OVERUSE INJURIES IN THE HIGH SCHOOL ATHLETE

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Many of the physicians in Ortho RI participated in the RIIL.

Most physicians in Ortho RI participated in high school athletics.

All RIIL athletes will be offered an appointment within 24hrs.
Participation in high school athletics is increasing, with more than 7.3 million high school students participating annually.
(Source: National Federation of State High School Associations)

High school athletics account for more than 3.7 million injuries annually, including:
- 500,000 doctor visits
- 30,000 hospitalizations
(Source: Centers for Disease Control)
The High School Athlete

- Injury rates similar to professional athletes.
- Types of injuries often different because high school athletes are still growing.
- Bones grow first, pull on tight soft tissues.
- More susceptible to muscle, tendon, and growth plate injuries.
Acute Injuries

- Caused by sudden trauma.
  - Bumps and bruises.
  - Sprains and strains.
  - Ligament ruptures.
  - Fractures
- “Part of the game.”
Microtrauma affects muscles, ligaments, tendons, bones, and growth plates.

With sufficient time to recover, these structures adapt and remodel to become better equipped for the demands of the sport.

Excessive stress and/or inadequate recovery overpowers the musculoskeletal system and leads to overuse injuries.

HALF of high school sports injuries. 100% PREVENTABLE!!!
Common Overuse Injuries

- Range from benign to season/career ending
  - Tendonitis
  - Stress reactions/fractures
  - Growth plate stress injuries
    - Can lead to premature closure of growth plates.
  - Osteochondroses (Hamstring, knee, heel)
Diagnosis

- Persistent pain with activity.
- Decreased desire to practice - Burnout.
- Change in technique.
- Nighttime pain.
- Swelling.
- Numbness.
Risk Factors

- Prior injury
- Poor conditioning
- Growth spurt
- History of amenorrhea
- Higher training volumes.
- Multiple teams
  - i.e. Club and high school teams
- SINGLE SPORT SPECIALIZATION
Single Sport Specialization

- Intensive, year-round training in a single sport at the exclusion of other sports.
- Recent study demonstrated DOUBLE the rate of both acute and overuse injuries in single sport athletes.
- Associated with higher rates of burnout.
- Largely an American phenomenon.
How do Athletes Get Great?

Just train for 10,000 hours right?
“It’s quite clear now that the continued push for early specialization of youth athletes is either unnecessary or detrimental to ultimate achievement in most sports.”
AOSSM Early Sport Specialization Consensus Statement

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Preseason conditioning programs.
Allow for adequate recovery time.
Cutting back the intensity, duration and frequency of an activity
Adopting a hard/easy workout schedule
Prevention - Continued

- Identifying and correcting improper mechanics.
- Neuromuscular training.
  - Combination of balance, weight, plyometric, agility, and sport specific exercises.
- Cross training/Participation in multiple sports.
The Future

- Better prevention of injury.
- New, less invasive surgical techniques.
- Ongoing research to better understand sports injuries.
- Continued rise in injury rates unless education is increased???
Other Resources

- www.OrthopedicsRI.com
- www.STOPSportsInjuries.org
- www.orthoinfo.org
- www.sportsmed.org
- www.SAFEKids.org
GOOD LUCK THIS SEASON!!!

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