



Tackling Tough Question

Counseling Young Athletes and Their Families on the Mental Health Impacts of Youth Football

Dr. Alex Bernadett. June 7th, 2019.

Objectives

- - understand current evidence surrounding long term health impacts of youth football
- - counsel young athletes and their families on the risks and benefits of youth football participation
- - access local and national resources

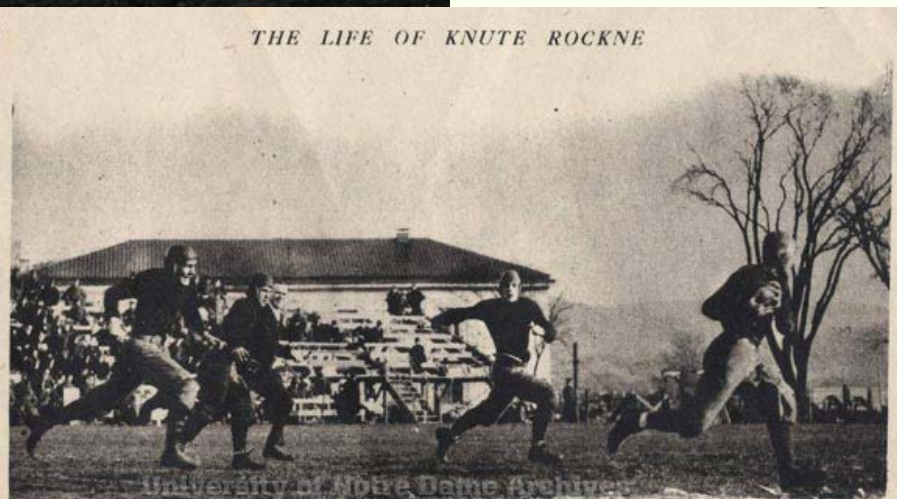
Historical Context

- “The *New York Times* bemoaned football’s trend towards ‘mayhem and homicide.’ About two weeks after printing these words, the *Times* ran a new editorial. The headline was ‘Two Curable Evils.’

The first evil it addressed was the lynching of blacks. The second evil was football.”

Historical Context

- How Teddy Roosevelt and a little known Catholic school from the Midwest saved football

