

Esercizi di stabilizzazione del core

Functional Training & Core Stabilization

What is the “Core”?

Core stability includes the “combined attributes of strength, balance, agility and flexibility of the muscles that control the trunk and spine.” A core conditioning program includes performing exercises that promote awareness and the activation of muscles required to stabilize the spine prior to both common and challenging movements. Successful *functional training* is dependent upon the stability of the core. Although the core is often associated with abdominal exercise, it is in fact much more comprehensive than your typical abdominal crunch or sit-up routine.

Il core è il punto in cui si localizza il centro di gravità del corpo umano e dove inizia ogni movimento.

Core Activation Exercises – Floor

Lower Unit

Lie on the floor or mat on your back (supine) with your knees bent 90 degrees and your feet flat on the ground. Place one hand on your midsection a couple inches above your navel toward your chest and then cough. Then try to suppress a second cough by drawing the navel toward the spine using the transverse abdominis muscle (TA). Holding that contraction, activate the pelvic floor muscles by visualizing pulling the center bottom of your pelvis toward the head. Breathe normally while keeping the gluteal muscles (buttock) relaxed, then release. Repeat this several times before your workout begins for the 1st couple of weeks until you feel confident that you are activating all the muscles of the inner unit.



Posterior Core

Lie on your back (supine) with knees bent and feet together. Place a towel between the knees and squeeze. Contract the inner unit and the gluteal muscles (buttocks). Lift the hips toward the ceiling, maintaining the squeeze on the towel. Keep the lifted part of the body in a straight line from the knees to the hips to the shoulders. Lower and repeat the exercise 5-10 times. Hold for 5 seconds at the top.



Increase Challenge

1. Increase the challenge to the lower unit by performing a progression of dead bug exercises. Lie on your back with knees bent. Activate your lower unit and the buttocks to hold spine stable and neutral throughout the exercise. Relax your neck and shoulders as you lift your arms and feet off the floor. If you can stabilize your spine (no pain or fatigue in the low back) then progress to slowly move your arms and legs alternating each side up and down without allowing movement in the spine.
2. Increase Challenge to posterior stabilizers.

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Abdominal Crunches – Floor & Ball

Abdominal Crunches

Lift your head, neck and shoulders as one unit in a controlled motion. Lead with the ribs, up and forward in two counts until your shoulder blades clear the floor. Exhale as you complete the last count up. Do not lift any higher than this or you will be using your hip flexors instead of your abdominals, which could cause low back pain. Come back down slowly without relaxing the abdominals. Start with 5 repetitions and gradually build up to 20.



Crunches on Physioball

1. Once you have mastered sitting on the ball and maintaining a neutral spine with no discomfort you can proceed to crunches on the ball. Start by sitting on the ball and then slowly walk your hips down so that you are in about a 45 degree angle leaning back on the ball with your head up. Crunches are performed by slowly lowering your shoulders and head back and slightly around the ball and then returning to a crunched position. Keep your feet underneath your knees and your chin out of your chest. Do not let your neck move too far back or down the ball. Stop the exercise if you have any discomfort in the neck or low back. Increase the challenge by moving your arms from a crossed position in front of your chest up toward your head or above it. The farther you move your hands out over your head the more demanding this exercise becomes.
2. Add challenge by adding resistance like a medicine ball or dumbbell.

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Hip & Back Extensors – Floor

Hip Extension

1. Starting on hands and knees, slowly raise one leg to a horizontal position and hold for 5 seconds. Keep your head in-line with the spine (don't look up or forward). Gradually lower the leg and then lift the opposite leg.

Hip & Back Extensors

2. Starting on hands and knees, slowly raise one arm and the opposite leg to a horizontal position and hold for 6 seconds. Gradually lower the arm and leg and then lift the other arm and opposite leg.
3. Same as above except you will lift arm and leg on same side to increase challenge.



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The Core Brace Position – Floor

Prone Bridge

1. Start by pulling in your lower unit and other abdominals and lift your torso up from the elbows with hands turned inward. Lift from the knees or the toes depending on your ability to maintain a neutral spine (no fatigue or pain in the back) while holding.

