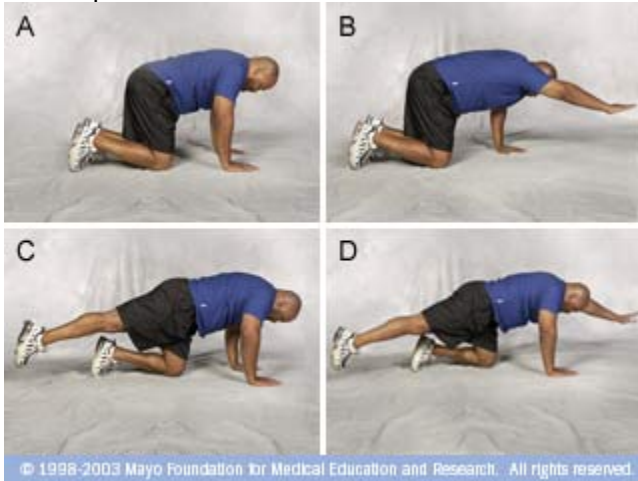


Lie on your back and place your feet on a wall with a 90-degree bend at your knees and hips. Cough and hold to activate your transversus abdominis.

Imagine two dots in a vertical line on your abdomen — one above and below your bellybutton. Imagine pulling those dots together.

Use your trunk muscles to raise your head and shoulders off the floor. To avoid straining your neck, cross your arms on your chest, rather than locking them behind your head, and don't raise your head more than shown. Hold for three deep breaths, then return to the start position and repeat.

Quadruped



Start on your hands and knees with your hands directly below your shoulders and your head and neck aligned with your back (A).

Cough and hold your core muscles tight. Raise one arm off the floor and reach ahead (B). Hold for three deep breaths, return your arm and raise your other arm.

Repeat the exercise by raising each leg (C).

Challenge yourself by raising one arm and the opposite leg together (D). When raising your leg, avoid rolling your pelvis. Center your hips and tighten your trunk muscles for balance. Do this on both sides.

Modified Plank Variation



Starting from the modified plank position, concentrate on contracting your core muscles. Raise your right arm off the floor and hold for three deep breaths (A). Repeat with your left arm.

Next lift each leg, in turn, from the modified plank start position (B). Hold for three breaths before returning to the start position.

When you've mastered the single-arm and single-leg lifts, lift both an arm and the opposite leg at the same time for an extra challenge.

Abdominal Roll

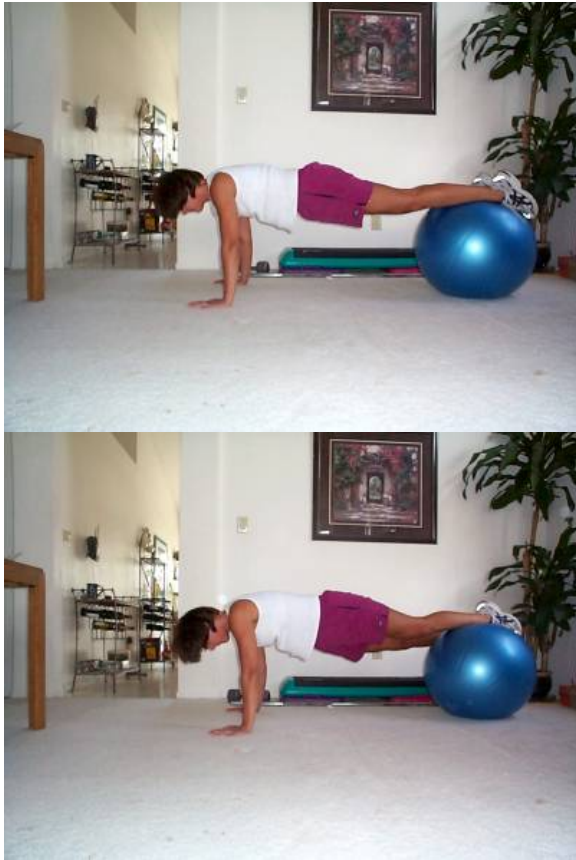


Place your arms on the ball, parallel to one another. Pulling your belly button towards your spine and tightening your torso, slowly roll forward until your chest touches the ball. Keeping form, slowly pull your body back using your arms and abdominals. Don't collapse as you roll forward! Repeat 6-10 times.

