

Core Training for the Distance Athlete

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Hi Team Stockholm Marathon Runners,

Thank you for expressing interest in the exercises we lectured about in our lecture on Saturday the 6th of April. We have improved our slides into this document so that you can do these exercises properly, and we wanted to give you a little more information so that you can become a stronger more efficient and less injured running athlete!

Core Stability Training

An appropriate core training program consists of a wide variety of exercises and can in fact not only include a Swiss ball but such things as medicine balls, rubber-bands and of course weight training equipment found in most gyms. Many of you that have been doing weight room training in the past are already using your core but not in an isolated way. Many of the tasks we do in our daily lives works on our core strength like climbing a rope, digging a hole and shoveling dirt and lifting heavy boxes. Below are the important aspects of a core strength training program.

1. Variation
2. Appropriate exercises for your level
3. Exercises should include those that require the torso to twist, flexion and extension, and some isometric (no movement) muscle action.
4. If you are doing core strength exercises to enhance sport performance then sport specific exercises should be included.

Choosing the right Swiss ball

Which Ball?

With the explosion in Swiss ball use as a training tool there are now many models of Swiss balls. They range from a fairly basic and inexpensive model to a more expensive anti-burst model. The model you choose should be based upon your budget and your anticipated use. Some of the cheaper models can quickly lose their shape and be easily punctured, while the anti-burst balls do not appear to provide a sufficient increase in benefits from the mid-range balls to justify their higher price.

Team Stockholm Marathon 2008 Core Training Lecture – The Exercises

Size and Shape and inflation

Swiss balls come in many different sizes (55-95cm) and it is very important to purchase a ball size that best matches your height and weight. Most individuals of average height should use the 65cm size Swiss ball. Shorter individuals and those taller may require a 55cm and 75cm ball respectively. However a perfect way to check your perfect Swiss ball size is to sit down on the ball with your feet planted flat on the floor. The angle of your knee joint should be 90 degrees. However something to watch out for is that there will be slight variations in ball size when it is inflated. When inflating you're my suggestion is to use a compressor as it is difficult to gain sufficient pressure when using a hand-pump. It is important to inflate the ball to its certain size, but you need to understand the firmer the ball the more difficult many of the exercises will become (with a few exceptions).

Swiss ball don'ts

It is not a good idea to kick or bounce, leave it in direct sunlight as this will cause your ball to lose its shape more quickly. Please never use your ball near sharp objects.

Training Specifics

Like we said in our lecture, we suggest training these exercises 2 x week, and try to do these exercises either on a day off from running – or if impossible on days that are just easy running.

We suggest starting the training with the Balance exercises (sitting and 4-point balance), and then do the other exercises. Please contact us if you have any questions.

If you currently participate in a weight lifting program then you can include some of the following Swiss ball exercises as merely a training supplement. We would suggest including 2-4 Swiss ball exercises at the end of a resistance training session, as a short session later on the same day as your gym session, or on a completely another day. In these situations we suggest that the selection of exercises be altered every 5-6 sessions to develop a better overall level of balance and proficiency. If you are undertaking a split strength training program then you can select Swiss ball exercises that match the muscle groups that you are training in that gym session.

Remember Core Training should emphasize quality and not quantity, so a workout should last no more than 20mins start to finish.

Team Stockholm Marathon 2008 Core Training Lecture – The Exercises

Sitting Balance + 4-point Balance

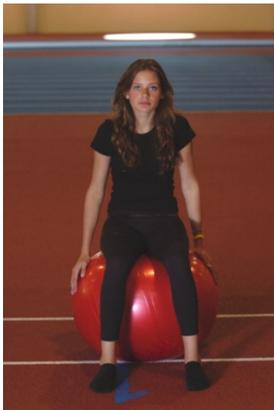
DETAILS

Primary Emphasis	Balance
Primary Movement	N/A
Difficulty Level	Beginners
Progression From	Beginning exercise

TECHNIQUE

- Sit on the swiss ball with your legs slightly spread (picture 1) and feet off the floor
- Raise your arms to the sides for balance
- Try and maintain your balance while you make small movements with your arms and legs (pictures 2 and 3)

Picture 1: Seated balance start position



Picture 2: Seated balance 1 leg



Picture 3: No support



4 Point Balance

- Hold ball in front with knees touching.
- Slowly roll forward onto ball
- Keep balance by using hands.

Picture One: 4 Point start position



Picture two: End balance position



EXERCISE STRUCTURE

Task 1 is to be able to maintain balance while sitting with both feet off the ground. When this is achieved then the structure of the exercise should be to perform 4-5 repetitions of 10 seconds each. Following this, the introduction of arm and leg movements should be used to further challenge balance and then you can move onto the 4 point balance.

