

# **POSTERIOR CRUCIATE INJURIES**

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Two weeks ago with the Baltimore Ravens in town, Raven quarterback, Vinnie Testaverde left the game early with a knee injury. Preliminary reports after the game suggested an injury to the posterior cruciate ligament. Earlier this season, our own Mark Brunnell was found to have an injury to his posterior cruciate ligament, as well as his medial collateral ligament. Most of us who follow sports are familiar with the term ACL or anterior cruciate ligament, but recently we have been hearing more and more injuries to the PCL or posterior cruciate ligament of the knee. The cruciate ligaments are, in fact, two ligaments that are crossed and are located in the center of the knee joint. The anterior cruciate ligament which is the more frequently injured ligament prevents the lower bone or tibia from coming forward on the upper bone. Injuries to the anterior cruciate can result in an instability where when one cuts, or changes directions suddenly, the lower bone shifts forward on the upper bone giving the athlete an unstable or shifting feeling within the knee. This often can result in further damage to the knee in the form of injuries to the meniscus or even the smooth hyaline cartilage surfaces. In the past ten years, orthopaedic surgeons have made remarkable advances in the treatment of injuries to the anterior cruciate ligament and now surgical reconstruction of this ligament is quite routine.

The posterior cruciate is an equally important ligament and it prevents the lower bone, or tibia, from traveling back on the upper bone, or femur. Injuries to this ligament often occur in regular people in automobile accidents where the knee hits the dashboard of a car in rear-end or head-on type collisions. The dashboard drives the lower bone backwards, rupturing the ligament. In sports, this injury can also occur when a tackler's shoulder pads strikes the front or anterior portion of the shin bone, driving it back. Another very common mechanism of injury in football is when the player's knee strikes the ground, driving the shin or lower bone back on the upper bone. The posterior cruciate may be completely torn or partially torn, resulting in varying degrees of looseness or instability. When injuries of the posterior cruciate are associated with injuries to the other ligaments, such as the anterior cruciate or the medial or lateral collateral ligament, these injuries can be devastating. They often require very large and extensive surgery. However, when the posterior cruciate injuries are partial, or are not associated with other severe injuries, the athletes actually do quite well. In the NFL, running backs Kijana Carter, Rashawn Salom and even the NFL's most premiere running back, Barry Sanders have recovered from posterior cruciate injuries. The players are often treated in a brace for a short time and are immediately started in a vigorous rehabilitation program consisting of range of motion exercises, strengthening and functional exercises such as cycling, running, etc., and then many players return to professional football as soon as one to four weeks. While physicians can examine these knees and still detect looseness or instability, most of the athletes function very well and have no sensation of instability.

Some athletes over time may have problems with the instability associated with a torn posterior cruciate. If complaints persist, there is a posterior cruciate reconstruction which

is similar to that done with the anterior cruciate. The central third of the patient's own patella tendon is frequently used as the new PCL but also allograft of the patella or Achilles tendon may be substituted. Rehab from this surgery, however, is very extensive and the results are not quite as predictable as those obtained with the anterior cruciate ligaments.