



Early Sport Specialization: A Prescription for Success?

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Youth Sports

Benefits

- Development of self-esteem
- Peer socialization
- General fitness
- Promotes long term active and healthy lifestyle



Costs

- Emphasis on competitive success
- Frequent & multiple competitive event scheduling
- Risk for injury, burnout
- Disengagement from health-promoting physical activity



Sport Participation and Long-Term Health

- Health benefits: cardiorespiratory, musculoskeletal, and metabolic systems
- Benefits obtained via youth sports activity can extend into adulthood (Van Mechelen, W., Twisk, J., & Kemper, H. *International Journal of Sports Medicine*. 2002;23, S1–S50.)
- Active and healthier adult lifestyle (Perkins et al 2004.)

Concerns in Youth Sports



Have things changed with Time?



1999



2017

Early Single Sport Specialization

Many parents and young athletes are concerned that not specializing early will place them at a disadvantage in achieving their sport-related goals



The New York Times

SPORTS

Committing to Play for a College, Then Starting 9th Grade

By Nathaniel Popper



Detroit Free Press

8th-grader offered by U-M didn't know who coach was

By Mark Snyder

Owen Pappoe, a linebacker, says he already has five scholarship offers after participating in Rivals.com camps



Deliberate Practice and the 10 Year/10,000 Hour Rule

“The central claim of our framework is that the level of performance an individual attains is directly related to the amount of deliberate practice.”



K. Anders Ericsson, Ph.D.

Predictions of Deliberate Practice

- Deliberate practice: a highly structured activity with the explicit goal to improve performance.
- The past amount of deliberate practice is directly related to the individual's current performance.
- More specifically, expert performance is not reached with less than 10 years of deliberate practice

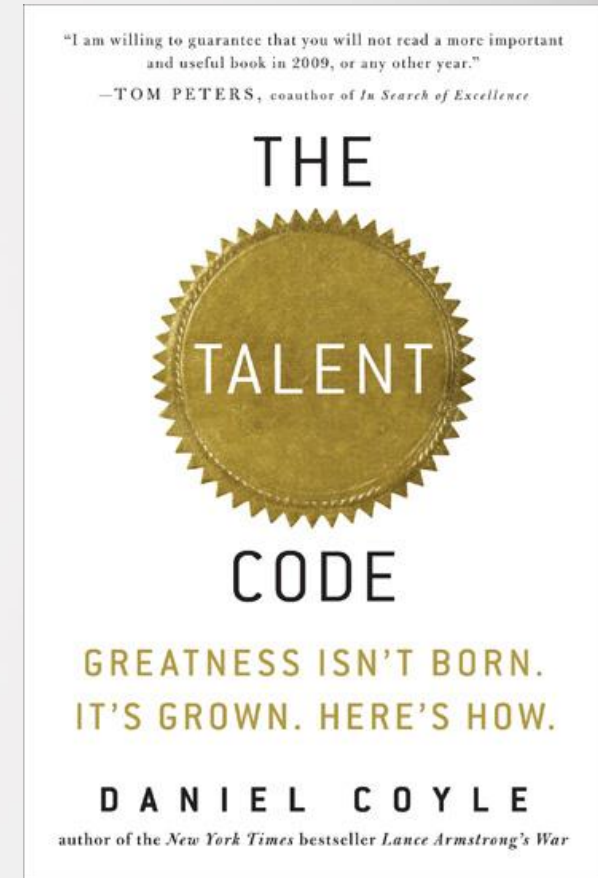
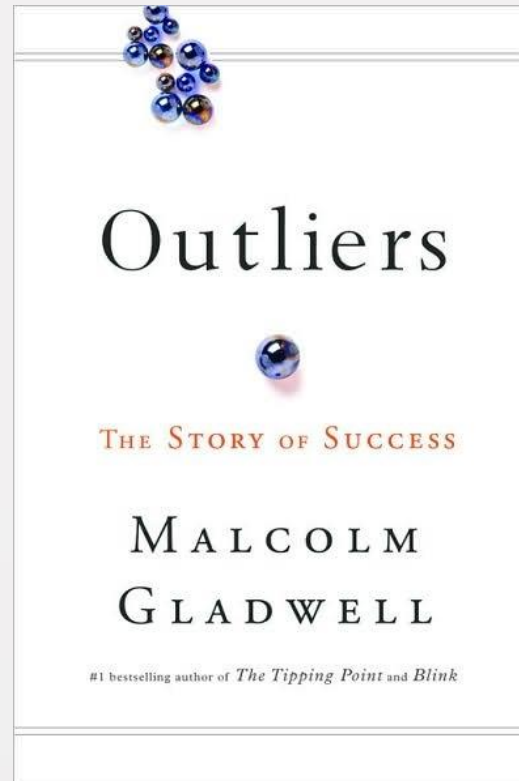
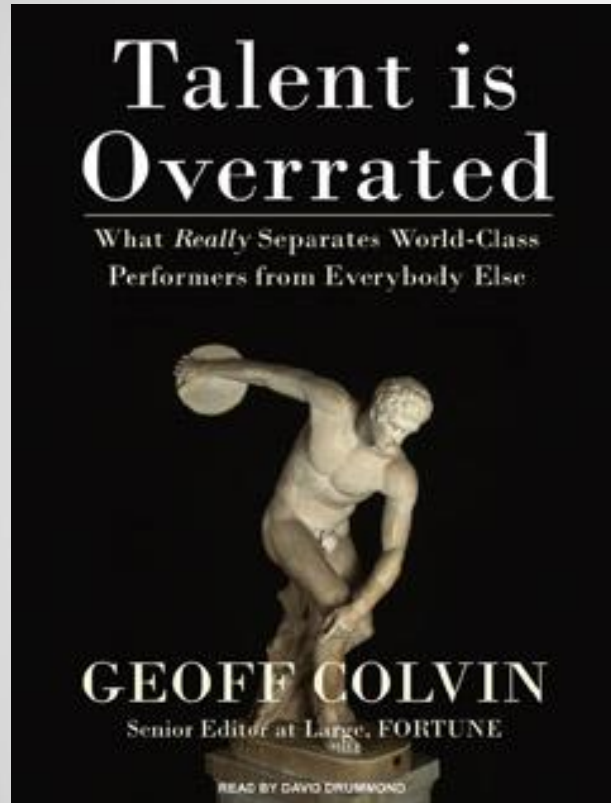
Ericsson A. Psychological Review 1993, Vol. 100. No. 3, 363-406

10 Year Rule

- Simon and Chase (1973) "10-year rule" for chess champions. (Simon, H. A., & Chase, W. G. (1973). Skill in chess. *American Scientist*, 61, 394-403.)
- J. R. Hayes (1981) confirmed that 10 years' experience is necessary to become an eminent composer. (Hayes, J. R. (1981). *The complete problem solver*. Philadelphia, PA: Franklin Institute Press.)



