

# **MEDIAL COLLATERAL LIGAMENT SPRAINS**

## **Jacksonville Jaguars' #1 Knee Injury**

**R. STEPHEN LUCIE, M.D.**

*Former Head Team Physician, Jacksonville Jaguars*

Over the years, the most frequent knee injury suffered by some of our Jacksonville Jaguars is the sprain of the medial collateral ligament. Although this injury is not as devastating as the season-ending injury to the anterior cruciate ligament, each season many of our players miss a number of games with sprains to the medial collateral ligament. Jaguar stars Mark Brunell, Kevin Hardy, Brain Swartz, and Jeff Lagemen have all been side-lined for a number of weeks with this injury during past seasons.

The knee is a mobile, complex joint which has the ability to bend and rotate slightly. It basically functions as a hinge as it only wants to move in one direction which is to flex and straighten. Knee ligaments help control motion by connecting bones and bracing the joints against abnormal types of motion. The collateral ligaments are the ligaments which are on the side of the knee to help stabilize the knee and prevent it from giving-way in a side-to-side direction. The medial collateral ligament as shown in our pictures is the main ligament on the inside of the knee, and it is the main structure that prevents the knee from collapsing inward. In sports such as football, it is quite common for players to be hit on the outside of the knee. When the knee is struck in this direction, it can be stretched beyond its normal range of motion which may cause the medial collateral ligament to tear. Sometimes a player actually hears a snap or pop when this occurs as the ligament gives-way. Pain and swelling are common, and sometimes this type of injury can be associated with a tear of the meniscus, cartilage or even the anterior cruciate ligament.

Sprains to this ligament are graded just like ankle sprains.

1. A milder grade 1 sprain usually involves minimal tearing of the ligament and joint instability. These players can often return to play in one to two weeks.
2. A moderate, or grade 2, ankle sprain is characterized by immediate pain, some swelling and a mild amount of instability which is determined by the physician. Grade 2 sprains typically take two to four weeks to rehabilitate prior to returning to full play.
3. Severe, or grade 3, medial collateral ligament injuries are complete tears of the ligament and often result in instability of the knee, marked swelling, immediate and severe pain.
4. More severe sprains such as a grade 3 type which involve complete tearing of the ligament often four to eight weeks to recover. These injuries used to be treated surgically, however, with the newer braces and improved rehabilitation techniques, surgery can often be avoided in all but the more severe cases. Usually, the knees are immobilized for one to two weeks in a long brace, and then a sport or functional brace with supports on both sides of the knee allow the players to engage in a very active rehabilitation program including cycling,

Nautilus type strengthening machines, isokinetic strengthening and on-field running and agility prior to returning to full play.

After the players are released, they are often required to wear the sport brace for an additional three to four weeks before being allowed to participate fully without any type of support. While prevention is often the goal with sports medicine, prevention of these types of sprains have proven to be difficult. The lateral knee brace or preventative type knee brace which many of the linemen wear, were designed to prevent this type of injury. However, even when players are braced in this manner due to the forces involved in a high velocity and collision sport such as football, sprains still occur. The best protection for the knee remains strong muscles surrounding the knee joint and proper strength and conditioning for these athletes. This may be the best method to reduce knee injuries in both professional athlete and the high school player.