# Spinal cord injury without radiological abnormality

- SCIWORA - Term SCIWORA is antiquated in MR era because it does not take into account MR imaging detection of soft tissue or spinal cord injuries that are occult on CT or radiographs
- Plain radiographs, CT classically normal or negative for acute injury
- MR frequently abnormal
  - Spinal ligament disruption, intervertebral disc herniation, paraspinal muscle injury, &/or shearing of vertebral endplate subepiphyseal growth zone
- Hyperextension/flexion or longitudinal distraction most common injury mechanisms
- Primary spinal cord injury &/or spinal cord infarction
- More common in children < 8 years of age than in adults.
- Many SCIWORA injuries are stable

# SCIWORA

- Pediatric SCIWORA
  - Predilection for upper cervical spine
  - More likely to have severe neurological injuries, delayed neurological deficits
- Adult SCIWORA
  - Often concurrent cervical spondylosis
  - Vascular compromise from smoking or vascular disease may accentuate injury severity
- Thoracic SCIWORA
  - High-speed direct impact, distraction from lap belts, and crush injury by slow-moving vehicles