

# SPORTS INJURY GUIDELINES

*“The Winning Team for Your Athletic Health Care Needs”*

## Female ACL Injury and Prevention

### The Injury

ACL injuries have gotten more media attention, especially in females. The reason for this increase in media coverage has been debated, but the fact remains that non-contact ACLs can be reduced through proper training.

Non-contact ACL injuries occur typically from cutting and landing movements. During the movement the knee drops in towards the center of the body (valgus) and the center of mass is out of control. The forces are then absorbed by the ligament rather than the muscles. This causes overloading and injury.

### Why?

The reasons are constantly being researched and theories consist of females' hormonal fluctuations, Q-angle (the angle formed by the knee in relation to the hip) and mechanics. The first two cannot be changed but the latter can be changed through proper training.

Some common causes of ACL injuries

- Decrease in hamstring strength
- Outside hip weakness
- Limb strength and balance differences
- Decreased core strength
- Unfavorable landing mechanics

### Training

To change this trend training to correct these faults will decrease the chance of a non-contact ACL injury. Special programs and proper training will balance limb differences, quadriceps to hamstring balance, core and hip strength, and proper landing mechanics.

## Hop Test

Standing on one leg, hop forward and stick the landing without letting your knee drop in or losing your balance. Now try to the side-to-side and then backwards. If you have difficulty with this you should work on more training like this:

Single Leg Squats  
Planks and Side Planks  
Multi-Directional Lunges  
Hamstring Curls on Swiss Ball  
Side lying Leg Lifts  
RDLs (pictured below)