The Media Responds



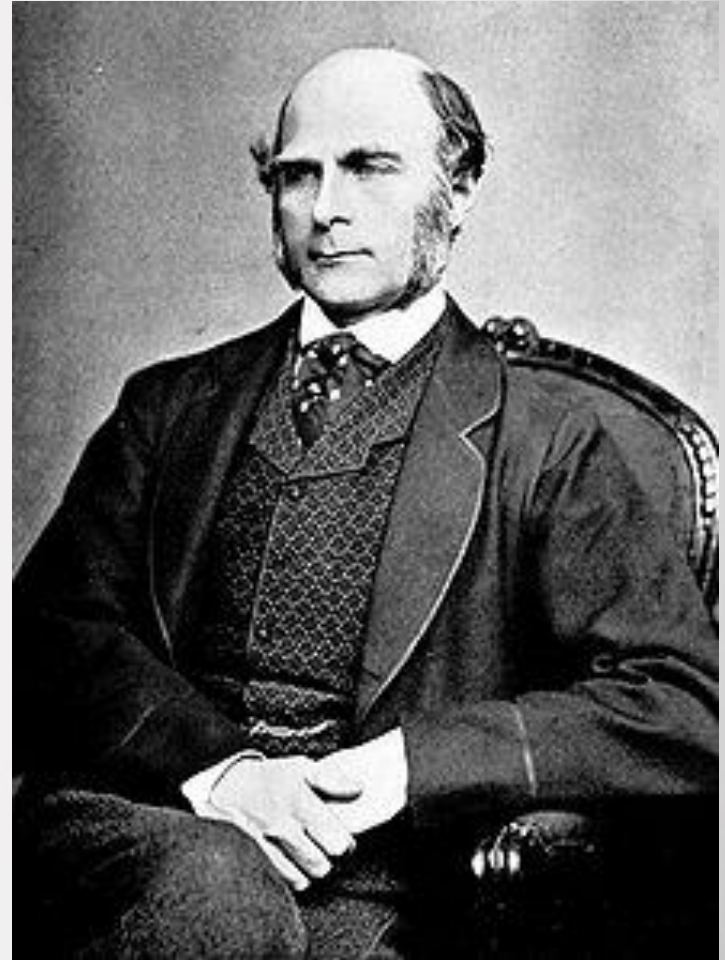
Deliberate Practice Data Limitations

- All studies focused on highly select, non-athlete, populations
- Small sample sizes
- No denominator
- Highly subject to recall bias
- Limited analysis published/provided - No SD provided
- No data on possible hereditary & environmental components

Nature vs. Nature

“So long as he is a novice, he perhaps flatters himself there is hardly an assignable limit to the education of his muscles; but the daily gain is soon discovered to diminish, and at last it vanishes altogether. His maximum performance becomes a rigidly determinate quantity.”

From “Hereditary Genius” Sir Francis Galton 1869



Genetic Influences

- Very limited data.
- Over 200 autosomal gene variants and trait loci are associated with human physical performance.
- Most preferable genotypes are uncommon AND combinations are even more rare.
- Chances of a “perfect” sports genotype are 1 in 20 million.

Puthuchearry Z et al. Sports Med 2011;41:845-59.

Does ESSS Promote Long-Term Success?



Early Specialization in Sport– Does it Work?

- Russia - only 0.14% of 35,000 highly qualified athletes training at sport schools succeeded from entry-level to high-level sports.
- Germany - over 7 years, 15 of 4972 (0.3%) selected at the youngest level in each sport eventually ranked among 10 best international senior athletes

Ljach WI. High performance sport in childhood in Russia). Leistungssport. 1997; 27(5):37Y40.

Gullich, A. (2001). Squad careers in junior and senior elite sport – age structure and continuity. Leistungssport, 31(4), 63–71.

Do “Other” Sports Matter?

- German national athletes in all Olympic sports (N = 1558)
 - Older age of initiating training in main sport compared to those who did achieve international level (11.4y vs. 10.2y)
 - On average, participated in 2 other sports before or parallel to main sport.
 - Internationally successful athletes continued in other sports to a later age.
 - Adolescent success did not predict senior level success.

Gullich A, Emrich E. Evaluation of the support of young athletes in the elite sport system. Eur. J. Sport Soc. 2006; 3:85Y108.

Early Success Does Not Predict Future Success

- Barrieros et al 2014
 - 395 athletes (soccer, volleyball, swimming and judo)
- Only a third of international pre-junior athletes were selected as senior athletes
- The number in the senior squads who had **never** been selected at the pre-junior age was **larger** than those who had been members of the pre-junior teams

Is 10,000 Hours Necessary for Success?

- World-class athletes in basketball, field hockey and soccer athletes attain international success with much less than 10,000 practice hours, specifically 4,000- 4,500 hours.
- Many elite performers as well as athletes across virtually all age and success levels and all types of sports do not engage exclusively in deliberate practice.
- They also participate in non-organized, peer-led “play” and other sports besides their primary sport – both organized (coach-led) and non-organized (peer-led) .

Hornig M, Aust F, Güllich A. 2016, Güllich A. 2014, Baker J, Côté, J, Abernethy. 2003.

Rees et al. Sports Med. 2016, Bridge MW, Toms MR. 2013.

Butcher J, Lindner KJ, Johns DP. 2002. Fransen J et al. 2012. Coutinho P et al. 2016.

Does the 10y/10,000h Rule Apply for Sports?

Australian Institute of Sport

- 459 elite junior (<23) and senior athletes
- Av time from novice to expert
= 7.5y (+/- 4.1)



AIS Data

Slow Cookers vs. Rapid Risers

	Slow Path	Quick Path
Age began main sport	8y	17y
# Sports prior to main sport	0.9	3.3
# Sports after main sport	2.4	0.2



Sport Specialization and Long-Term Success

- Adult world-class athletes from all Olympic sports and different international sport systems:
 - Moderate intensity early sport-specific practice/training in their respective primary sport.
 - Extensive involvement in various other sports, including multi-year competitive participation, and also in non-organized, peer-led sport-play. (Bridge MW, Toms MR.2013, Butcher J, et al 2002, Fransen J, et al. 2012, Coutinho P, et al. 2016.)
 - **Lower amount** of sport-specific childhood practice/training found in those who eventually became world-class athletes. (Güllich A, Emrich E. 2006. Moesch K, et al. 2013.)

Sport Specialization and Long-Term Success

- World-class performers also continued participation in other sports practice to a later age (typically until late adolescence or beyond), and specialized in their primary sport significantly later.
- These findings have been confirmed within the top margin of the success continuum, even comparing Olympic and World Championship medalists versus non-medalists.

Rees T, Hardy L, Güllich A, et al. The Great British medalists project: A review of current knowledge on the development of the world's best sporting talent. Sports Med. 2016

Güllich A. Developmental sport activities of international medalists and non-medalists – a matched-pairs analysis. Manuscript under review. 2016.

Sport Specialization and Long Term Success

- Multisport involvement is over-represented in world-class performers.
 - More practice and play in other sports
 - Experienced a greater number of different sports.
- More world-class than national-class athletes started their athletic career in a different sport and then changed to their current primary sport.

Rees T, Hardy L, Güllich A, et al. The Great British medalists project: A review of current knowledge on the development of the world's best sporting talent. Sports Med. 2016

Güllich A. Developmental sport activities of international medalists and non-medalists – a matched-pairs analysis. Manuscript under review. 2016.

What Does the Data Tell Us?

- For Olympic athletes there appears to be no evidence that success is associated with:
 - Earlier onset and higher volume of training
 - Extended involvement in a formal “select” program of training in adolescent ages or younger
- Early competitive participation and inclusion in talent development programs is not associated correlated with later success.
- Training in “other” sports enhances long-term success.

Early Specialization

What are the Potential Downsides?

- Social Isolation
- Lack of independence/overdependence
- Manipulation
 - Preferential treatment
 - Age modification (eg Chinese gymnasts, LL WS)
 - Dietary and PED issues
 - Monetary
- Burnout
- Injury
- The Silent Injury – Abuse

On a 5-yr-old soccer prodigy in the Ajax (Netherlands) system:

“He is well worth this investment of time and attention, because **one day he might be sold** to Chelsea or Real Madrid or Juventus for millions”.

Sokolove M. How a soccer star is made [Internet].
2010 New York Times Magazine . Available from:
<http://www.nytimes.com/2010/06/06/magazine/06Soccer-t.html?ref=todayspaper>.

The Silent Injury

“It hurt me a lot. She never said, ‘You’re good.’ Actually she said, ‘You’re not good.’ Other coaches would say ‘You can be top 20.’

I was with her from when I was 11 until I was 20! I felt like I would have to beat two people to win a match: the opponent and myself. My doubts were so strong”
She quit tennis at age 20.



Li Na 2014
Age 32
Australian Open Champion
No 2 in the World

The Silent Injury in Youth Sports



Does ESSS Increase Injury Rates?

