AAP Statement on Tackling in Youth Football

Nailah Coleman, MD, FAAP, FACSM
ncoleman@childrensnational.org
What’s the big deal?

Photo obtained 2/24/2016 from www.gazettenet.com
Objectives

- review current information on injuries in football
- review relationships of tackling to football injuries
- review potential effects of limiting or delaying tackling on injury risk
- photo of downed player or player on stretcher

Photo obtained 2/24/2016 from https://www.youtube.com/watch?v=0RC4sPcmpNI
Background

• ~ 1.5 million child and adolescent athletes play American football each year

• increased public concern and medical investigation about American football injuries
  • head and neck injuries
  • long-term morbidity
  • concern for CTE
Injuries in Youth Football

- Common football injuries: contusions, sprains, strains

- Common football injury locations: knees, ankles, hands, back

- Football head and neck injuries = 5-13%

- Increased severity of injuries in football, compared to other sports (ex. head and neck injuries, such as quadriplegia, concussion, second impact syndrome, CTE; dislocations, fractures)

- Increased severity of injuries in higher levels of football play
Tackling Injuries in Youth Football

• More injuries arise from tackling than non-tackling mechanisms, in general

• About 50% of high school and college football injuries are associated with tackling (instigator or recipient)

• Research also demonstrates a higher likelihood of higher impact hits and more hits during higher levels of play (college v. high school v. youth, games v. contact practices v. non-contact practices)
Tackling Injuries in Youth Football

- Most cases of severe head and neck injuries also occur with tackling.
- Most concussions are also associated with tackling.
- Brain injury-related fatalities (mostly subdural hemorrhage) = 69% football injury fatalities.
- Catastrophic c-spine injuries are also associated with tackling, usually with poor technique (esp. Spearing, which was banned in 1976).
Strategies for Injury Reduction

- Decrease contact practices
- Delay tackling until a certain age
- Teach proper tackling technique
- Neck muscle strengthening
- Rule changes
- Protective equipment
Decreased Tackling Occurrences

- Decrease contact practices
- Decrease total number of hits per season by decreasing exposures
- Might not decrease number of concussions (higher incidence during games for older players)
- Might allow for increased magnitude of injury
- Might decrease incidence of CTE
- Would require increased focus on proper technique
- Delay tackling until a certain age
- Concern for increased risk of injury, when tackling is introduced (older, larger, higher forces)
Training

- Teach proper tackling technique
  - Head up, use shoulder
- Neck muscle strengthening
  - Help with technique
- Weakness may be associated with increased risk of concussion
  - Speculated as reason for decreased likelihood of concussion with anticipated hits
Game Changes

• Rule changes
  • No spearing
  • Continual update and enforcement are key

• Protective equipment
  • Helmet - prevent catastrophic head and brain injuries
  • Mouth guards - prevent dental injuries
  • Neck rolls - not found to be helpful and may affect ability to keep the head up
  • No equipment definitively associated with a decreased incidence of concussion
Conclusions

• Most football injuries are minor

• More severe injuries are associated with football, particularly with player-to-player contact, poor or illegal technique, and a higher level of play
Recommendations

• Review and enforce the rules...always

• Discontinue tackling altogether

• Increase availability of on-tackling football leagues (for those who want to continue to play without the tackling risks)

• Research other ways to decrease impacts to the head

• Teach proper tackling technique, as well as the best way to avoid and to absorb a hit

• Neck muscle strengthening

• ATC's on the sidelines for practices and games
"Though no one can go back and make a brand-new start, anyone can start from now and make a brand new ending."

--Carl Bard