PHASE 3 CORE EXERCISES – Functional Stability

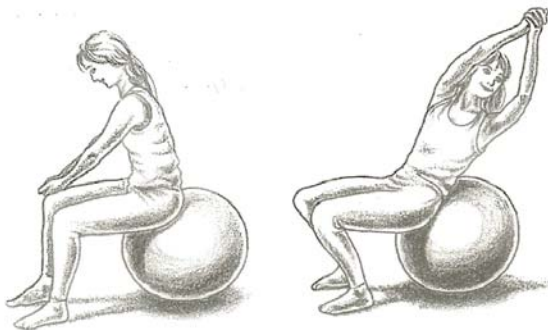
Perform these exercises 3 times per week. Repeat each exercise 10 times to make one set. Perform a total of 2-3 sets.

Ball Roll



Place feet on either side of the ball (turn your ankles so that you are hugging the ball). Cough and hold your core muscles tight. Hold body in a straight line with abs pulled in, hips straight and hands directly under shoulders. Slowly roll the ball to the right, keeping torso straight, then to the left. Don't sag in the middle. Do as many as you can for 10 to 20 seconds, rest and repeat.

Diagonal Arm Lifts on Stability Ball

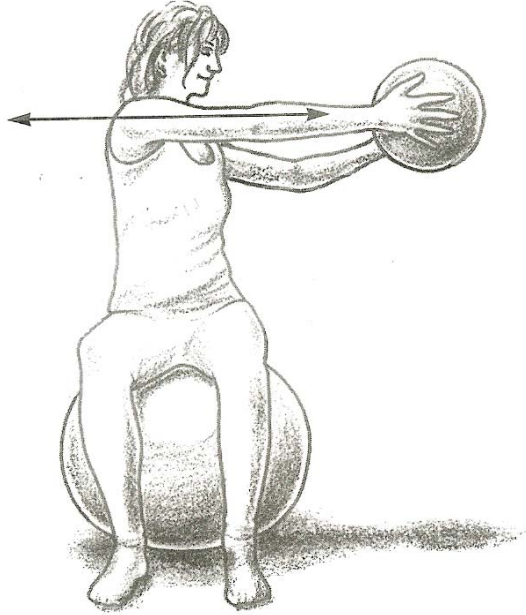


Sit on ball. Clasp hands and place by right knee. Roll ball forward while leaning backward. Cough and hold your core muscles tight.

Raise hands over left shoulder. Watch hands throughout motion. Repeat on other side.

To challenge yourself, hold a small dumbbell while performing this exercise.

Trunk Rotation on Stability Ball

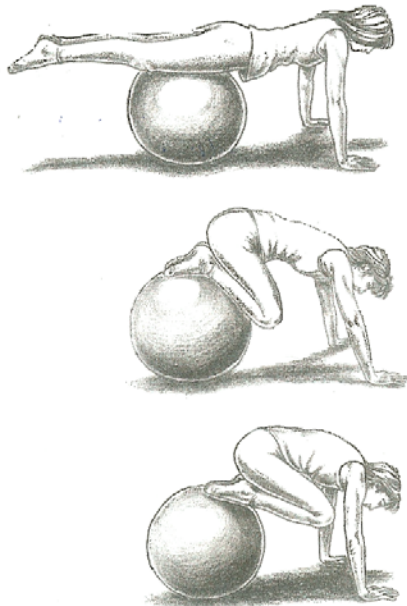


Sit on ball. Grab a medicine ball or dumbbell with both hands. Hold straight out in front of you, shoulder height. Contract your core muscles.

Rotate arms to the right, then left slowly. Watch ball throughout the motion.

To challenge yourself, after rotating to the side, bring your chest down towards the ball you are sitting on. Keep your hands straight out in front of you.

Prone Abdominal Crunch on Stability Ball



Begin in the neutral position with thighs on the ball. Contract your core muscles. Keep the low back from sagging.

Bend legs and draw knees up towards the chest.

In addition to strengthening the abdominal muscles, it will strengthen the gluteal, hamstring, and quadriceps muscles.

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