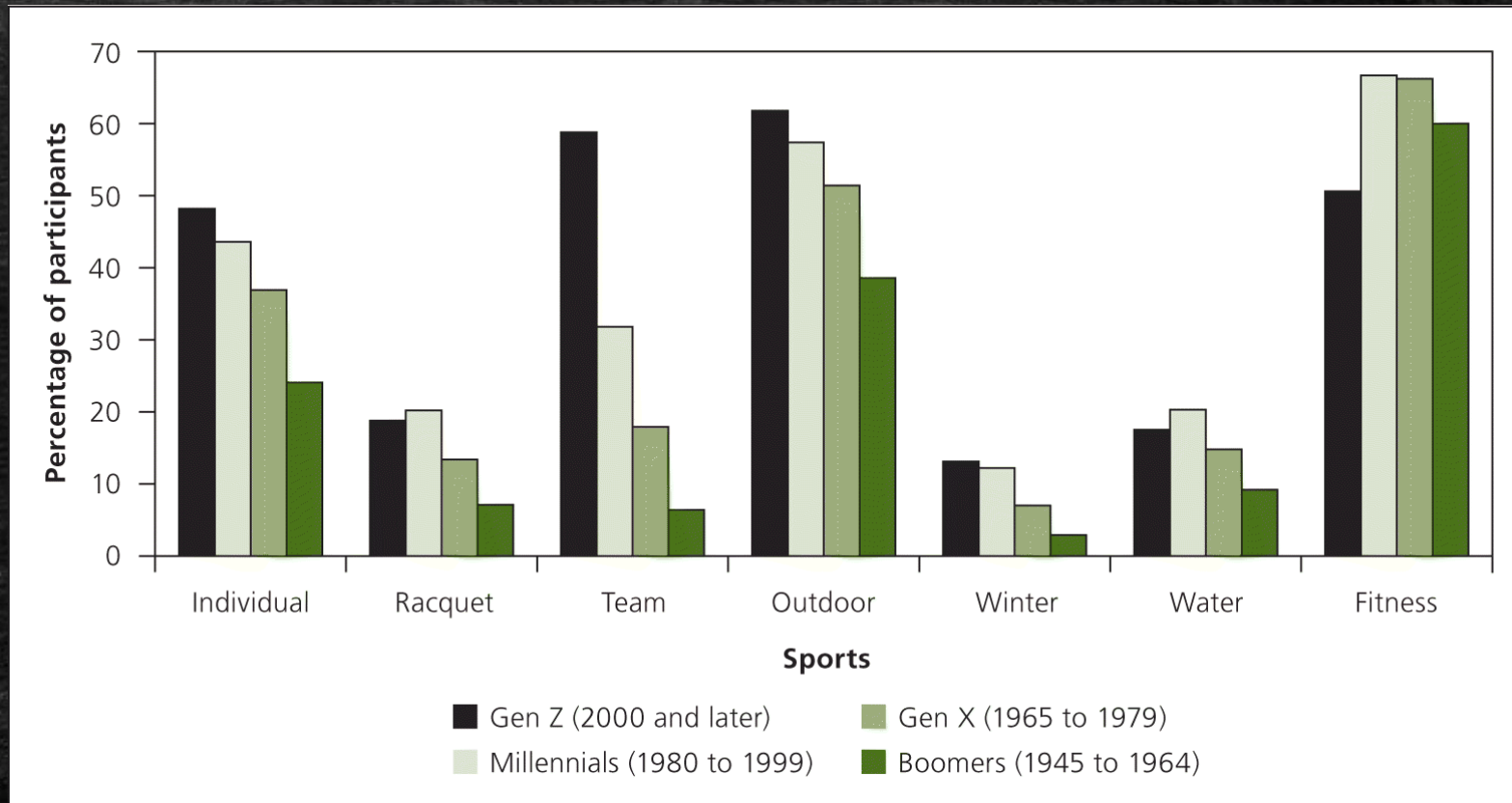


The completion of one of the startling "Dorais to Rockne" passes which beat the Army in 1913 and modified the entire