Data on the relationship between ESSS and injury rate is limited and mixed

- Several suggest ESSS is an independent risk factor (Post et al 2017, Pasulka et al 2017, Bell et al 2016, Jaynathi et al 2015, Hall et al 2015, Visnes et al 2013)
- Others studies have not concluded that ESSS is not associated with increased injury rates (Kahlenberg et al 2016, Fabricant et al 2016, Beese et al 2015)

ESSS and Injury

SCANDINAVIAN JOURNAL OF MEDICINE & SCIENCE IN SPORTS

The prevalence and severity of health problems in youth elite sports: A 6-month prospective cohort study of 320 athletes

- Elite sport athletes (N = 320, 16.2 years) from different Sport Academy High Schools in Norway
- Oslo Sports Trauma Research Centre (OSTRC) questionnaire on health problems was used to self-report injuries and illnesses for 26 weeks.
- 39% specialized < 12y
- Overuse injuries (37%), acute injuries (34%), and illnesses (30%)
- Early specialization not associated with injury or illness

Moseid et al. Scand J Med Sci Sports. 2018 Apr;28(4):1412-1423.

Original research

The associations of early specialisation and sport volume with musculoskeletal injury in New Zealand children

Jody McGowan, Chris Whatman, Simon Walters
[J Sci Med Sport. 2020 Feb;23\(2\):139-144.](#)

Early specialisation in one sport did not increase the odds of reporting a history of injury. Exceeding currently recommended sport participation volumes was associated with increased odds of reporting a history of gradual onset injury.

Original Research

Sports Specialization Is Not Associated With Greater Odds of Previous Injury in Elite Male Youth Soccer Players

David Frome, BS, Karen Rychlik, MS, Jennifer Fokas, BA, George Chiampas, DO Neeru Jayanthi, MD, Cynthia LaBella, MD
[Clin J Sport Med 2019;29:368–373](#)

after accounting for age and weekly training volume, specialized athletes had decreased odds of reporting any previous injury and similar odds of reporting a previous LE overuse injury as nonspecialized athletes

Sport-Specific Associations of Specialization and Sex With Overuse Injury in Youth Athletes

Eric G. Post, PhD, ATC, Kevin M. Biese, MA, ATC, Daniel A. Schaefer, MS, RSCC, Andrew Watson, MD, MS, Timothy A. McGuine, PhD, ATC, M. Alison Brooks, MD, MPH, David R. Bell, PhD, ATC
[Sports Health. 2020 Jan/Feb;12\(1\):36-42.](#)

Specialization and exceeding 8 months per year in a single sport was associated with overuse injury in Volleyball... Specialization was not associated with overuse injury in basketball or soccer athletes.

UCLA Study of Sport Specialization

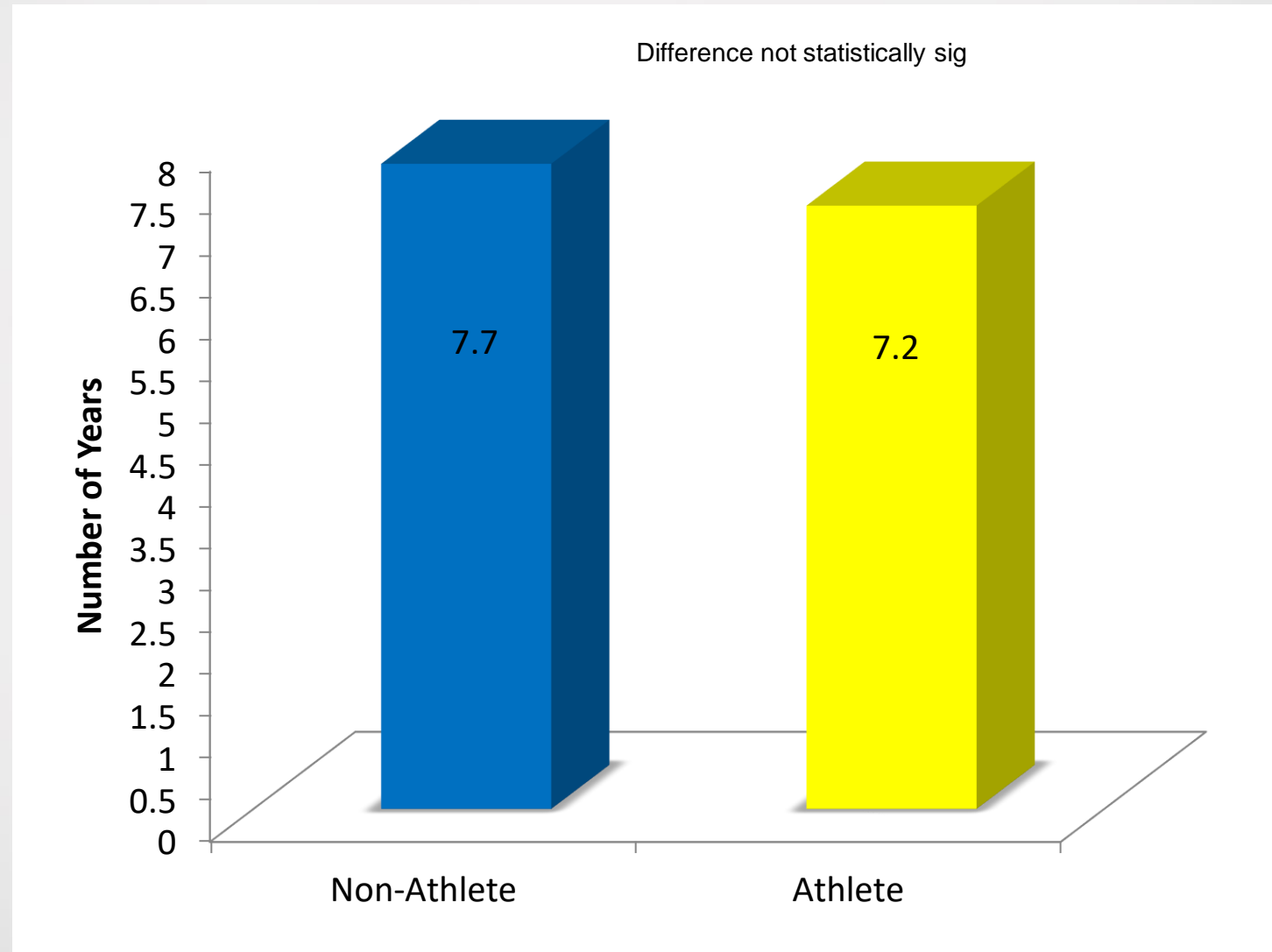
Journal of Athletic Training 2019;54(10):1050–1054
doi: 10.4085/1062-6050-431-18
by the National Athletic Trainers' Association, Inc
www.natajournals.org
Original Research

Early Single Sport Specialization in a High-Achieving US Athlete Population: Comparing National Collegiate Athletic Association Student-Athletes and Undergraduate Students

