

Healthy Living

Patient Information from the American Chiropractic Association

Introduction to Stability Balls

Stability Balls, also known as exercise balls, FitBalls, Swiss balls, Physio balls, etc., are a low-cost versatile piece of equipment that can help improve core strength, facilitate flexibility exercises, and add variety to traditional fitness routines.

The exercise ball introduces an element of instability that doesn't come in a floor exercise. The body naturally and automatically responds to this instability by engaging the core muscles, both those in the abdominals and back and in the pelvic floor and hips. Over time, the core muscles strengthen, resulting in better posture, improved balance and enhanced athletic ability. Furthermore, the spinal movement induced by using the exercise ball (small range, adjustment of balance) may help reduce pain by stimulating the body to produce higher amounts of natural pain inhibitors.

According to the *Journal of Strength and Conditioning Research*, adding a stability ball to your sit-up and back-extension routine could boost your core stability in as few as 5 weeks. In the study, 30 women performed daily abdominal and back exercises on a stability ball or on the floor for 5 weeks. While tests of muscles that control balance and stability showed nearly across-the-board improvement, those using the ball significantly outscored the floor group.

Choosing an Exercise Ball

It is important to buy the right size ball and maintain the proper air pressure. The firmer the ball, the more difficult the exercise will be. The softer the ball, the less difficult the exercise will be. If you are overweight, an older adult, generally deconditioned, or just beginning a fitness routine, you may want to consider using a larger, softer ball.

Stretching Tips

To get the maximum benefit from stretching, use proper technique. The American Chiropractic Association offers the following tips:

- Warm up your muscles by walking or doing other gentle movements for 10 to 15 minutes.
- Slowly increase your stretch as you feel your muscles relax. Don't bounce.
- Stretch slowly and gently to the point of mild tension, not pain.
- Breathe. Inhale deeply before each stretch and exhale during the stretch.
- As your flexibility increases, consider increasing the number of repetitions.
- Stop immediately if you feel any severe pain.

When sitting on the ball, make sure your hips are level or just slightly higher than the knees. The following are general guidelines for buying the right size stability ball:

Height	Ball Size
Under 4'6"	30 cm (12 inches)
4'11" – 5'4"	45 cm (18 inches)
5'1"–5'7"	55 cm (22 inches)
5'8"–6'2"	65 cm (26 inches)
Over 6'2"	75 cm (30 inches)

Use in the Office

Stability balls also have become increasingly popular as an alternative to chairs in the home and office. "Active sitting" on a ball may engage your postural

muscles and allow you to experience the benefits of movement while remaining seated; however, little research has been conducted on the use of stability balls for prolonged sitting.

Safety Precautions

Use the ball in an open space, away from any potential hazards. Consider using burst-resistant balls, which deflate slowly, if punctured. In addition, exercise balls may not be suitable for all patients, especially those with sudden changes in blood pressure. Before using a stability ball, ask your doctor of chiropractic to help you develop an individualized program and teach you proper technique.

Basic Exercises

To start to exercise, gently sit on the ball and begin to find a neutral lumbar spine position:

- Slouch slightly by rounding the lower and upper back.
- Begin bouncing lightly.
- Allow your body to automatically find your straightened posture, which will allow you to maintain your balance and continue bouncing. The straightened posture, which occurs during the "up bounce," is your neutral lumbar spine position.

When you feel comfortable with the ball, you can perform basic exercises in a slow and controlled manner. The following exercises should be performed with a standard, properly-fitted stability ball:

Basic Abdominal Crunch: Lie on your back with your calves resting on the top of the ball; Curl your upper body, squeezing your abdominals and lifting your shoulders and upper back. (Fig. 1a, 1b)

Body Ball Crunches: Lie on the ball with your back supported at the arch. Cross your arms behind your head or across your chest. Keep both feet on the floor. Curl your upper body, squeezing your abdominals and

lifting your shoulders and upper back. Return to starting position. Do not pull on your head and neck. (Fig. 2a, 2b)

Ball Pushups: Place the front of your knees and shins on the ball and your hands flat on the floor. Look down at the floor and lower your face to within a few inches of it, then push back up to the starting position. Increase the challenge by walking further out to ankles. (Fig. 3a, 3b)

Fig. 1a



Fig. 2a



Fig. 3a



Fig. 1b



Fig. 2b



Fig. 3b



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For more information on prevention and wellness, or to find a doctor of chiropractic near you, go to the Patient Information section on ACA's Web site at www.acatoday.org or call 800-986-4636.

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