game of football. Here's Knute making a touchdown.



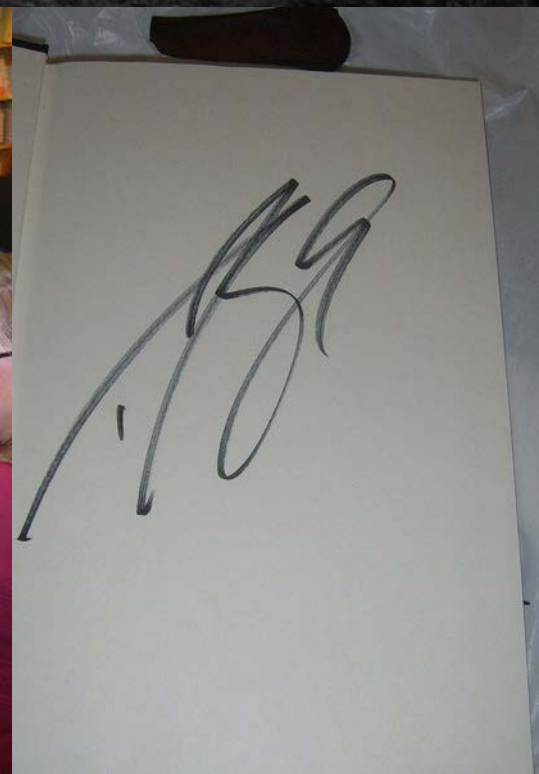
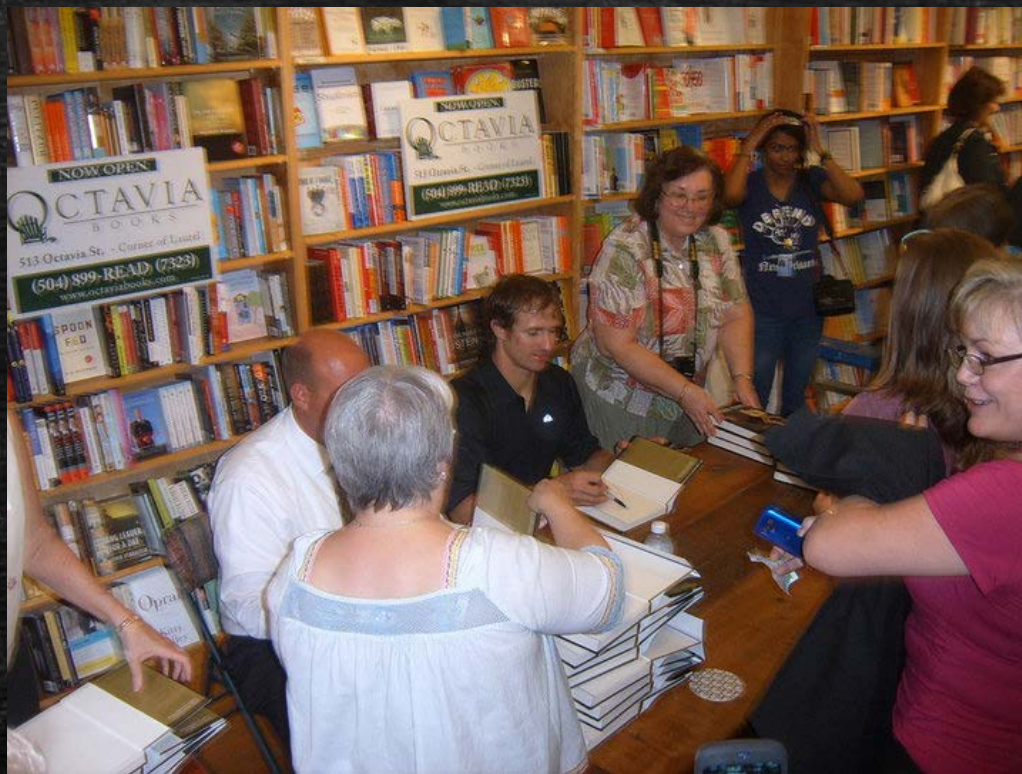
Youth Athletics in America

