
Anterior Cruciate Ligament (ACL) Injury In Soccer Players

The most common mechanism for injury (MOI) for a non-contact ACL injury in soccer players is deceleration. Frequently, it occurs when the tibia is rotated externally, the knee is extended and the foot is planted. If you think about it, it is a common movement for soccer players, but the knee needs to bend instead of sticking. I think there is such a high rate of this injury in soccer players because they are constantly engaging in high-risk activities in the movements of the game rather than through contact alone. Most ACL tears in soccer players are non-contact, and they happen when players change direction, decelerate, land from jumps with extended legs and planted feet or when knees are hyperextended (Alentorn-Geli, Myer, Silvers, Samitier, Romero, Lazaro-Haro, & Cugat, 2009). When players are dribbling the soccer ball or running up the field offensively or defensively, these actions are common. Of course, the game of soccer also includes contact ACL injuries, but it is significantly more prevalent as a non-contact injury.

Some common extrinsic factors for ACL injuries are weather, footwear and shoe-surface interaction. Some intrinsic factors are body mass, joint laxity, quadriceps angle and foot pronation (Alentorn-Geli et al., 2009). If these were considered “non-modifiable and modifiable” factors, they would appear more controllable. Professionals could better prepare themselves for certain conditions, and the sport would likely see less ACL injuries. For instance, grasses that result in optimal shoe surface interaction would be used. Cleat placement would be optimized. Changing the terms empowers people to alter conditions that are within their control.

The evidence tells us that more research needs to be done regarding injury prevention programs, but there are some training habits that appear to be more beneficial. For instance, applying preventive programs that consider neuromuscular factors for ACL injury and biomechanical factor are more effective. Additionally, programs must encompass multiple components. Plyometrics, balance, strength and stretching exercises help to build the body's ability to handle soccer movements that are at high-risk for injury, but repetitive training pre-season and during the season helps the body to remember the repetitive movements made in soccer, and it helps the body to remember how to properly make those movements (Alentorn-Geli, Myer, Silvers, Samitier, Romero, Lazaro-Haro, & Cugat, 2009). Essentially, there are a number of training exercises that can be done to promote the mind remembering how to move correctly, so a person is more likely to automatically choose correct positioning even when in an intense game. Ensuring that training occurs pre-season along with during the season enhances the body's capacity to override any bad habits and replace them with new actions that are at less risk for ACL injury.

This study measures the difference between male and female ACL action during certain movements to determine if there are any factors that enhance the female's propensity to get ACL injuries. It acknowledges that cadaver studies show that the main ACL loading occurs through anterior placement of the tibia compared to the femur, external valgus movement and tibial rotation. Individuals in this study, child soccer and team handball players ages 9-12, performed cutting maneuvers on each leg after a warmup. This study was meant to show the difference between males and females when it comes to these maneuvers, and what was found is that force peaks occurred at a later time in females compared with males. The findings of this study indicate that it may be the timing of force peaks may be crucial to the risk factor of ACL

injury rather than the force behind the movement, and it may be why females are more prone to ACL injuries than males (Sigurdsson, Sveinsson & Briem, 2018).

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