

## **On Field Management of Athletic Cervical Spine Injuries; Equipment Removal and Spine Boarding**

### **Abstract**

**Background:** Cervical Spine injuries can result in life-altering outcomes for athletes. Despite the critical importance of managing these injuries appropriately and efficiently, a recent study acknowledges that health care providers broadly lack the fundamental knowledge with regards to spine injury management and spine boarding techniques (3). Team physicians receive minimal training regarding this topic and have limited exposure to on-field spine motion restriction techniques throughout graduate training. All health care professionals involved in on-field management of these injuries should be aware of the updated guidelines and institutional practices regarding spine immobilization following on-field injuries. Appropriate prehospital management including evaluation, equipment removal, spine board immobilization and transfer of the patient can mitigate further risk for these injured athletes.

**Indications:** The goal of spinal-motion restriction is to reduce spinal instability and prevent further neurologic injury. Indications include blunt trauma with altered level of consciousness, spinal tenderness or concern for spinal instability, loss of cervical motion, bilateral neurologic complaints or anatomic deformity of the spine following a sports related injury.

**Technique Description:** This video will describe critical aspects of on-field management of cervical spine injuries, with video demonstration of current care concepts and recommended best practice for spinal motion restriction, athletic equipment removal, and patient transfer techniques for on-field spine boarding. The video will demonstrate removal of helmet and shoulder pads as well as transferring techniques for the supine or prone positioned injured athlete, with techniques dependent upon the number of rescuers available. The videos will also highlight appropriate communication throughout the transferring process which is paramount to successful stabilization.

**Discussion/Conclusion:** Optimizing on-field management of athletic cervical spine injuries with thorough communication and collaborative stabilization techniques can help mitigate the risk of further neurologic compromise in the injured athlete. Stabilization using more rescuers (6 or more) have been shown to minimize spinal motion across an unstable spine injury. Understanding various techniques for immobilization, equipment management, and patient transfer will allow health care professionals to provide safe and reproducible care for these injured athletes.