- In the United States, there are 212.6 million physically active persons older than six years, including 36 million youths and 7.8 million high school sports participants at approximately 36,000 secondary schools



Benefits of Youth Athletics

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Drew Brees Booking Signing. July 2010.

Risks of Youth Athletics

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Injury Risk in Youth Athletics

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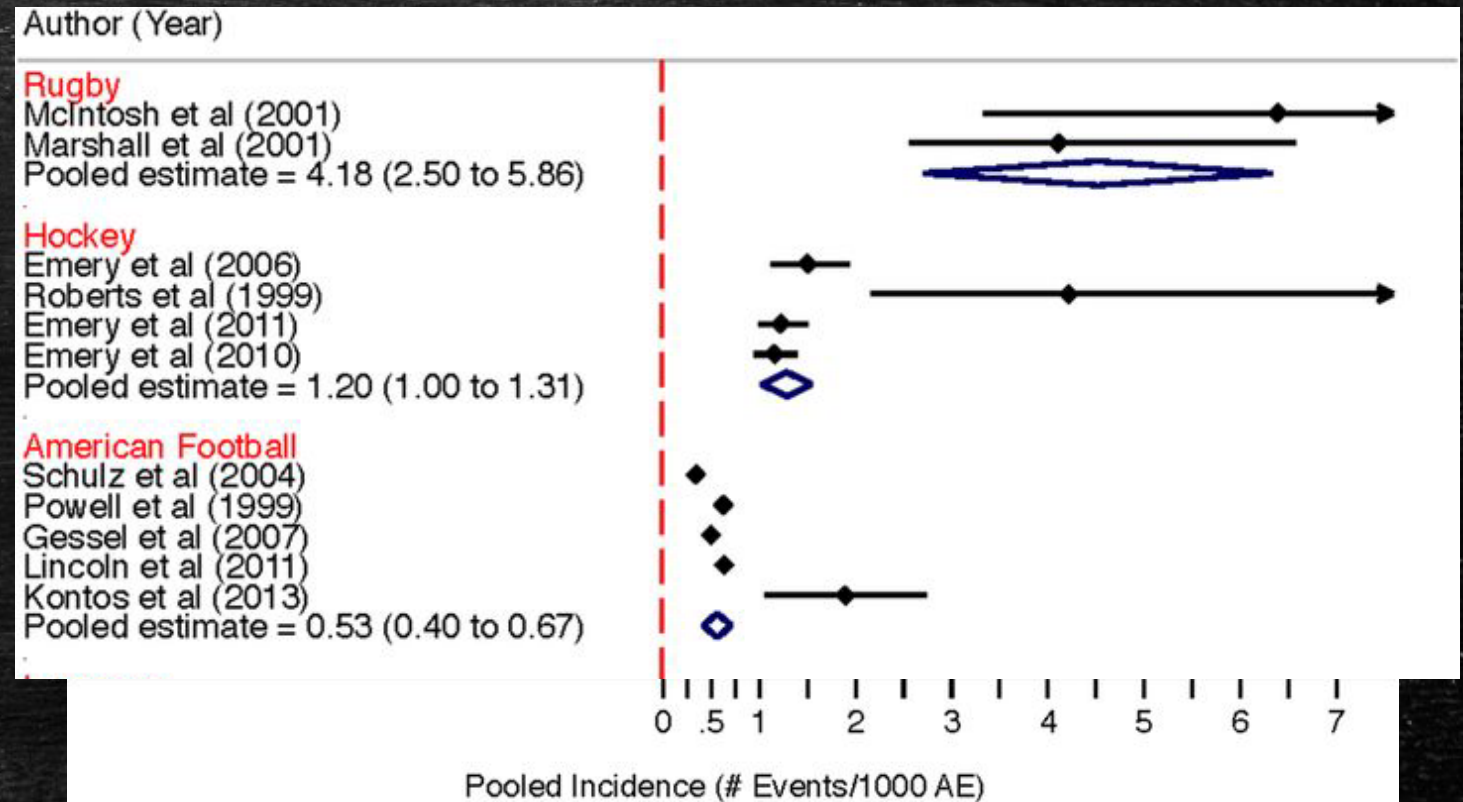
UW vs OSU. Homecoming 2011. UW Wins in OT.

