

# **BOSELLI DEFINES KNEECAP INJURY**

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During the second week of the Jaguars' training camp, Jaguar fans were stunned to learn that Tony Boselli had injured his left knee. After four days of evaluation, it was determined that Tony dislocated his kneecap and chipped a significant amount of the smooth or hyaline cartilage from the under-surface of his kneecap. Several of these chips were floating around within his knee joint and surgery was necessary.

Tony had suffered a previous knee dislocation during his junior year at the University of Southern California. Although he missed five games, through rehabilitation and determination he was able to not only return from the injury, but earn All-America honors as a senior.

While kneecap dislocations certainly aren't common, kneecap problems are among the most common knee injuries seen in our office. In fact, it is the number one problem seen in recreational runners. We often see an increase in these problems prior to the River Run.

The kneecap is a flat, triangular bone about two inches wide. It is one of the many parts that comprise the knee joint. Its main function is to increase the strength of the quadriceps muscle in extending the knee. It acts as a fulcrum to give power when kicking the lower leg forward.

During activities such as walking, this force across the kneecap increases to 1 ½ times body weight. In activities such as stair climbing, it increases to 7-8 times body weight. In vigorous activities such as football, stresses can occur up to 15 times body weight. When your leg is on the move, the patella is on the move. It slides up and down in a track in the femur or thigh bone and is controlled by four muscles that make up the quadriceps muscle. When any one of these patella "strings" or muscles pulls incorrectly, either too hard or not hard enough, the kneecap can get off track. If one of the "strings" pulls too hard, the kneecap may come out of its groove.

When the kneecap comes completely out of its groove, it's called a "dislocation". If the kneecap comes only a little way out of its groove, it is termed a "subluxation".

A dislocation usually occurs without warning during an activity. The person may feel a sudden sharp pain or feel the knee "give out". In a competitive athlete such as Boselli, knees may be placed in positions where abnormal forces cause the kneecap to dislocate.

Tony's surgery consisted of an arthroscopy to remove fragments of cartilage and smooth off the remaining cartilage, a micro fracture pick technique to stimulate healing in the damaged area and a procedure called a "lateral retinacular release" which is shown in the adjacent figure.

By cutting the retinaculum, or capsule of the knee joint, adjacent to the kneecap on the outside, the pull on the patella is reduced. The kneecap then moves into its proper place. Through muscle strengthening exercises, the “strings” of the kneecap become balanced again and the kneecap returns to its normal configuration. Often more extensive open knee surgery is required to correct kneecap dislocations but, in Tony’s case, this type of surgery may have caused him to miss the entire season. By using the lateral retinacular release procedure and a vigorous rehabilitation program designed by Jaguars trainer Mike Ryan and his staff, Tony was able to return to action with his knee strength at 85-90% of normal capacity.

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