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**perfect fit**

# Keep it rollin'!

**W**HATEVER name they are identified by—Swiss balls, medicine balls, Flexaballs, Fit balls, Resist-a-balls, Physio balls or stability balls—they are large air filled balls used as a piece of exercise equipment. This new and dynamic revolutionary idea is sweeping the fitness industry today. They offer effectiveness, safety, and are a fun way to workout. You can work on functional strength, flexibility, endurance, muscle toning and on keeping that fat off, while targeting balance and coordination.

Physical therapists have used these large, resilient, stability balls for years to challenge, encourage and improve movement. As one learns to use the ball to stretch and strengthen, the exercises can be difficult and challenging, but can be adjusted to meet all ages, fitness levels and special requirement categories.

Introduced in Switzerland in 1909, the ball was initially introduced into the physical therapy circles to treat orthopedic and neurological disorders. The trend caught on extensively in the United States in the 1970s and 80s.

In 1992, the Swiss ball began to be used more extensively in the field of physical fitness.

## Benefits

The ball can improve muscle tone, help you lose fat by increasing your lean body mass, increase muscular endurance and strength, improve or restore flexibility, increase abdominal and spinal strength and stability, improve your balance, posture and coordination.

The ball is great fun to train with and brings a freshness and newness to your exercise programme.

Improving, developing and main-

aining motor control is an absolute essential of life. As the ball gets you up off the floor, it allows one to move easily on a cushion of air. This results in more comfortable movement for most participants. Many strengthening exercises and stretches can be performed on the ball that are not possible on the floor. Isometrics can be practiced very effectively. Maintaining proper alignment on the ball stimulates the body's natural motor reflexes and encourages the body to react as a whole, integrated unit. In other words, the whole body is challenged to participate in order to correct posture and balance while performing dynamic stretches and contractions.



**Figure 3: Using the Swiss ball to work on lower body strength and endurance**

Working with the ball is extremely effective in targeting the abdomi-

nal and back muscles. Strong postural muscles and proper posture are important for relieving and preventing low-back pain.

The ball can improve muscle strength and endurance in all major muscle groups. One of the most attractive features is the ball's versatility. It can be adapted to all ages, all fitness levels and to people of all health conditions. Demands placed on the body during activity on the ball vary dramatically. The overload and challenge is anything but consistent and predictable. As the ball is portable and lightweight, it is easy to ravel with, and to store. It is an inexpensive exercise tool and is maintenance-free over a long period of time.

## A healthy back

At least 90 per cent of our population has, at some time or another, experienced some degree of low-back pain. Much of this pain can be attributed to poor posture and an imbalance of flexibility and strength in key postural muscles.

This can be rectified while working with the ball. Both the anterior and posterior musculature can be strengthened and stretched.

## Closed and open chain exercise

One of the reasons as to why the ball is so effective, is that it incorporates both closed chain exercises (CCE) and open chain exercises (OCE). To best understand this, it is useful to view your whole body as a length of chain. Imagine your arms and legs to be the opposite ends of a chain.

Open chain exercise is when an end segment of a chain (arms or legs) are not fixed and do not support the weight of your body. An example is a seated bicep curl.

Closed chain exercise occurs when either set of limbs, upper or lower body, is involved in supporting your weight. A squat, for instance, is an example of a CCE.

## Muscular strength and endurance

Muscle strength is defined as the amount of force a muscle, or group of muscles can exert against a resistance in one singular attempt. Strong muscles are effectively developed by progressively overloading, or gradually taking on more and more pressure or resistance. Once a muscle or group of muscles adapts to a particular exercise, it is necessary to overload to see further gains in strength

being made. Otherwise, you'll stagnate. This is known as progressive overload. Another way to overload the muscles without changing the resistance or pressure, is to introduce new movements, or place/position the body differently for a movement you have been regularly doing. The ball offers all of these options.

Muscular endurance is the ability of a muscle or group of muscles to sustain repeated muscular contractions for an extended period of time without extreme fatigue. Muscular endurance is important as it allows us to complete repetitive everyday tasks of everyday life. This way you can sustain strenuous everyday activity, and still have enough energy to go through the day without fatigue. The stronger your muscles are, the more endurable they will also be!

Stronger muscles can also resist dangerous mechanical stress to the



**Figure 1: Working with a Swiss ball**



**Figure 2: Targeting the inner thighs**

exercise (such as lactic acid, excess blood, carbon dioxide), out of your muscles and then out of your system through your circulation network. This prevents or reduces delayed muscle soreness, which is typical 24-48 hours post-exercise.

## What should I look for?

Some of the features one needs to look for when buying a ball include:

- Make sure the ball you buy stays in place and doesn't roll away when put down.
- Some balls are available with legs. These assist you in controlling the ball, by gripping the legs. You might be more comfortable and feel more balanced and stable when working with these. Legs can also be used as a handle for carrying one or several of these at a time. This feature also makes stacking on the floor easy, eliminating the need for racks or nets.
- Get a large enough ball, which can be used as a focal point for exercises such as squats, or as a balance point for dynamic stretches.
- Get a seamless ball, which doesn't burst under pressure, as other balls do.
- Balls are available in different sizes for adults and children. Get the appropriate size.
- Many balls are available with a lifetime guarantee. Get one of those!

## Comfort and safety

To make your ball training safe and effective make sure:

- You work on a non-slippery floor. A carpet or a mat under the ball works best.
- Make sure you've got adequate exercise space. Generally speaking, a body's length from the ball in all directions is an ideal amount of space.

- Wear workout shoes or go barefoot while performing stretches. Avoid wearing just socks, as you won't have the necessary traction for secure body positions on the ball, and your feet could slide out from under you.

- Comfortable, contact clothing is the best choice; tights and unitards are good as these will not slip or move and therefore allow for more effective stretching on the ball. Clothing that rides up or allows exposed skin to contact the ball may hinder smooth movement on the ball, introducing the problems that go with friction.

## Exercises demonstrated here

### For the upper body

Hold the ball up as demonstrated in Figure 1. Two exercises can be done in this position. Firstly, throw the ball against a wall and catch it as it bounces off the ball. Get faster as you get the hang of it. Secondly, push one arm closer to the other, using the ball in between the two as resistance.

### For the inner thighs

Lie on your side on the floor, with your top leg on top of the ball as demonstrated in Figure 2. Make sure your hips and thighs are aligned properly, directly above one another. Maintain neutral alignment of the neck/cervical spine by either propping the upper body onto your elbow, or by lying down completely, resting your head on your arm. Press the upper leg down into the ball, towards the floor. Lift the lower leg up to meet the upper leg and then lower it back down to the starting position.

### For the lower limbs

As demonstrated in Figure 3, get up onto your hands and knees with the ball behind you. Straighten one leg out onto the ball. Two exercises can be done in this position. One is pushing the straight leg downward into the ball. Another is to lift the straight leg up off the ball, but only by an inch or two, so that the back does not arch.

Start by doing two sets of eight to 10 each of the above exercises. Always exhale during the toughest part of the exercise and inhale as the movement gets easier. As you get fitter and stronger, you'll find you're able to do more and more. Then you can gradually increase the number of reps and sets. What more can I say? You need more reasons to consider this form of training? I don't think so. Just get out there and have a ball!

For classes and gym training call the columnist's centre, Body Art, on 380-5929 or 380-2602

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