Injury Risk in Youth Football

- Injuries in middle school football

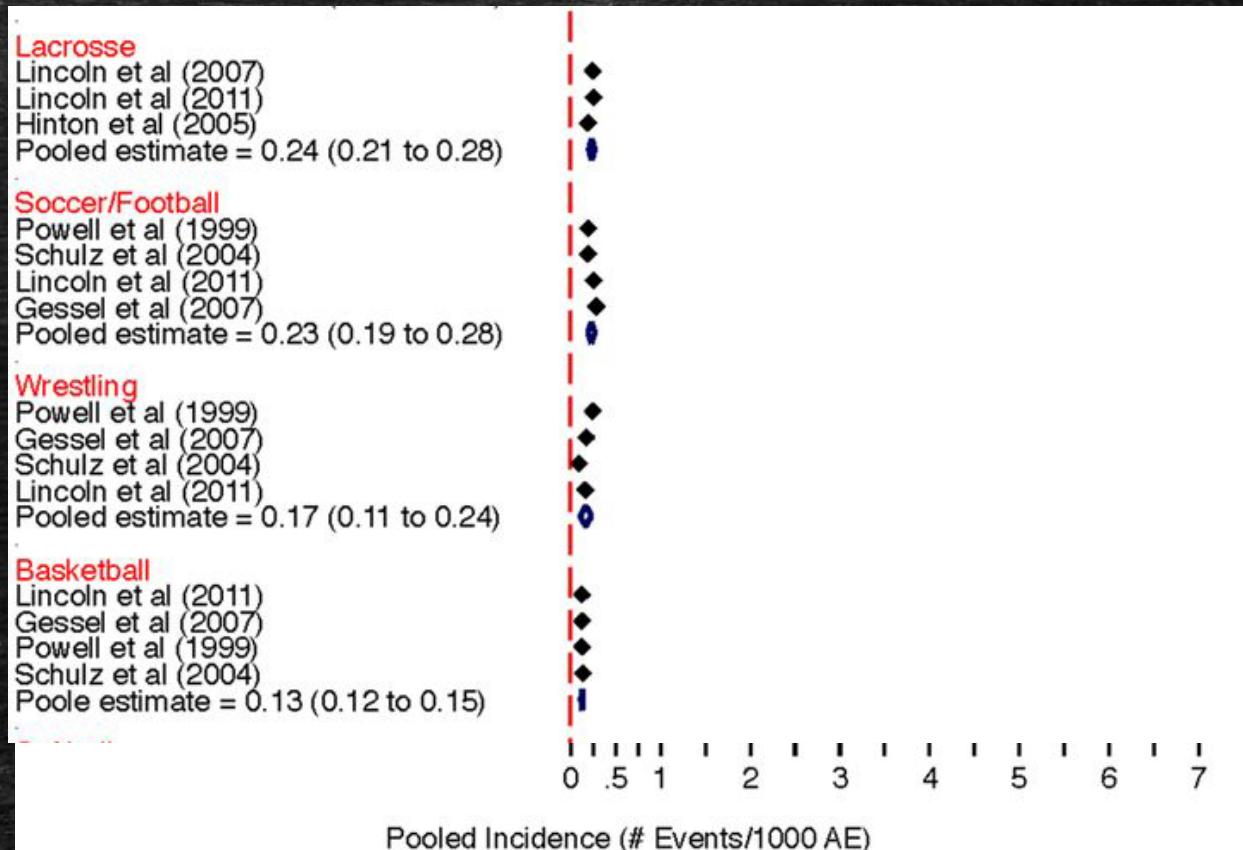
Concussion Risk in Youth Athletics

- Women's sports are higher than men's sports.
 - Ex. Soccer, hockey.
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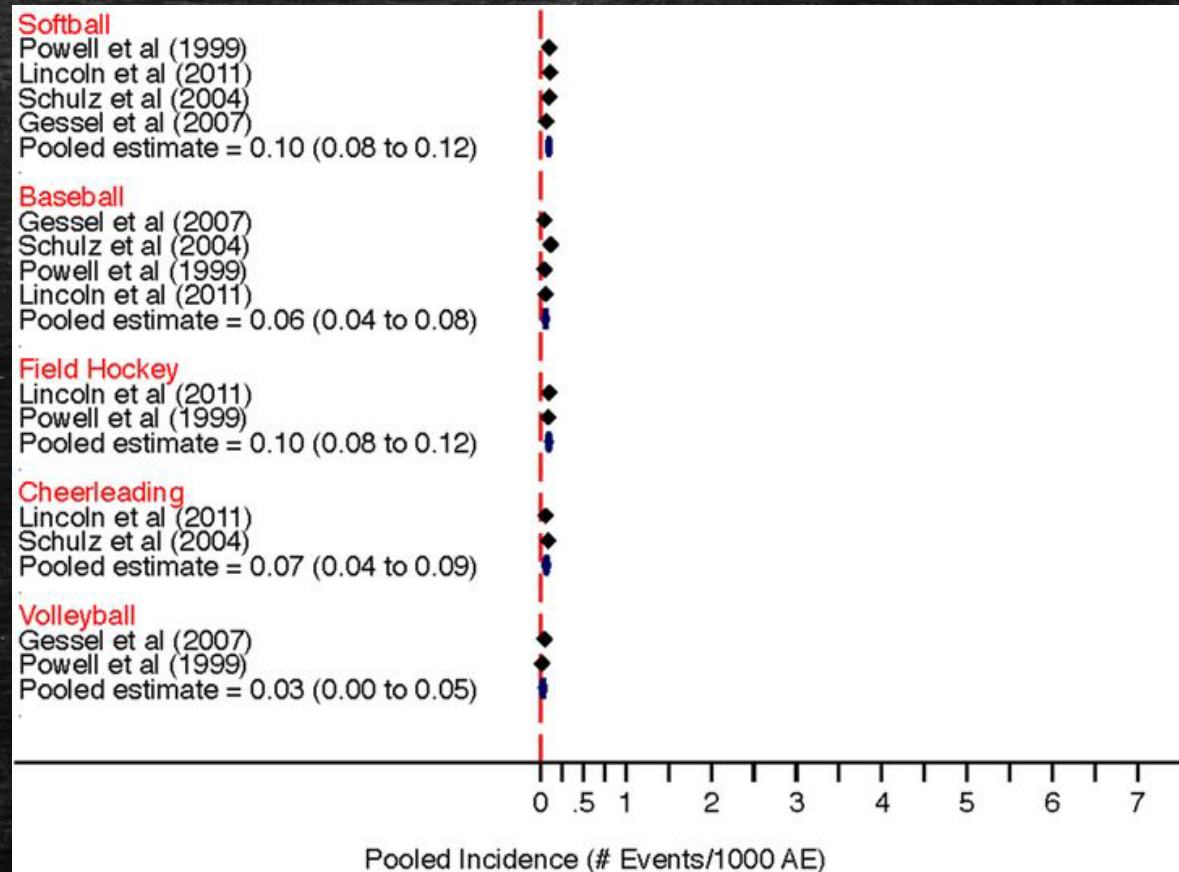
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Concussion Risk in Youth Athletics