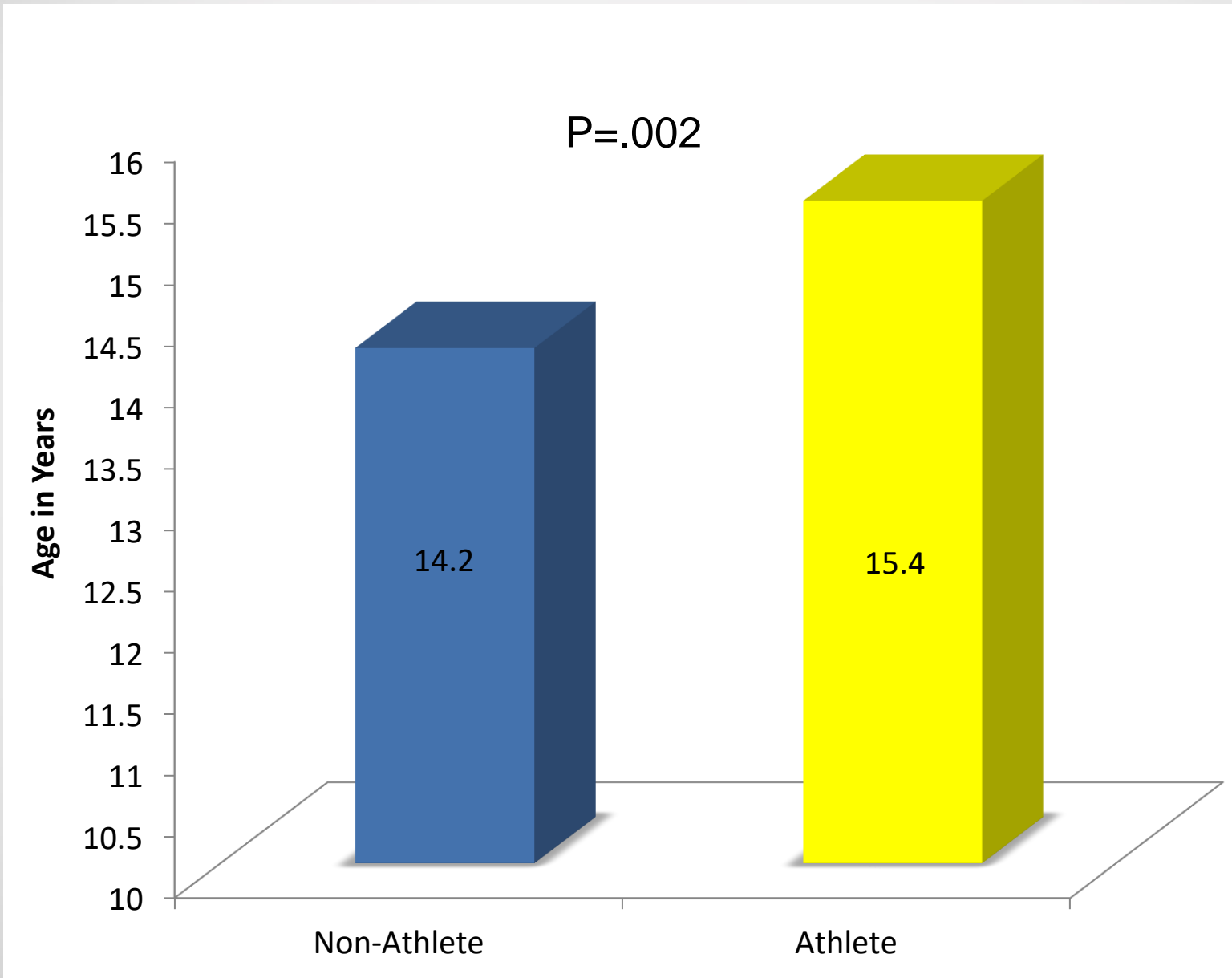
John P. DiFiori, MD, FACSM, FAMSSM*; Celeste Quitiquit, MD†; Aaron Gray, MD‡; Edward J. Kimlin, MD§; Ryan Baker, MD||
*Primary Sports Medicine, Hospital for Special Surgery, and National Basketball Association, New York, NY;

	Undergraduate Students	D1 Student-Athletes
Number of Participants	156	299
Male	77	135
Female	78	164
Average Age	19.7 years	19.4 years
Groups Represented	Various undergraduate clubs: <ul style="list-style-type: none">- Powerlifting- Martial Arts- Quidditch- Tennis Club- Student Athletic Training- Pre-med group	19 D1 NCAA sports

Average Age of Sport Initiation



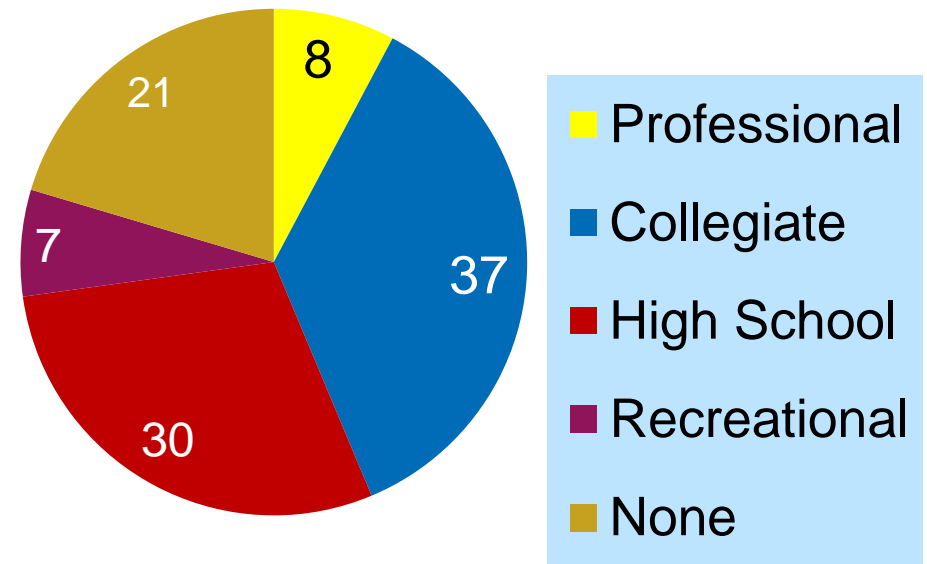
Average Age of Sport Specialization



“The Apple Doesn’t Fall Far from the Tree”

- Parent who competed at the collegiate or professional level
 - Athletes 45%
 - Non-D1 students 8%
($p=.002$)
- No differences between undergraduate students and NCAA Division I student athletes for:
 - Birth Month
 - Birth Order

Parental Sport Achievement



Key Findings

- Most successful NCAA athletes do not begin to specialize until mid adolescence.
- Timing of specialization does not seem to separate an elite athlete from a recreational athlete
- Parental sports participation history suggests that genetic and environmental factors play a key role in the development of collegiate athletes.

Genetics and Family Environment



Youth Basketball Participation

- Among youth 6-14 years of age, 13.5M play basketball – 37% of this age group¹
- Most popular team sport for 12-17 year olds – >11M participating¹
- High school level: approximately 430,000 girls and 540,000 boys play the sport²

¹ NBA/Experian Participation Data

² National Federation of State High School Association. 2014-15 high school athletics participation survey. <<http://www.nfhs.org>

US High School Basketball Landscape

Number of Games in One Year

The best high school basketball players in the U.S. commonly play around **100 games (and potentially more) in a calendar year** given the current schedule for high school and AAU basketball teams.

US High School Basketball Landscape

Number of Games in One Weekend

- The NCAA's Spring "live" recruiting period recently took place over two separate weekends in April.
- At these tournaments, more than 1,000 high school players from across the country played up to 5 games in a 30- to 40-hour span (typically starting on Friday night and ending Sunday early afternoon).

Travel Schedules for Elite High School Players

- The most elite high school players in the United States for the Class of 2017 (i.e., Top 10-20 recruits nationally) traveled **30,000 to 60,000** miles during their last calendar year of high school.
- The average NBA team traveled **46,000 miles** (with a range from 37,000 to 57,000 miles) during the 2016-17 regular season.
- A typical top college basketball team traveled roughly **20,000 to 30,000 miles** during the 2016-17 season.



Kids should play multiple sports and not focus on just one

Kiki VanDeWeghe and John DiFiori, Special for USA TODAY Sports

Published 10:19 p.m. ET Aug. 13, 2015 | Updated 5:45 p.m. ET Aug. 14, 2015



Kids dribble basketballs and participate in a Jr. NBA Clinic at Quest Multisport in Chicago.
(Photo: Randy Belice, NBAE/Getty Images)

Like so many other parents of young athletes, we also have seen firsthand that youth sports today are very different from a generation ago. Youth sports — including basketball — increasingly involve two unfortunate trends. First, a greater percentage of athletic time for boys and girls is devoted to structured competitions. Second, youngsters are frequently pushed to specialize in a single sport. These changes have come at the expense of children having the chance to play multiple sports, develop sound fundamental skills and play some sports simply for enjoyment.

The NBA — like every major sports organization — encourages children to be active and to play our game. But we also recognize the need to re-evaluate the current culture of youth sports in this country and acknowledge the opportunity for major sports organizations to bring attention to, and possibly foster change on, this important issue. As part of our expanded Jr. NBA youth basketball program that will tip off in October, the NBA is creating a platform that will emphasize skill development, teach the team values of basketball and focus on the health and wellness of young athletes and fun for all.