Side Bridge

2. Start by lying on your side with the knee bent at about a 90-degree angle. With the abdominals pulled in, push up with the elbow, lifting the upper torso off the ground.
3. Increase the challenge in exercises 3-6.



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Challenge Neutral Posture – Standing & Ball Work

One Foot & Balance Board Standing

1. Stand on one foot and try to maintain your neutral posture as described in the Section 2 introduction.
2. Stand on two feet or eventually one foot in the middle of a balance board maintaining your neutral posture.
3. Challenge can be increased by closing your eyes or moving light weights (medicine balls) out in front and to the side of the body. Be careful to maintain a neutral spine at all time keeping the strain on the core muscles rather than the low back area.



Functional Training Exercise

Chest Press – Bench, Floor or Physioball

Chest Press

1. Lie supine on a bench with your knees bent and your shoulder blades and head in contact with the bench, floor or physioball. Adjust your arms so that your elbows are positioned at about shoulder height. Press your arms out in front of you until your elbows are almost straight. Pause and slowly bring your arms back to the starting position. Exhale on the push and inhale when lowering the weight. Start with light weights until you are comfortable stabilizing the weights. It is always a good idea to have a trainer spot you when you are a beginner at this exercise.
2. Increase core challenge by training one arm at a time or alternating back and forth between arms.



floor option



alternate



physioball

Push-Ups

1. Assume the push-up position on the floor as shown below. Straighten arms to push away your trunk (push-up). Hold for two seconds and slowly lower torso back to the ground. Do not allow your hips to drop or your back to arch (keep core activated). Exhale as you push up. Keep your elbows close to your body as you push up and down.
2. Increase whole body challenge by changing positions as shown below.

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Upper Back (Rows and Pulls) – Bench, Physioball, Bar

Bent Over Row

1. Position yourself with the right knee and the same side arm on a bench or chair for back support. The left foot should be on the ground with that knee slightly bent, keeping the hips square and the upper body parallel with the floor. Start with the left arm holding the dumbbell in a fully extended position. Pull the weight up by bending the left arm and pulling it up so that the upper arm is parallel with the floor and the elbow forms a right angle.
2. Increase core challenge by extending one leg (opposite lifting arm) straight back. Keep your core activated and a neutral spine.

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Pull-Ups

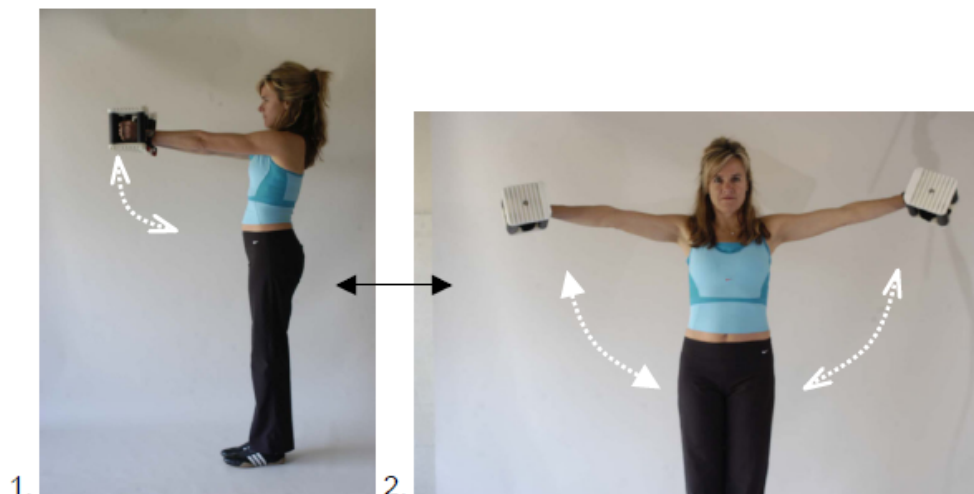
3. Use both forward and reverse grips. Start from the hanging position with arms fully extended. Be sure to pull in your abdominals and keep your knees slightly bent in front of you. Pull up until your hands are level with your shoulders, pause and slowly return to the starting position. Exhale on the pull and inhale when returning. Don't arch your back.



