

## Prolonged Rehabilitation of Jones Fracture in Division I-A Collegiate American Football Player: A Case Report

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**Objective:** To describe the prolonged rehabilitation program for a Jones fracture in a Division I-A American football player. **Background:** A 21 year old, African American, collegiate football player (body mass= 264 lb; height= 76.5 in; body fat= 16.0%) complained of a sharp pain at the dorsal aspect of the left foot. The athlete experiences a compressive force to the fifth metatarsal and upon evaluation, mild swelling was present along the lateral aspect of the foot.

**Differential Diagnosis:** Jones fracture, metatarsal fracture, bone contusion.

**Treatment:** An intramedullary fixation surgery was scheduled two weeks post injury, to correct and stabilize the fracture. Intramedullary fixation is a method of mending the bone internally with a screw, wire, or metal plate along the fractured bone length wise. Following surgery the athlete continued use of crutches for ambulation and was placed in a removable walking boot for 5 weeks.

**Uniqueness:** This case presented a unique challenge in the rehabilitation program, as the athlete experienced slow formation of the bone callus and therefore a prolonged rate of recovery. The athlete was in a walking boot longer than expected (2 weeks longer than anticipated) which inhibited advancement in his rehabilitation due to a slow bone callus formation. A soft callus usually begins to form at day 5 following injury, but documentation was incomplete, and a hypothesis for slow bone callus formation could be secondary to lengthened time between injury occurrence and injury reporting. The athlete may have been weight bearing during the early callus formation, but healing may have been prohibited. Also, vascularization in the area is already limited and may also have played a role in delayed bone growth. **Conclusions:** Although the return to participation was longer than expected, the rehabilitation program was successful in returning the athlete to competition. **Keywords:** fifth metatarsal fracture, bone callus formation, Jones Fracture