NBA/USA Basketball Youth Guidelines



Curriculum & Instruction



Playing Standards



Health & Wellness



NBA/USA Basketball Working Groups

Curriculum & Instruction

- Mark Adams
- Jeremiah Boswell
- Renee Brown
- Jamie Carey
- Matt Doherty
- John Jakus
- Troy Justice
- Chris Keller
- Matt King
- Leigh Klein
- Don Showalter
- Dawn Smyth
- Greg Turner

Playing Standards

- Shane Battier
- Bruce Bowen
- Kathy Brook
- Jay Demings
- L.J. Goolsby
- Joe Lewandoski
- Frank Lopez
- Leo Papile
- James Parker
- Sue Phillips
- Carol Ross
- Dan Searl
- Brad Taylor

Health & Wellness

- John DiFiori, MD
- Joel Brenner, MD
- Dawn Comstock, PhD
- Jean Cote, PhD
- Arne Güllich, MD
- Robert Malina, PhD
- Ed Ryan, ATC

Youth Basketball Initiatives

Health & Wellness Working Group

British Journal of Sports Medicine

An international peer-reviewed journal of sport and exercise medicine

Editorials

Debunking early single sport specialisation and reshaping the youth sport experience: an NBA perspective

John P DiFiori,^{1,2} Joel S Brenner,³ Dawn Comstock,⁴ Jean Côté,⁵ Arne Güllich,⁶ Brian Hainline,⁷ Robert Malina⁸

THE 'COMMON WISDOM'

Among many parents and coaches, it is believed that early single sport specialisation is essential for future competitive sport success and, further, that a high level of achievement in youth sports predicts future success. Owing to these misconceptions, youth sport has become focused on results at young ages rather than the overall development process, including physical and psychosocial health

FACT CHECK

Research of top athletes does not support the view that youth sport achievement and early specialisation is a prerequisite for elite-level performance. In fact, youth level success has little correlation with long-term success.³⁻⁵ In some cases, early single sport specialisation may even be detrimental to long-term success and performance at elite levels.^{2 3 6 7} In addition, sport-specific training and competition at

In this way, the likelihood of a young athlete selecting a main sport that optimally 'fits' him or her may be improved. This approach reflects the concept of 'multiple sampling and functional matching'.^{2 3}

Thus, while it is clear that organised sport-specific practice is important to sport success, it must also be recognised that early specialisation is unnecessary and may even be detrimental to long-term success, while multisport practice and peer-led play experience facilitates the effectiveness of later specific practice (ie, late specialisation) and long-term achievement.

THE BIGGER PICTURE

Although there can be an intense focus on achieving competitive success among some parents, coaches and even young athletes, youth sport participation offers many other benefits. These include peer socialisation, improved self-esteem and the



The NBA and Youth Basketball: Recommendations for Promoting a Healthy and Positive Experience

John P. DiFiori¹ · Arne Güllich² · Joel S. Brenner³ · Jean Côté⁴ · Brian Hainline⁵ · Edward Ryan III⁶ · Robert M. Malina⁷

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Abstract

Participation in sports offers both short-term and long-term physical and psychosocial benefits for children and adolescents. However, an overemphasis on competitive success in youth sports may limit the benefits of participation, and could increase the risk of injury, burnout, and disengagement from physical activity. The National Basketball Association and USA Basketball recently assembled a group of leading experts to share their applied research and practices to address these issues. This review includes the group's analysis of the existing body of research regarding youth sports participation and the related health, performance, and psychosocial outcomes. Based upon this, age-specific recommendations for basketball participation are provided that aim to promote a healthy and positive experience for youth basketball players.

Recommended Participation Guidelines

	Game Length	Games Per Week	Practice Length	Practices Per Week
Ages 7-8	20-28 minutes	1	30-60 minutes	1
Ages 9-11	24-32 minutes	1 to 2	45-75 minutes	2
Ages 12-14	28-32 minutes	2	60-90 minutes	2 to 4
Grades 9-12	32-36 minutes	2 to 3	90-120 minutes	3 to 4

Maximum Participation Guidelines

	<u>Maximum # of Games</u>		Max. # Hrs. / Wk of Organized Basketball	<u>Time Off From Organized Basketball</u>	
	Per Day	Per Week		Min. # of Rest Days Per Week	Max. Months/ Year in Organized Basketball
Ages 7-8	1	2	3 hrs	2	4 months
Ages 9-11	2	4	5 hrs	2	5 months
Ages 12-14	2	5	10 hrs	1	7 months
Grades 9-12	2	6	14 hrs	1	9-10 months

Rest Guidelines

	Minimum Rest Days Per Week	Maximum Months Per Year in Organized Basketball	Recommended Hours of Sleep Per Night
Ages 7-8	2	4 months	9-12 hours
Ages 9-11	2	5 months	9-12 hours
Ages 12-14	1	7 months	8-10 hours ¹
Grades 9-12	1	9-10 months	8-10 hours

¹ For 12 year olds, 9-12 hours of sleep is recommended

Youth Basketball Player Health and Wellness Recommendations

1. Promote personal engagement in youth basketball and other sports.
2. Youth sports should include both organized and informal, peer-led activities.
3. Youth should participate in a variety of sports.
4. Delay single-sport specialization in the sport of basketball until age 14 or older.
6. Ensure rest from *organized* basketball at least one day per week and extended time away from *organized* basketball each year.
7. Limit high-density scheduling based on age-appropriate guidelines.
8. Further evaluation of basketball-specific neuromuscular injury prevention training programs is warranted.
9. Parents and coaches should be educated regarding concepts of sport readiness and injury prevention.

National Jr. NBA Programming



Players



Coaches



Parents

Jr. NBA Programming Calendar

JANUARY

Jr. NBA 3v3 MLK
Tournament in Memphis

Jr. NBA 3v3 Leagues
begin

FEBRUARY

Jr. NBA activations at NBA All-Star:
Jr. NBA Day, Skills Challenge, 3v3
event, and Gatorade Invitational

