Radiation Use in Modern Sports Medicine

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Imaging in Sports

- Critical diagnostic tool
- Stadium/hospital/clinic
- Elite & amateur
Imaging in Sports Medicine

- MRI and MR arthrography provide excellent soft tissue definition
- Mainstay of diagnostic tools for sports injuries
- Non-ionic contrast agents preferred
Diagnostic
X-ray

- Widely available and accessible
- Good ‘first-line’ test in both acute and chronic cases
Diagnostic

- Acute
  - Return to play
- Immediate management
  - Early recognition
Diagnostic

- Sub-acute and Chronic
  - Long-term injuries
  - Need for repeat imaging
  - Return to play
‘Stadium Radiology’
Season over?
10 weeks later.....
Therapeutic

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Abstract
BACKGROUND: Back pain is a frequent health problem in the general population. The epidemiology of back pain in the general population is well researched, but detailed data on the prevalence and risk factors of back pain in athletes are rare.

OBJECTIVE: The primary objective was to review articles about back pain in athletes to provide an overview of its prevalence in different sports and compare its prevalence among various types of sports and the general population.

DATA SOURCES: A comprehensive search of articles published through May 2015 was conducted. Two independent reviewers searched six databases from inception (PubMed®, Embase, MEDLINE®, Cochrane Library, PsycINFO and PSYNDEX), using specifically developed search strategies, for relevant epidemiological research on back pain in 14- to 40-year-old athletes of Olympic disciplines. The reviewers independently evaluated the methodological quality of reviewed articles meeting the inclusion criteria to identify potential sources of bias. Relevant data were extracted from each study.

- 94% lifetime incidence
- Varies with sport
Ethical Concerns

- Lower threshold to image
- Lower threshold to intervene
- Propensity for multiple studies
- Dose (principles)
Exposure to Diagnostic Ionizing Radiation in Sports Medicine: Assessing and Monitoring the Risk
Ethical Concerns

- Justification
  - Athlete vs ‘normal’ member of population
Thank you