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Lower Extremity Strengthening for Soccer Players

A majority of the injuries sustained by soccer athletes occur in the lower extremities (1). Some of the more common lower extremity soccer injuries include muscle strains, medial tibial stress syndrome, ankle sprains, and foot pain. While some traumatic are caused by direct player contact, many of the overuse or minor traumatic injuries may be avoidable when a lower extremity strength training program is performed. The purpose of this article is to present a functional lower extremity strength training program (table 1) to reduce the risk of injury in soccer athletes.

The Leg Press

The leg press, although not seen as a “functional” exercise, can help build leg strength in the untrained athlete. In general, athletes should start in a 90° – 90° hip and knee position (figure 1). When performing the press, attempt to fully extend the legs without hyperextending the knees (figure 2). As one’s strength improves, progress to lunges and squats.



Fig1 Leg Press Start



Fig2 Leg Press End

Table 1

General Lower Extremity Strength Training Program for Soccer Athletes

Leg Press	3 sets x 8 – 10 reps
Squats	3 sets x 8 – 10 reps
Forward Lunge	3 sets x 8 – 10 reps
Backward Lunge	3 sets x 8 – 10 reps
Inverted Hamstring	3 sets x 12 – 15 reps
Side Plank with Hip Abduction	3 sets x 20 reps each side

Forward Lunge

This functional exercise strengthens the lower extremities and helps to enhance core stability. Stand with hips shoulder width apart. Step forward (lunge) flexing the lead hip and knee. Be watchful of your alignment; the lead knee should be aligned with the hip and foot (figure 3, next page). The body is lowered towards the floor to the point that the trailing knee almost contacts the ground. The lunging sequence is repeated with the opposite leg stepping forward.



Fig3 Forward Lunge



Fig5 Side Plank with Hip Abduction

Backward Lunge

The backward (or reverse) lunge is performed in the same manner as the forward lunge except that the trailing leg steps backwards to initiate the exercise.

The Squat

Stand with feet shoulder width apart. The bar should be positioned across the upper back resting on either the trapezius muscle or the trapezius and deltoids. The squatting motion should be initiated by flexing at the hips. Ensure that the knees do not fall in front of the feet. Lower to a position of almost full hip and knee flexion, where the thighs are parallel to the floor (figure 4). Maintain a neutral spine posture throughout the squat; avoid rounding or hyperextension in the lower spine. Return to the starting position by extending the hips and knees.

Inverted Hamstring

The inverted hamstring exercise addresses hamstring tightness, core stabilization, and incorporates balance training. Balance on one leg while maintaining optimal posture. Next bend at the hips (not the waist) while maintaining a neutral spine. Hold the arms to the sides to assist with balance. While leaning forward, a stretching sen-

sation should be felt in the hamstrings. Hold for count then return to the starting position.

Side Bridge with Hip Abduction

Begin in the side plank pose position (supporting the body by the feet and a forearm). While maintaining an abdominal isometric contraction, abduct (lift away) the upper leg from the bottom leg (figure 5).

Conclusion

Undertrained soccer athletes risk a variety of lower extremity injuries. The inclusion of a comprehensive functional lower extremity training program may help to reduce some of that risk. ■

References

1. Yard EE, Schroeder MJ, Fields SK, Collins CL, Comstock RD. 2008 The epidemiology of United States high school soccer injuries, 2005 – 2007. *Am J Sports Med.* 36; 1930 – 1937.



Fig4 Squat