Jr. NBA Military Base
activations

MARCH

Jr. NBA 3v3 Leagues
conclude

Jr. NBA Military Base
activations

APRIL

Jr. NBA 3v3 National
Championship in Dallas

Jr. NBA Global Championship
International Regionals begin

MAY

Jr. NBA Global Championship
U.S. Regionals begin

Jr. NBA Youth Leadership
Conference in Chicago

JUNE

Jr. NBA Skills Challenge
National Finals in New York

UA Next Combine Series
begins

JULY

Jr. NBA Global Championship
U.S. and International regionals
conclude

Her Time to Play events
at WNBA All-Star in Las Vegas

AUGUST

Jr. NBA Global Championship
in Orlando

Rookie Transition Program
Jr. NBA clinics

SEPTEMBER

Her Time to Play events
at WNBA Finals

Jr. NBA Flagship Network
Meeting

OCTOBER

NBA Start of Season
activations

Jr. NBA Week

NOVEMBER

NBA Hoops for Troops
activations

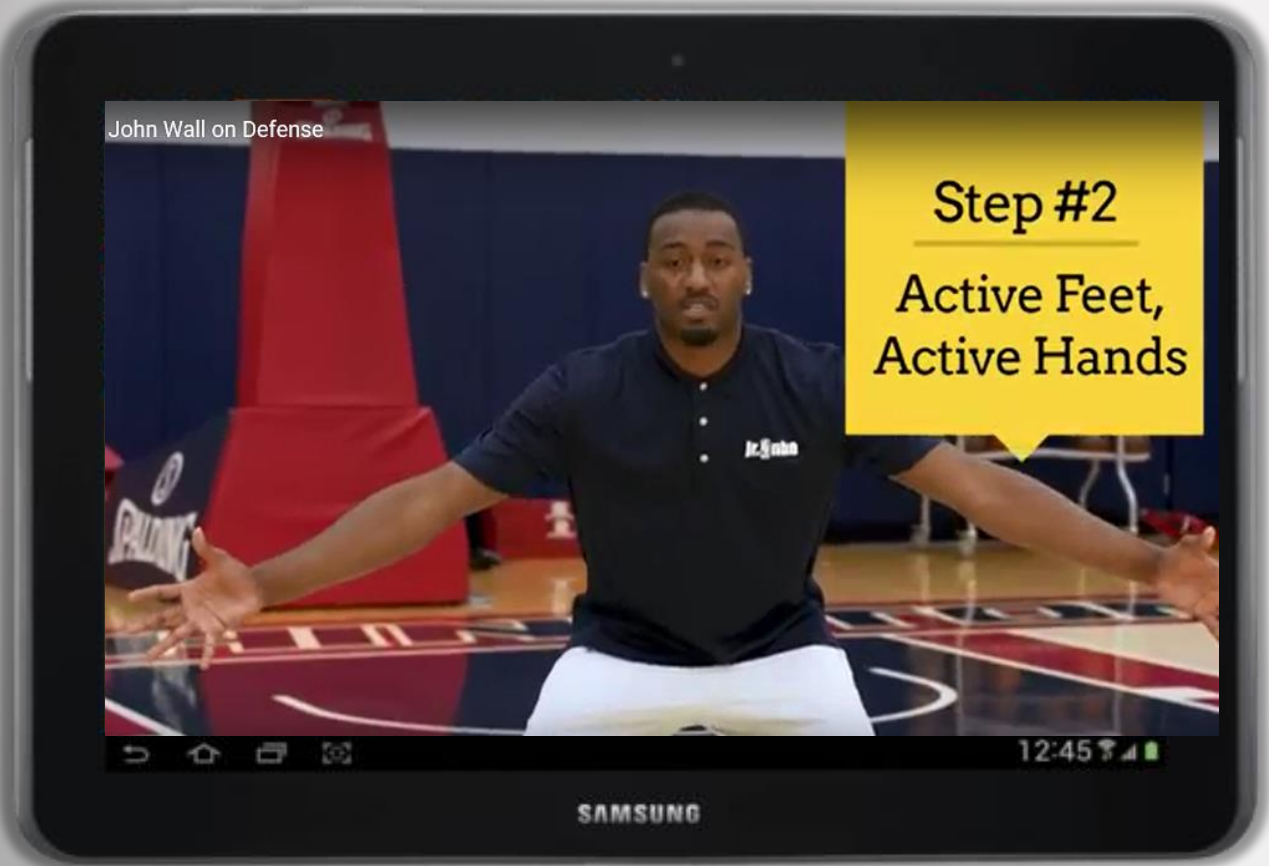
Jr. NBA Skills Challenge
begins

DECEMBER

Her Time to Play
registration opens

Jr. NBA Gatorade Invitational
in Chicago

Jr. NBA Instructional Curriculum



Practice 1 of 12



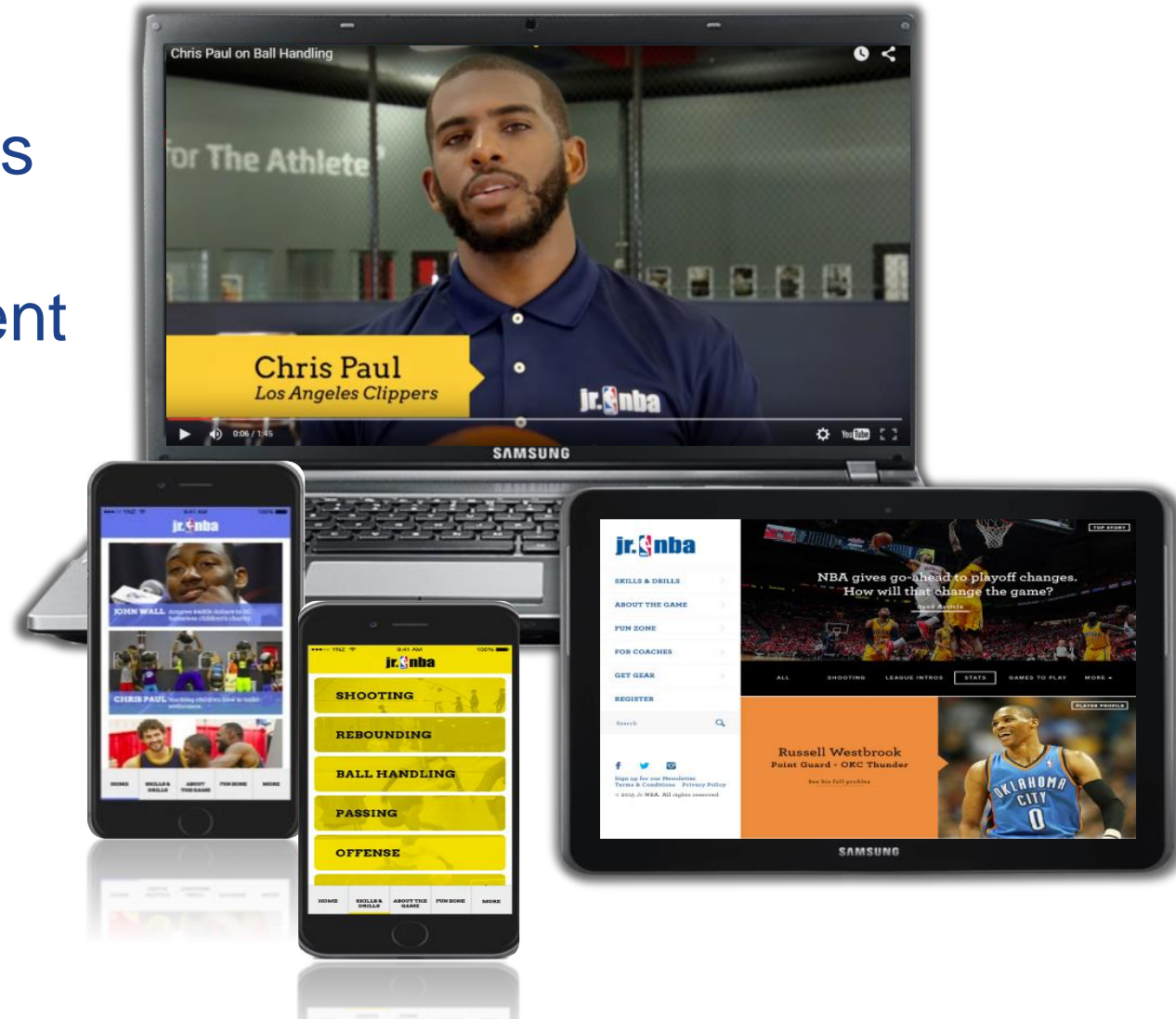
ROOKIE LEVEL

Cultivating Values & Developing Wellness	HAVE FUN!	The game of basketball is fun! Encourage the players to enjoy the game and their teammates!	5%
	KNOW YOUR TEAM GAME	Have players get to know each other by answering fun questions!	
Warm-Up & Injury Prevention	THE ESCAPE GAME (3 times each partner)	The players will partner up and “escape” from each other in this fun warm-up game.	5%
Building Skills	TEACH: Ball-Handling		70%
	TOSS & CATCH (1 x 45 sec.)	Develop comfort with the ball and work on hand eye coordination by tossing and catching the ball.	
	SMACKS (1 x 20 sec.)	Get comfortable with the ball, and warm-up the fingers and hands by smacking the ball.	
	TAPS (2 x 30 sec.)	Tap the ball quickly from hand to hand gain familiarity with the ball and warm-up the fingers and hands.	
	WAIST WRAPS (1 x 10 reps)	Challenge the players to wrap the ball quickly around their waist.	
	HEAD WRAPS (1 x 10 reps)	Wrap the ball around the head as quickly as possible.	
	TEACH: Passing		
	STATIONARY WALL PASS Chest (3 x 10)	Find a target on the wall and practice hitting it with the perfect pass!	
	TEACH: Shooting		
	FORM SHOOTING No ball (2 x 8)	Focus on perfect form and visualization.	
	SHOOTING LINE GAME (2 times to 8 makes)	Have some fun shooting just like practiced!	
	TEACH: Footwork & Conditioning		
	JUMP-STOP DRILL No ball (2 times down & back)	Use this drill to work on the fundamentals of the jump stop; balance and body control.	
Team Concepts	TEAMWORK CARRY DRILL	This is a great drill to encourage teamwork!	10%
Competing	WHAT TIME IS IT MR. REF?	Have fun with this game and add a basketball if appropriate!	10%
Compliment Session	COMPLIMENT SESSION	Have the players volunteer to say something positive about another player’s actions or performance in practice.	