- AMSSM Review
- ***

Table 2 Seasonal risk of concussion in sports

Author	Type of athletes	Years of study	Seasons (n)	Athletes (n)	Concussed	Concussed per player/season (%)
Football						
Barr and McCrea ¹⁵	High school and college football	1997–1999	2	1313	50	1.9
McCrea ¹⁸	High school and college football	1998–1999	2	1325	63	2.4
McCrea et al ¹⁷	High school and college football	1999–2001	3	2385	91	3.8
McCrea et al ¹⁹	College football	1999–2001	2		94	3.9
Barr et al ¹⁶	High school and college football	2008–2009	2	823	59	7.2
Seidman et al ²⁴	High school football	2013	1	343	9	2.6
Dompier et al ²⁵	Football	2012–2013	2	20 479	1178	5.8
	Youth football	2012–2013	2	4092	136	3.3
	High school football	2012–2013	2	11 957	767	6.4
	College football	2012–2013	2	4430	275	6.7
	College football	2011–2014	4	9718	518	5.3
Houck et al ²⁶	College football	2006–2015	9	945*	118	12.5
Bretzin et al ¹⁴	High school football	2015–2016	1	39 520	1530	3.9
Total football				67 133	3192	4.8

Concussion Risk in Youth Athletics

- AMSSM Review
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All sports							
Galetta et al ²⁷	Football, sprint football, men's and women's soccer and basketball	2010–2011	1	219	10	4.6	
Marinides et al ²⁰	College athletes	2011–2012	1	217	30	13.8	
Galetta et al ²¹	Ice hockey/lacrosse youth and college		1	332	12	3.6	
Leong et al ²⁸	Football, men's and women's basketball	2012–2013	1	127	11	8.7	
Putukian et al ²²	College athletes	2011–2012	1	263	32	12.2	
Chin et al ²³	High school and college athletes	2012–2014	3	2018	166	2.7	
Kerr et al ¹²	NCAA athletes	2011–2014	4	32 156	1410	4.4	
	Men's baseball	2011–2014	4	1757	13	0.7	
	Men's basketball	2011–2014	4	1889	74	3.9	
	College football	2011–2014	4	9718	518	5.3	
	Men's ice hockey	2011–2014	4	3689	253	6.9	
	Men's lacrosse	2011–2014	4	1768	44	2.5	
	Men's soccer	2011–2014	4	1810	29	1.6	
	Men's wrestling	2011–2014	4	821	65	7.9	
	Women's basketball	2011–2014	4	1690	90	5.3	
	Women's ice hockey	2011–2014	4	1301	94	7.2	
	Women's lacrosse	2011–2014	4	1522	49	3.2	
	Women's softball	2011–2014	4	1569	38	2.4	
	Women's soccer	2011–2014	4	2831	93	3.3	
	Women's volleyball	2011–2014	4	1791	50	2.8	
Dhawan et al ²⁹	Youth hockey		1	141	20	14.2	
Tsushima et al ¹³	Athletes grades 8–12	2013–2014	1	10 334	1250	12.1	
Bretzin et al ¹⁴	High school athletes in 15 sports	2015–2016	1	193 757	3352	1.7	
Total				239 564	6293	2.6	

*Total number of athletes estimated using 105 athletes per year on football roster.
NCAA, National Collegiate Athletic Association.

Long Term Impacts of Concussions

- A systematic review of potential long-term effects of sport-related concussion
- PMID: 28455362

Youth Football: Worth It?

- **Clinicopathological Evaluation of Chronic Traumatic Encephalopathy in Players of American Football.**
- PMID: 28742910



Youth Football: Worth It?

- **CTE Studies biased by:**
- **Selection bias**
 - Not representative of overall population of former American football players
 - Majority of donors played at college and professional level
- **Recall bias**
 - Retrospective reporting of “informants”
- **Ascertainment bias**
- **No comparison group**

Youth Football: Worth It?

- **Association of Playing High School Football With Cognition and Mental Health Later in Life.**

- PMID: 28672325

Punch line:
“Cognitive and depression outcomes later in life were found to be similar for high school football players and their nonplaying counterparts from mid-1950s in Wisconsin.”

Youth Football: Worth It?

- **Association of Playing High School Football With Cognition and Mental Health Later in Life.**
 - **Secondary Outcomes:**
 - Playing HS football did not have a significant adverse association with anger, hostility, anxiety, or cheese consumption compared to controls at ages 54, 65, and 72.
 - HS football players were significantly more likely to engage in regular moderate to vigorous physical activity at 35 years old and less likely to have heavy alcohol use at ages 54, 65, and 72.
- PMID: 28672325

Youth Football: Worth It?