PROGRESSION OPTIONS

Sitting Balance (eyes closed, swimming arm action, catching objects).

SUPERMAN

DETAILS

Primary Emphasis	Lower back, gluteals
Primary Movement	Hip extension
Difficulty Level	Beginners
Progression From	N/A

TECHNIQUE

- Lie over the ball as shown in picture 1 with both hands and both feet on the floor
- Lift one leg and the opposite arm off the floor (picture2)
- Hold this position for 3-5 seconds
- Return to the floor and repeat with the opposite arm and leg
- To make exercise harder close your eyes

Picture 1: Superman start position



Picture 2: Right arm, left leg raised



Picture 3: True Superman



EXERCISE STRUCTURE

Perform 8-12 repetitions (per side) for 2 sets.

BRIDGE AND HAMSTRING CURL

DETAILS

Primary Emphasis	Hamstrings, Gluteals
Primary Movement	Balance / Knee flexion
Difficulty Level	Intermediate
Progression From	Swiss Ball One Leg Lying Bridge

TECHNIQUE

- Lie on floor, legs up on a Swiss ball. Arms out to the side.
- Activate Stomach muscles.
- Bridge: Raise hips off floor until your body is a straight line. Hold each repetition for 5-6 seconds.
- Curl: Once in top position and balanced you are then to contract your hamstrings and bring ball closer to your torso. Repeat 2 sets of 15rep

Picture 1: Bridge position



Picture 2: Roll position



Picture 3: Bridge and roll with arms across chest



EXERCISE STRUCTURE

Perform 2 sets of 12-15 repetitions

Strengthening the hamstrings requires emphasis on movements that develop hip extension so remember to fully extend your hips throughout this exercise. Of particular importance is development of eccentric strength which is why this exercise must be performed slowly.

PROGRESSION OPTIONS

You can do this exercise with one leg etc, contact me if you want more advanced exercises

SWISS BALL ISOMETRIC PRESS-UP HOLD + VARIANT

DETAILS

Primary Emphasis	Core / Abdominals
Primary Movement	Isometric in torso, shoulder flexion
Difficulty Level	Advanced

TECHNIQUE

- Start with feet on ball and knees touching floor.
- Ball can be pushed into wall
- Hands on floor approx 20cm apart.
- Contacting stomach
- Then lift knees from floor
- Hold for 5 - 10seconds.

Picture One: Starting position: Hold



Picture Two: End position: Hold



Picture Three: Press up start



Picture four: Press up finish



EXERCISE STRUCTURE

Hold: Perform 5 x 5 – 10secs per time. Press up: Perform 2 x 5 – 8 repetitions.

PROGRESSION OPTIONS

The exercise options here are countless, but you can in the hold position take away an arm or leg for support, and in the press up you can stand on one leg.

WALL SQUAT

DETAILS

Primary Emphasis	Quads, Gluteals
Primary Movement	Hip Extension, Knee Extension
Difficulty Level	Beginners
Progression From	N/A

TECHNIQUE

- Stand back to wall, ball sitting at lower back
- Feet shoulder width apart, knees in line with your toes
- Slowly lower hips to where thighs are horizontal to ground
- Do not allow knees to come together
- Maintain pressure on ball, keep stomach + lower back Tight.
- Return to start position

Picture one: Start position



Picture two: End position



EXERCISE STRUCTURE

Perform 2 sets of 15-20 repetitions per set. Each repetition should be performed slowly (2 seconds down, 2 seconds up) This exercise can be performed with a single leg. When starting the feet will need to be together rather than shoulder width apart.

PROGRESSION OPTIONS

Swiss Ball Wall Squat with Balanskudde, Swiss ball Single Leg Squat

SWISS BALL WOOD-CHOP

DETAILS

Primary Emphasis	Obliques, Glutes
Primary Movement	Trunk Rotation
Difficulty Level	Intermediate

TECHNIQUE

- Lie with shoulders + head on ball
- Place feet on floor
- Keep a flat spine by contracting your butt.
- Raise your hands + link fingers together.
- Use only your side stomach muscles to rotate your body onto one shoulder slowly
- Let ball move under you
- Return to start and repeat

Picture 1: Shows the initial starting position



Picture 2: Shows the end position



EXERCISE STRUCTURE

Perform 2 sets of 12 repetitions per side.

PROGRESSION OPTIONS

You can begin making this exercise harder by placing some sort of weight between your hands