

Swiss Ball Exercises

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The importance of core strength is often an overlooked aspect of endurance sports. The core or abdominals provide the base of swimming, cycling and running performance and as such are the key to efficient “TRANSFER OF POWER” in the three disciplines. In other words all the energy that is put into an arm stroke in the pool or a stride in the run will be put into going forward, and not lost due to a reduction in technique caused by tired abdominals. This is particularly a problem in triathlon where a large duration of the event is performed when the body is already fatigued from the prior swim and bike. The Swiss ball provides athletes with a number of exercises that can strengthen the core muscles. Furthermore, it is much more effective than weights in a gym due to the instability of the ball causing deep intercostal muscles in the abdominals to also work to stabilize the body further. It is therefore very specific to actual sport performance in an ecological setting. You are only as strong as your weakest link!



A Swiss Ball

SWISS BALL EXERCISES

1. GLUTEUS AND ABDOMINAL BRIDGE HOLD:

a. **Target Muscles:** Gluteus Muscles, Abdominals and Lower back

b. **Directions:** Lie on your back with both feet on the ball. Spread out the arms to support yourself and provide stability. Lift the hips, back and legs off the floor by activating you gluteus muscles. Hold the pose for 10 seconds \pm 5, and repeat until form is lost.

c. **Coaching Points:** Ensure you glut muscles and tense and back, hips and feet are high and all in alignment.

d. **Exercise advances:** Put both arms in the air, this will give you less support; have only one foot on the ball; see *figure 1* (Ensure the hips and pelvis remain flat)

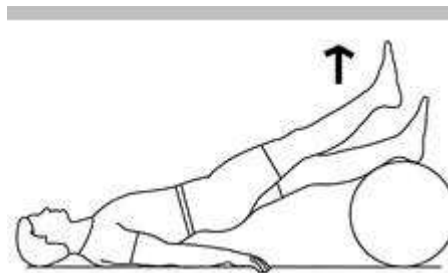


Figure 1: Glut and abdominal bridge

2. Hamstring Curl:

- a. **Target Muscles:** Hamstring, Gluteus, abdominals and lower back.
- b. **Directions:** Lie on your back with your feet on the ball (as in *Figure 2*) then, with your feet on the ball curl the ball toward you trunk. This is done by bending the knees and keeping the hips high. Proposed set 3x10reps
- c. **Coaching Points:** Ensure the hips and torso stay in line and high.
- d. **Exercise Advances:** Same as above but using only one leg



Figure 2: Swiss ball hamstring curl

3. PRONE JACK-KNIFE

- a. **Target Muscle group:** Abdominal, lower back and gluteus.
- b. **Directions:** Assume the press up position with both feet on the ball, bend the knees and the hips, and roll the ball toward the head (see figure 3.) An example set would be 3x12reps.
- c. **Coaching Points:** Ensure the back remains flat, head, hips and feet all in one line. Ensure good timing of movement 2:1:2 (i.e. 2 seconds movement in; 1 second at the end of the range of movement [ROM] and then 2 seconds on the movement back out to the starting point).

d. Exercise Advances: The same exercise with only one foot on the ball.



Figure 3: Prone Jack-knife (Starting Position)

4. T-BALANCE:

a. Target Muscles: Gluteus, Abdominals and lower back

b. Directions: Place both feet on the floor with the top of the back and shoulders on the ball; outstretch the arms so the arms and hand are parallel to the shoulder. Roll the body towards the right of the ball. Ensure high tension is maintained in the Glut muscles. Go as far as possible within the ROM that your body will allow. At the greatest ROM hold the position for 2 seconds before rolling back toward the left and holding the same position on the left; repeat. (See *figure 4*)

c. Coaching Points: Ensure the pelvis remains level and the hips stay high. Only exercise within the ROM where good form is maintained.

d. Exercise Advances: Increase the ROM possible.



Figure 4: T-balance

5. PRONE PIKE:

a. Target Muscles: Lower abs and lower back

b. Direction: In the Prone Position with both feet on the ball; bring both feet toward the torso, ensuring straight legs and back, with the hips remaining high(see figure 5.) 3x7 repetitions would be a suggested set.

c. Coaching Points: Ensure the legs and back remain straight. Roll onto the toes to ensure the full ROM is met.

d. Exercise advances: Increase the ROM, more repetitions



Figure 5: Prone Pike

6. SWISS BALL SIT-UPS

a. Target Muscles: Lower and upper abdominals.

b. Directions: Lie with your back arched over the ball, with both feet on the floor and knees bent at approx 90 degrees. Utilising the abdominal muscles perform small and controlled abdominal crunches. The ROM should be small.

c. Coaching points: Ensure the movement is small and controlled. Only come up high enough so the abdominals shoulder and head are in one line.

d. Exercise advances: More repetitions, side crunches and diagonal crunches

7. SWISS BALL PRONE ROLL OUT

a. Target Muscles: Latissimuss dorsi (large back muscles), abdominals and lower back.

b. Directions: Assume the prone position (fig 3), with the knees on the middle of the ball. Roll the ball back (closer toward your pelvis) extending the arms to bring your head closer to the floor. Go to the full ROM where good form is maintained and then roll back to the starting position. Repeat.

c. Coaching points: Ensure the back and stays flat, only work within the ROM where good form is maintained.

d. Exercise advances: To make the exercise more intense start with the ball closer to your feet and extend the arms further to get you head closer to the floor.

Aim to do around two to three core stability routines per week. Use some of the exercises suggested above and get some routines together. Ensure you perform a variety of exercises so that a good spread of the core muscles are utilized during your workouts. These sessions need be no more than 30 minutes in duration. Get into a routine, increase your core strength and then watch your swim, cycle and run times fall!

When choosing how many repetitions to do per exercise be smart. It is very important that you work within the range where good form and correct posture is maintained. If you go too far and begin to do the exercise with a collapse spine and poor form you will be doing more harm than good. Also, make sure the exercises are progressive as you improve. This can be done either by increasing the number of repetitions performed per exercise or making the exercise more difficult as suggested in the “exercise advances” sections above.