- **Effect of Playing 1 Season of Tackle Football on Measures of Auditory, Vestibular & Visual Function in Youth Football Players**

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Punchline: "Performance on neurosensory tests is unaffected by one season of youth tackle football in the absence of concussion.

In healthy young athletes there are no correlations between tests of auditory, vestibular, and visual function.

Youth Football: Worth It?

- **Predictors of perceptions of mental illness and averseness to help: a survey of elite football players.**
- PMID: 26732829

Punch line: Hypermasculinity traits are correlated with less utilization of mental health services.

Decreasing stigma in youth/collegiate athletes and providing targeted therapeutic efforts will encourage a positive attitude towards mental health.

Youth Football: Worth It?

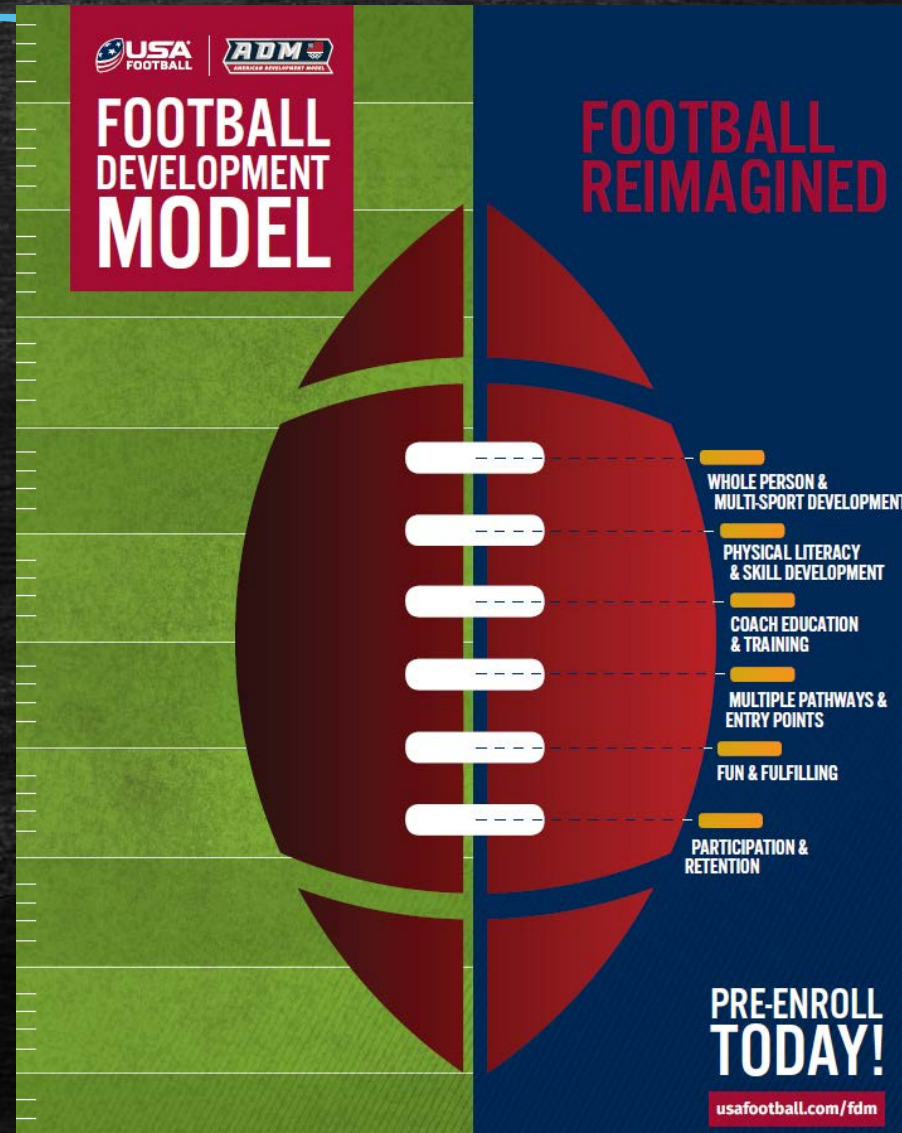
- Kyle Turley

The Future of Youth Football in America

- Rule changes at the collegiate level to make the game safer

The Future of Youth Football in America

- USA Football movement to teach fundamentals and safe play at an early age
- Training youth football coaches on safe tackling, blocking techniques
- Push to have flag football as an Olympic sport



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MAKING FOOTBALL FUN AND FULFILLING

The number one reason athletes play football is because it's fun and they are able to play with their friends. Let's make football a game before it's a sport.