Shoulders – Standing

Shoulder Raises

1. **Anterior Raises:** While standing with feet hip width apart, hold light weight dumbbells in both hands. Begin with palms toward your side and lift the weights straight out in front to a shoulder height level keeping arms straight throughout the movement. Pause and slowly return to the starting position. Fatigue should be felt in muscles of the shoulder and not in the upper back or neck areas. Avoid any discomfort at the joints.
2. **Lateral Raises:** While standing with feet hip width apart, hold light weight dumbbells in both hands. Begin with palms toward your side and lift the weights with straight arms outward up to shoulder height, pause and slowly return to the starting position. Fatigue should be felt in muscles of the shoulder and not in the upper back or neck areas. Avoid any discomfort at the joints.



Shoulder Press

3. Sit with your feet flat on the floor and your upper body in neutral position. Hold the dumbbells at about the shoulder height. Push the weight toward the ceiling. When your elbows are almost extended, pause and slowly return to the starting position. Exhale on the push and inhale when returning the weight. Focus on holding your core throughout this exercise.
4. Increase the core challenge by training one arm at a time or alternating back and forth between arms. You can also combine a lower body exercise to the shoulder press exercise.



combining

Emphasis on Arms – Standing

Biceps Curls

Triceps Extensions

1. From a standing or seated position, hold your set of dumbbells to your side with arms extended. Maintain a neutral spine by holding the abdominal muscles throughout the exercise. Curl up the weight with an underhand grip toward your shoulders. With the dumbbell motion you should rotate the palms from facing the sides at the start to the palms facing the chest at the end of contraction.
2. Position yourself with the left knee and the same side arm on a bench or chair for back support. The right foot should be on the ground with that knee slightly bent, keeping the hips square and the upper body parallel with the floor. Start with the right arm holding the elbow level with your torso. Lift the weight up by extending the right arm and pushing the weight back keeping the upper arm parallel with the floor. Squeeze the triceps, pause and slowly lower the weight back to the starting position. Complete your repetitions and then switch sides.
3. Increase the core challenge by using your body weight in dip motions or perform curls while standing on one foot or a balance disc.



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combining

alternating

1 foot

Lower Body – Standing, Physioball

Step-ups

1. Place a sturdy box, bench, or step about 4-10 inches high in front of mirror and stand facing the step or to the side of the step. Keeping your hips and shoulders square, slowly step up on the bench as though you're going up stairs but in slow motion. Then step back down. Keep a neutral posture. Start with no weight and slowly progress with added resistance from dumbbells. Holding the weight while stepping requires a strong focus on core – so don't forget to activate.

Step-Downs

2. Stand on top of the bench. Keep the foot of your non-dominant leg on the bench, with the toes slightly turned out (5-10 degrees). Keeping your hips and shoulders squared forward, and arms on hips or in front of you for counterbalance, slowly step forward off the bench as though you're going down stairs but in slow motion. Then step back up. Repeat w/out letting your knee turn in.



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Squats

3. **Using Physioball:** Stand facing away from a wall. Place an exercise ball against the wall at the low-back height. Plant your feet 12–18 inches in front of your body with a shoulder-width stance, toes pointing forward. Lean into the ball as you lower your body until your knees are flexed at a 90 degree angle, pause and return to starting position. As you squat, the ball will move to your mid-and upper-back region. Your weight should be on your heels, not your toes, and your knees should not be past your toes.
4. Begin with feet shoulder width apart with feet pointing straight ahead and knees over 2nd & 3rd toes. If using resistance, hold dumbbells at chest level with palms facing body. Perform a $\frac{1}{4}$ or $\frac{1}{2}$ squat keeping lower extremity in proper alignment. Before any compensation (i.e., bad form) occurs, activate gluteals and stand to a fully upright position.



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Lunges

5. Begin in a standing position and hold your core with spine neutral throughout the exercise. Step forward on one leg and slowly lower yourself by bending your knees until your back knee is 6-12 inches from the floor. Slowly return to a standing position. Pause and then repeat alternating sides or repeat same side when you have progressed in your conditioning. When bending the knees do not let the front knee travel beyond or in front of the same leg's ankle.
6. Increase core challenge by adding resistance or combining upper body exercises.



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