Jr. NBA Digital Platform

Jr. NBA.com and the Jr. NBA App serve as the premier digital resources for youth players, parents, coaches and officials providing valuable content such as:

- Four curriculum levels – Rookie, Starter, All-Star, and MVP
- 12 practice plans per level (48 total)
- > 250 instructional videos



NBA Youth Basketball Research

- 772 players between 14-18 years old
- 627 Boys, 145 Girls
- Spaulding Hoophall Classic at the Naismith Hall of Fame
- Nike Elite 100 Camp
- 21% were ranked among the top 50 in their class.



NBA Youth Basketball Research

- 49% played more than 50 games within the past year.
- 73% were specialized in basketball, 58% prior to age 14 years, and 35% prior to age 11 years.
- 70% reported less than 1 month away from organized basketball within the past year, and 28% reported no time away.
- Within the prior year, 55% reported feeling physically exhausted and 45% reported feeling mentally exhausted from basketball.
- Regression analysis did not find any significant relationships between early specialization prior to age 14 years and basketball-related injury or feelings of mental or physical exhaustion.

Age of Early Specialization, Competitive Volume, Injury, and Sleep Habits in Youth Sport: A Preliminary Study of US Youth Basketball

Peter L. Meisel, MSPH,^{*,†} John P. DiFiori, MD,^{†,‡} Jean Côté, PhD,[§] Joseph T. Nguyen, MPH,[‡] Joel S. Brenner, MD, MPH,^{||} Robert M. Malina, PhD,[§] Ed Ryan III, ATC,[¶] and Arne Güllich, PhD^{**}

Background: Concerns for youth sports in the United States often focus on early sport specialization, overemphasis on competition, injuries, and burnout. Little research has addressed relationships among the preceding and other concerns, including time away from organized sport, sleep, and perceptions of physical and psychological well-being.

Hypothesis: There is an association between reported competitive gameplay volume and specialization, injury, and fatigue among elite youth basketball players.

Study Design: Cross-sectional study; convenience sample.

Level of Evidence: Level 4.

Methods: An anonymous questionnaire was administered to a convenience sample of youth basketball players between 13 and 18 years of age from across the United States. Participants were queried about multiple factors, including the extent of their participation in organized basketball and other sports, time away from organized basketball, injury, sleep, and feelings of exhaustion related to basketball participation.

2022, SportsHealth 14:1; 30-44.

Youth Basketball Research

Age of Specialization

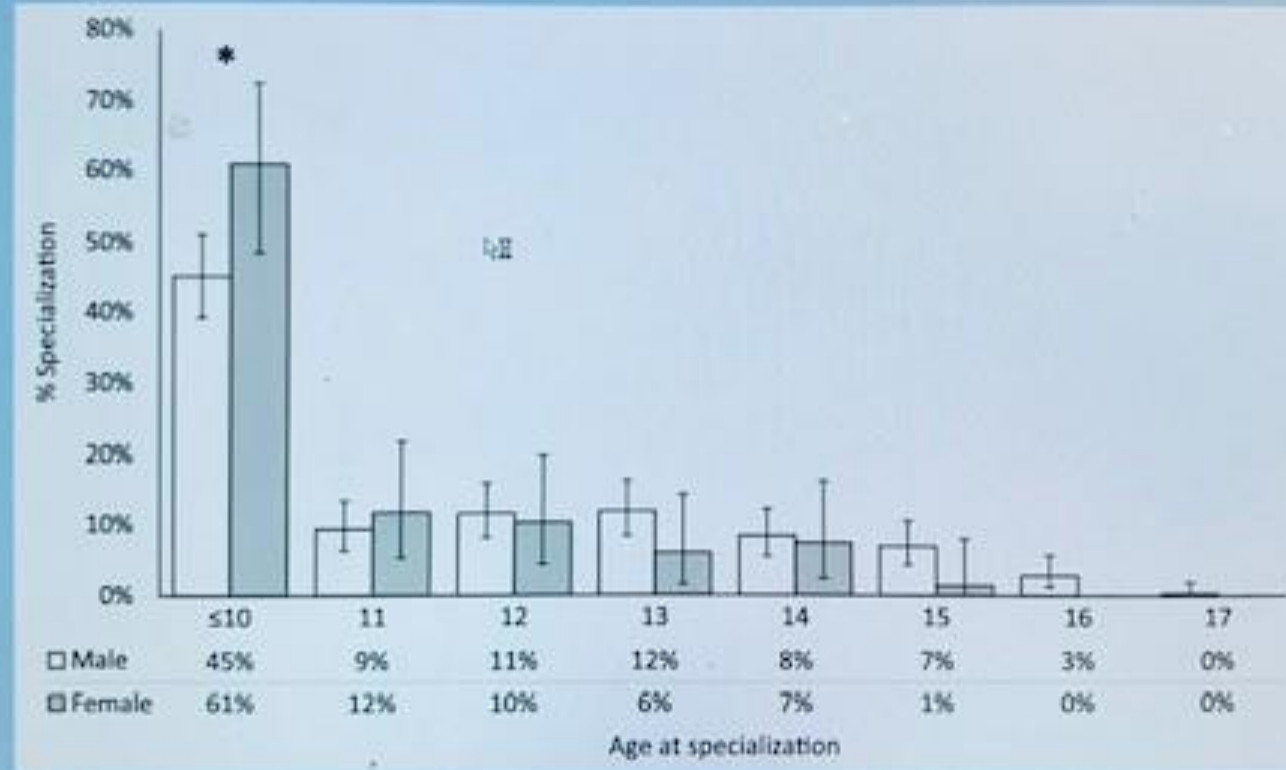


Figure 1. Reported age at which players began to specialize in basketball by gender. Error bars indicate 95% confidence intervals. *Significantly higher percentage of females specialized at 10 years or younger (61%) compared with males at that same age (45%) ($P = 0.018$).

Is the Narrative Changing?

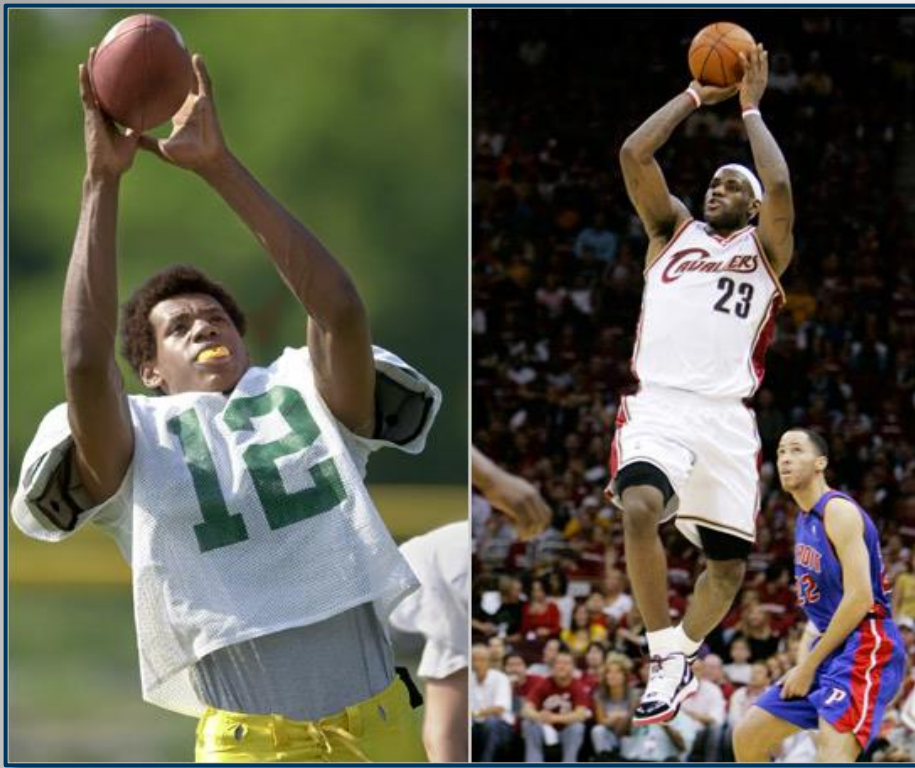


May 4, 2015

No surprise here: Lots of prep multi-sport athletes in NFL Draft

By Cam Smith

The trend continues: High school multi-sport athletes continue to be far more likely to be selected in the NFL Draft than those who quit to focus on football alone much earlier.