By focusing on coaching athletes to learn new skills and achieve personal successes we are creating the cornerstones to a fulfilling experience for every athlete who plays the game.

INCREASING PARTICIPATION AND RETENTION

Blending sport science with a progressive athlete-centric model develops better players who stay in the game longer.

By providing developmentally appropriate practices and competitions, athletes enjoy a better football experience. This fosters enthusiasm and confidence, inspiring participants to remain in the sport both as athletes and lifelong contributors.

CREATING MULTIPLE PATHWAYS WITHIN THE GAME

Athletes come to football at a wide variety of ages and stages. By providing individuals multiple pathways within the game, athletes are able to find the right fit for them.

Coaches and leagues should be prepared to meet athletes where they are within their journey and help prepare them for success as they move through different paths within football – whether it is flag, a modified game or tackle.

PROVIDING EXCEPTIONAL COACH EDUCATION AND TRAINING

Best-in-class coaches start with best-in-class resources and training.

For players to reach their potential, they should have trained coaches who can provide guidance and instruction at all stages of development. Coaches are teachers. Just as in the classroom, they should be equipped with best-in-class resources and the support they need to teach the skills required to successfully play the game.

CENTERING ON WHOLE PERSON AND MULTI-SPORT DEVELOPMENT

Developing better football players starts with a whole-person approach.

This means we should coach our athletes in a way that makes sense for their emotional, social, cognitive and physical development. It also means encouraging a diversified approach to training. Multi-sport athletes see fewer injuries and are more effective in developing elite-level skills.

FOCUSING ON PHYSICAL LITERACY AND SKILL DEVELOPMENT

Fundamental skills should be the foundation of development for every player.

Fundamental skills should be the foundation of development for every player. Basic foundational movements that for generations were learned through free play can – and should – be taught as they create building blocks for success in every player.

The Future of Youth Football in America

- NFL trying to be more safe
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The Future of Youth Football in America

- Culture of Football in America
- Implications for lower SES athletes
- L.J Collier story
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In Summary:

- Playing youth sports has many benefits
- There are risks
- These risks can be mitigated by teaching fundamentals and safe play at an early age
- Parents should make their kids play baseball or softball instead.

Table 2. Selected Sports Medicine Resources for Family Physicians

Continuing medical education

American Academy of Family Physicians

Concussion webinars: <http://www.aafp.org/patient-care/public-health/sports-medicine/webcasts.html>

Family Medicine Experience: <http://www.aafp.org/events/fmx.html>

Live and online sports medicine courses: <http://www.aafp.org/cme/browse/topics.tag-sports.html>

American College of Sports Medicine

Advanced team physician course: <http://www.acsm.org/attend-a-meeting/acsm-team-physician-course>

International Olympic Committee

Advanced team physician course: <http://www.ioc-preventionconference.org/atpc2016/>

Other resources

American Academy of Pediatrics

Preparticipation physical evaluation recommendations: <https://www.aap.org/en-us/about-the-aap/Committees-Councils-Sections/Council-on-sports-medicine-and-fitness/Pages/PPE.aspx>

American College of Sports Medicine

Revised criteria for preparticipation health screening: http://journals.lww.com/acsm-msse/Fulltext/2015/11000/Updating_ACSM_s_Recommendations_for_Exercise.28.aspx

Team Physician Consensus Conference Statements: <http://www.acsm.org/public-information/team-physician-consensus-conference-statements>

American Family Physician

Review of the preparticipation sports evaluation: <http://www.aafp.org/afp/2015/0901/p371.html>

American Medical Society for Sports Medicine

Find-a-Doc (primary care sports medicine physician locator): <http://www.amssm.org/Find-a-Doc.html>

American Orthopaedic Society for Sports Medicine

Sports- and injury-specific prevention tips and tools: <http://stopsportsinjuries.org>

University of California, San Diego

Practical guide to clinical medicine: <https://meded.ucsd.edu/clinicalmed/joints.htm>

Wheeless' Textbook of Orthopaedics (Duke Orthopaedics)

Overview of musculoskeletal injuries: <http://www.wheelsonline.com>

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- Pfister et al. *Br J Sports Med*. 2016 Mar;50(5):292-7.
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Questions?

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Football Glory in the Superdome. New Orleans, LA. September 2012. P/C: Parker Waters.