

THE BALANCED SOCCER ATHLETE

Athletes and parents of athletes always ask me:

What can I do to avoid muscle pulls on the soccer field?

This question can be answered with one simple word... BALANCE!

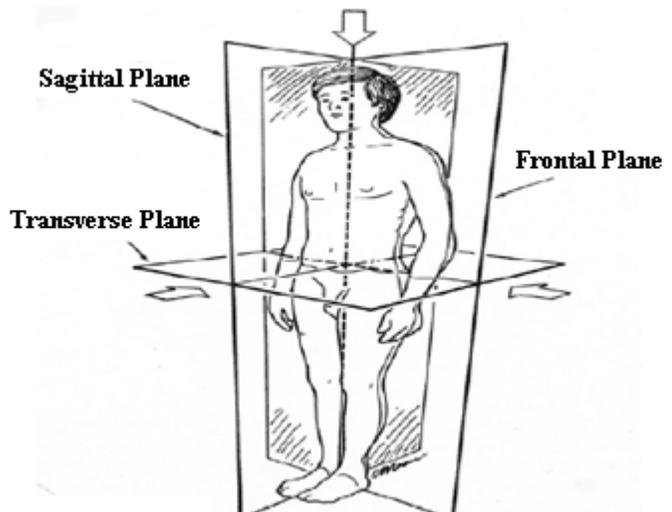
There are 3 basic types of balance that I am talking about.

1. **BALANCE OF STRENGTH** (see last page for diagram of muscles)
 - a. Make sure that you have a balance of strength in each joint of the trunk and lower body.
 - i. Quadriceps and Hip Flexor strength needs to be balanced out by Hamstring and Gluteus strength
 - ii. Lateral Quadriceps and IT band strength needs to be balanced out by Adductor strength
 - iii. Low back strength needs to be balanced out by Transverse Abdominus and Oblique strength (not the 6 pack abs)
 - b. **BALANCE IN TRAINING**
 - a. Think of how many times your quads are used during a soccer practice
 - i. Every step when walking, jogging, running, jumping, and changes in direction
 - ii. Every kick that is made
 - iii. Every touch when juggling
 - b. How to get the other muscles involved.
 - i. Begin to get the other muscles involved during the warm-up
 1. Incorporate retro and lateral movements in warm-up
 - ii. Set up specific drills that will involve retro, lateral and twisting movements with and without the ball
 - iii. Add partner resistance training on the field to target specific movements as well as muscles.
 - c. Set a weekly plan:
 - i. Practice session must include drills targeting all 4 movements:
 1. Forwards, Backwards, Lateral Right and Lateral Left
 - ii. Add in twisting motions and changes in direct to all 4 movements.
 1. Forwards, Backwards, Lateral Right and Lateral Left

3. TESTING BALANCE

- a. These 3 tests below will determine the body's ability to control and use specific muscles that are required most on the soccer field. These muscles are responsible for running, cutting, stopping, changes in direction, jumping, landing, and maintaining balance on and off the ball.

Planes of Back, Pelvis, and Hip Muscle Function



1. SIDELYING ADDUCTION DROP TEST (Frontal Plane)

(This test requires a second person to test the athlete)

Athlete lies on their side with the knees and hips at 80-90 degrees of flexion. Stand behind the athlete and passively flex the hip and knee to 90 degrees. Abduct and extend the hip to a slightly past neutral position while keeping the knee bent. Passively stabilize the athlete's hips from rolling backward towards you. Slowly allow the athlete's to lower their leg to the table or floor. Repeat the test on the opposite side.

POSITIVE TEST: Indicated by a restriction that does not allow hip extension and hip adduction. (the medial side of the top knee should touch the heel of the bottom leg without the pelvis moving)



Positive



Negative

2. STANDING REACH TEST (Sagittal Plane)

In this test, we are simply looking at if the athlete can touch their toes or not. This test is not to determine hamstring length, but will determine lower back flexibility or trunk flexion. In many cases the hamstrings are blamed for the lack of mobility, when in actuality the hamstrings are being stretched to their maximum and can not be stretched any more (trying to stretch more can result in injury). This creates lordosis of the lumbar spine (too much extension of the lumbar spine causing the pelvis to tilt anteriorly). A positive test is an indication that the hamstrings should be strengthened to posteriorly rotate the pelvis and decrease lower back dominance!