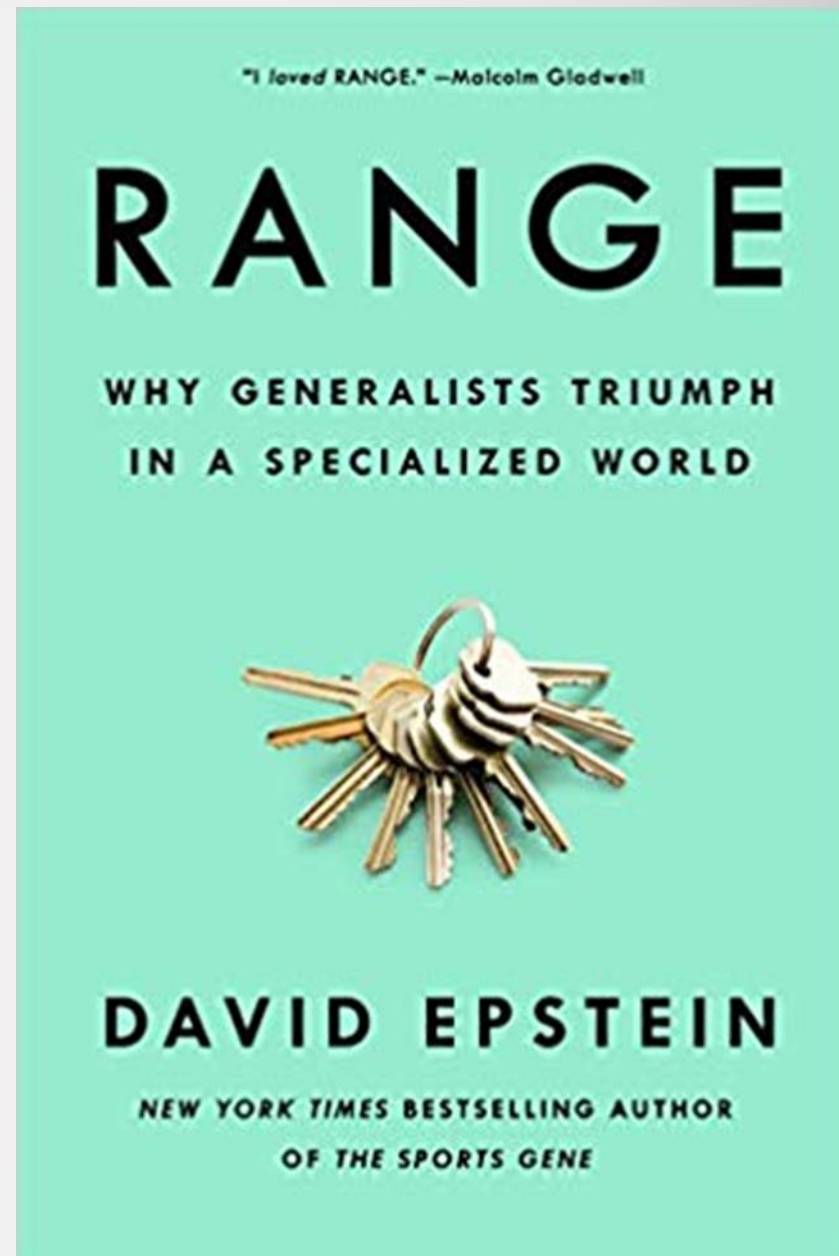
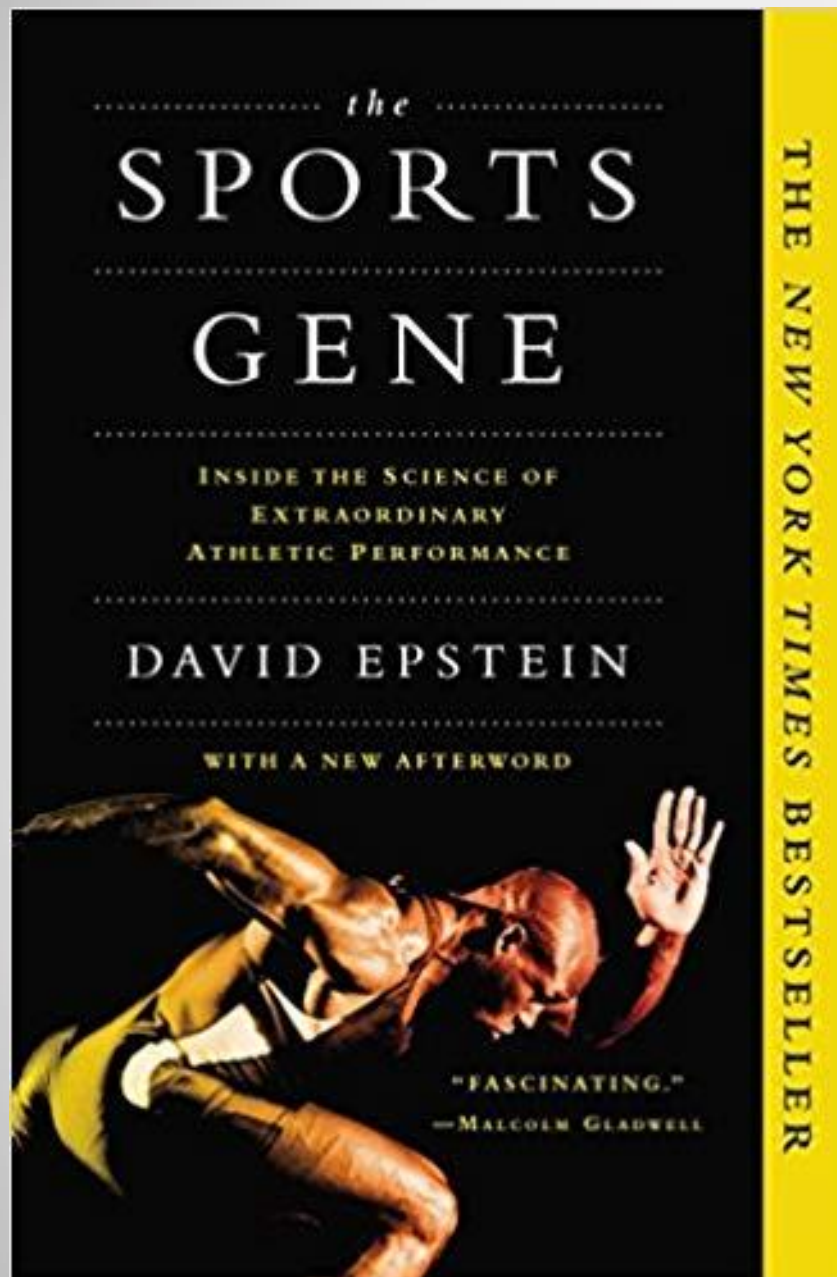


The Stephen Curry Approach to Youth Sports

In an age of hyper-specialization, the Golden State Warriors star benefited from playing multiple sports until he reached college

By Ben Cohen
May 17, 2016
Oakland, Calif.





The Take Home

- Early sport specialization is not ***necessary or sufficient*** to produce elite-level performance.
- Playing multiple sports should not be viewed as falling behind, but rather as building the foundation for future success. (and perhaps healthy activity levels in adulthood)
- Sport organizations can implement programs informed by data that promote a long-term approach to youth sport participation.

THANK YOU

