

ACL Injury Prevention



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Cruciate Ligament (ACL) injuries are estimated to occur 250,000 times per year in the United States alone. A disproportionately large number of these injuries will be among women age 15 to 25. Knee injuries are higher in female athletes approaching six times more frequent than males. Females have been shown to have a higher incidence of ACL injuries in skiing, gymnastics, handball, volleyball, basketball, and soccer than their male counterparts. The injury is so commonplace, especially among female athletes in sports like basketball, skiing and soccer that coaches, athletic trainers, and parents expect to see some of their athletes stricken every season. There are a number of anatomical and physiological differences between men and women that may account for the increased ACL tear risk that women bear. These differences biomechanically predispose women to having the knee internally rotated; thus, they are more likely to find themselves vulnerable to an ACL injury.

In the summer of 2000, the Journal of the American Orthopedic Society for Sports Medicine published the findings of a study group convened to look at non-contact ACL injuries in females. They cited four categories of risk factors for these injuries: environmental, anatomic, hormonal, and biomechanical. Of these, only neuromuscular training programs were noted as showing potential to decrease ACL injuries in females. Neuromuscular training programs have since shown success in preventing ACL injuries in female athletes as well as improving athletic performance.

The Aspen Sports Medicine Foundation, Orthopaedic Associates of Aspen & Glenwood, and Aspen Club Sports Medicine Institute have been providing The Roaring Fork Valley ACL Injury Prevention Program since 2006. This program would not be possible without generous grants from the Aspen Valley Medical Foundation and the Aspen Sports Medicine Foundation. This six-week neuromuscular training program was developed and designed around the latest research in the field of sports medicine. Neuromuscular training programs help athletes to re-train muscles through a combination of strength training and drills to develop better dynamic balance and knee stability. This method teaches the athlete how to land, cut, and jump properly to reduce ligament stress. This program has shown not only to decrease ACL and knee injuries, but to also enhance overall athletic ability and to reach a higher level of performance. At the beginning and end of each six-week program we evaluate each participant to understand changes in their muscular strength and form. During each meeting, trained physical therapists and athletic trainers will guide athletes through specific exercises while evaluating technique.

The physicians of Orthopaedic Associates of Aspen & Glenwood believe this ACL injury prevention program is extremely valuable to our community because of the high number of ACL injury cases they treat each year. Surgery is typically required to repair an ACL injury followed by four to six months of physical therapy. It takes almost a year to fully recover from this injury, and the patient has the potential for long term complications as a result of the

injury. By providing this program, it is hoped that competitive and recreational athletes will increase their injury prevention knowledge and training to decrease the number of ACL injuries in our community as well as to achieve a higher level of performance. To learn more about The Roaring Fork Valley ACL Injury Prevention Program and opportunities to participate please contact Andrew I. Larson, Director of Research with the Aspen Sports Medicine Foundation at (970) 925-3646.