Positive



Negative

3. HRUSKA ADDUCTION LIFT TEST (Frontal and Transverse Plane or Horizontal plane) (Can use a chair to put top leg on)

<p>LEVEL → 0</p> <p>Inability to raise lower ankle off mat or table</p> <p>Obturator weakness of flexed extremity</p>	
<p>LEVEL → 1</p> <p>Ability to raise lower ankle to upper knee</p> <p>Inability reflects either weakness of FA external rotators or AF stability of active extremity</p>	
<p>LEVEL → 2</p> <p>Ability to raise lower knee and ankle</p> <p>Inability reflects instability of AF and weakness of adductor magnus and obturators or an anterior tilted and forwardly rotated pelvis with accompanying FA IR weakness secondary to long position of ischiocondylar adductor and short position of gluteus minimus, medius and TFL)</p>	
<p>LEVEL → 3</p> <p>Ability to maintain above position while lifting lower hip off table slightly</p> <p>Inability reflects weakness of FA stabilizers on extended extremity including the short head of the biceps femoris and adductor magnus and possibly bilateral AF stabilizers including muscles of the pelvic diaphragm and lower gluteus maximus</p>	
<p>LEVEL → 4</p> <p>Ability to raise hip completely off mat or table to level of patients shoulder and examiner's shoulder</p> <p>Inability reflects lack of core lumbopelvic femoral strength and more than likely the internal obliques on side of extended leg and external obliques on side of flexed leg.</p>	
<p>LEVEL → 5</p> <p>Ability to raise hip above level of the patients shoulder and equal to examiners shoulder</p> <p>Inability reflects patient's strength and neuromotor proprioceptive skills to shift hips</p>	

This test is used to determine the ability to integrate adductor and oblique muscles to move your body laterally while maintaining pelvic control.

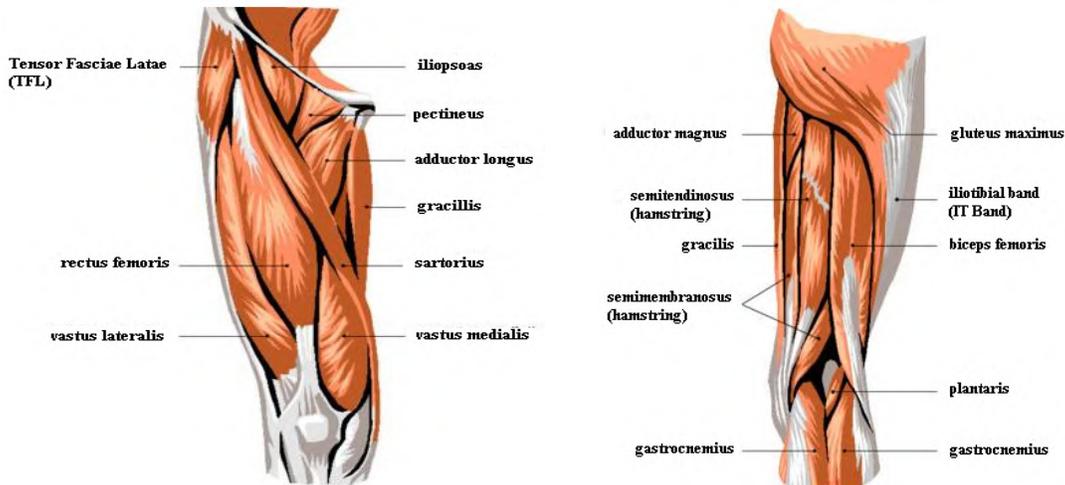
This is an extremely important motion for all soccer players, but especially goalies.

An inability to achieve a level 5 score will indicate that your body is weak in these muscles or could be using a compensatory muscle group to move you laterally.

Muscle compensation will result in poor movement ability and will eventually lead to breakdown and injury.

Guide to key terms for this test:
AF= Acetabulum moves on the Femur
FA= Femur moves on the Acetabulum

Muscles are diagrammed on last page



Anterior Hip and Thigh

Posterior Hip and Thigh

CHECK BACK SOON TO FOR MORE INFORMATION ON HOW TO PREVENT INJURIES ON THE FIELD.

NEXT EDITION WILL BEGIN TO LOOK AT ON AND OFF THE FIELD EXERCISES THAT CAN BE DONE TO IMPROVE ALL OF THESE TESTS!!!

Sneak Preview: How you can use your hamstrings to get more velocity on your shot

***What makes the Best Hamstring Exercise the BEST!
(A detail explanation of the proper steps to this exercise)***

What warm-up exercise uses the stretches and strengthens the hamstring at the same time!

***An example of a Soccer Specific Functional Hamstring Exercise
(A detailed explanation of an on the field exercise to improve function and strength using minimal equipment)***

If you have questions about the information provided on these pages please contact me.

***Geoff Regan ATC, CSCS, PES
270 Farmington Ave Suite 152
Farmington Ct. 06032
860-677-6067
gregan@selectmecialcorp.com***