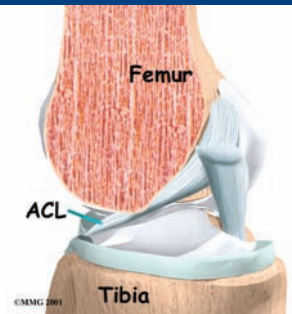


## Protecting the ACL

By Todd Wilkowski, PT, OCS, SCS  
BlueStreak Advisory Council Member



The ACL (Anterior Cruciate Ligament), one of four major ligaments in the knee, provides stability to the knee joint. It connects from the posterior-lateral part of the femur to the anterior-medial part of the tibia, controlling intensive motion of the knee joint and preventing the lower leg from sliding too far forward.

KIPP (Knee Injury Prevention Program) to identify at-risk athletes. Athletes are videotaped stepping off an 18-inch box and then jumping straight up. This video is analyzed for specific mechanical risk factors, which include landing in a “knock-kneed” position.

The angle of valgus knee collapse is measured by a line drawn from the middle of the knee through to the middle of the tibia and a line drawn from the anterior-superior iliac spine (hip) through the femur to the floor. Both males and females with valgus knee collapse angles greater than 15 degrees are determined to be at very high risk of sustaining an ACL injury.

### ■ Risk of Injury

Non-contact tears or ruptures, caused by rapid deceleration followed by a sudden direction change (known as cutting), are the most common type of injury to the ACL. Injuries occur when the leg muscles surrounding the ACL and hip muscles are too weak or don't respond quickly enough to support these movements.

### ■ Female Susceptibility to Injury

Female athletes are 4 to 6 times more likely than males to tear an ACL while participating in landing and pivoting sports such as soccer, basketball and volleyball. The increased risk among females results from differences between the sexes in knee joint anatomy (females generally have looser ligaments than males), general muscular strength and reaction time of muscle contraction and coordination.

### ■ The Box Jump and KIPP

BlueStreak and its Advisory Council created

### ACL BOX JUMP TEST



### ■ Injury Prevention

The good news is that athletes can significantly reduce the risk of ACL injuries by practicing mechanically correct drills requiring balance, power and agility. In fact, BlueStreak athletes who are designated as “at risk” for knee injuries are referred to participate in either physical therapy or a modified BlueStreak training program. After completion of these programs and re-evaluation, athletes can safely move into a training program without modification.

### About the Author

Todd Wilkowski, PT, OCS, SCS, is double board-certified in Orthopedic and Sports Physical Therapy by the American Board of Physical Therapy Specialties and is a member of the American Physical Therapy Association. In 2002, he and business partner Patrick Walsh established Performance Physical Therapy, which has locations in two BlueStreaks.

