

# RESEARCH BRIEF

# Getting and Keeping Kids in the Game: A Summary of Key Recommendations by Medical and Health Groups

Prepared by



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There is widespread recognition among medical and health communities of the importance of free play, and organized school and community sports programs that meet the physical activity needs and interests of youth. Consensus among leading medical and health groups centers on several common goals: 1) increasing regular physical activity for all kids and maintaining an emphasis on fun, 2) discouraging early sports specialization and overuse/overload, and 3) recommending age-appropriate sports development with youth development-specific coaching education.

This brief summarizes key recommendations relevant to youth sport espoused by leading medical and health experts and organizations, and demonstrates areas of consensus on youth sport within the medical and health communities. Entities associated with recommendations referenced in this brief include the American Academy of Family Physicians, American Academy of Orthopaedic Surgeons, American Academy of Pediatrics, American College of Sports Medicine, American Medical Society for Sports Medicine, American Orthopaedic Society for Sports Medicine, American Osteopathic Academy of Sports Medicine, Centers for Disease Control and Prevention, Institute of Medicine, National Athletic Trainers Association, and the National Youth Sports Health & Safety Institute/Sanford Health.

The recommendations presented here were first selected upon consultation with experts in the medical, health and sport fields, then further refined following feedback from the group of experts participating in the February 26, 2014 Aspen Institute Project Play roundtable, *Off the Bench: How to Get Health Pros into the Game of Youth Sports*, and finalized with consultation from a small working panel. The intent of this report is to demonstrate areas of consensus within the medical and health communities on how to get and keep youth active in sport.

## **Recommendations of Leading Medical and Health Groups**

#### **Physical Activity**

- Children and youth should accumulate at least 60 minutes of moderate-to-vigorous physical activity every day in a variety of individual and group activities that they enjoy.
- Opportunities for physical activity should be particularly encouraged and supported for under-served youth.
  - "By modifying physical education, health education, extracurricular physical activities, and community sports and recreation programs, schools and communities can help young people with physical and cognitive disabilities acquire the physical, mental, and social benefits of physical activity." 15
  - "Physical activity programs serving girls should provide instruction and experiences that increase girls' confidence in participating in physical activity, opportunities for them to participate in physical activities, and social environments that support their involvement in a range of physical activities." <sup>15</sup>
  - "Regardless of their socioeconomic status, all children have the right to safe places to play regularly, during which they develop cognitive, communication, problem solving, negotiation, and leadership skills. They have the right to engage in safe and regular physical activity that will decrease the incidence of lifelong health disparities." 16

#### **Age Appropriate Play**

Definition: "Readiness for sports is related to the match between a child's level of growth and development (motor, sensory, cognitive, social/emotional) and the tasks/demands of the competitive sport." <sup>3</sup>

- Growth, maturation, and development rates, with consideration of the adolescent growth spurt, are individual and must be considered in training and competition demands and sport performance expectations. All children should be encouraged to participate in sports at a level consistent with their abilities and interests. 4,7,8
- Pediatricians should work with parents to ensure that the child athlete is being coached by persons who are knowledgeable about proper training techniques, equipment, and the unique physical, physiologic, and emotional characteristics of young competitors.

### **Sport Specialization**

Definition: "Sport specialization may be considered as intensive, year-round training in a single sport at the exclusion of other sports." 2

- Specialization in a single sport before adolescence is discouraged, while diversity in sport participation and delayed specialization is encouraged. <sup>2-6,9</sup>
- Early sport specialization does not enhance the opportunity for long-term athletic success in almost all sports, except those that require elite-level competition before full maturity (e.g., gymnastics, diving), and may increase the risk for overuse injury and burnout.
- A playing ratio greater than 2:1 of organized sports to free play significantly increases the risk of injury, particularly serious overuse injury.
- "Diversified sports training during early and middle adolescence may be more effective in developing elite-level skills in the primary sport due to skill transfer."
- With the initiation of specialization in a single sport, young athletes "should take time away from the sport in which they specialize for one month out of every six months or two months out of every twelve months."

## **Over-Scheduling and Recovery Time**

- It is essential to allow at least 1-2 days of rest each week for recovery and adaptation to the physical and emotional demands of sports. Time away from sport-specific training and competition is recommended on a yearly basis as well.
- "Parents should be very cautious about having their children competing on more than one team at the same time, especially, if by doing so, the child does not have 1 to 2 rest days each week."
- Exercise caution with multiple bouts of competition in a single day. Appropriate rest periods (minimally 2 hours between bouts) should be considered and also should be adjusted based on extremes of temperature (particularly in high heat and/or humidity) to allow for sufficient recovery, cooling and rehydration. <sup>18,19</sup>
- Physicians, parents, coaches and athletes all play an important role in the prevention and recognition of overuse injuries related to overscheduling and insufficient recovery time.

### **Injury Prevention**

Overuse injuries in children and adolescents "may be caused by training errors, improper technique, excessive sports training, inadequate rest, muscle weakness and imbalances, and early specialization." <sup>3</sup>

- Review training logs and limit the number of weekly hours of sport-specific training and competition to less hours/week than a child's age (e.g., <13 hours/week, if age 13) to minimize the risk for overuse injury. <sup>2,17</sup>
- "Sport organizations and parents should advocate for workshops to provide coaches with basic education regarding overuse injuries common to their sports and ways in which they can be avoided. Local physicians can be sought to assist in implementing this effort."
- "In the absence of prospective markers of excessive physical stress, physicians and coaches should strive for early recognition and prevention and treatment of overuse injuries (tendinitis, apophysitis, stress fractures, "shin splints"). Child athletes should never be encouraged to "work through" such injuries."
- Certain training programs are effective in reducing the risk of ACL and lower-extremity injury. Complete musculoskeletal injury recovery and rehabilitation is critical in minimizing the risk for re-injury. <sup>2,3,8</sup>

#### **Concussions**

- Coaches, physicians, trainers, and teachers should have rules and regulations in place, consistent with their respective state laws, on how to handle suspected concussions and maintain familiarity with these important cautions and guidelines. 8,11-14
- Any young athlete suspected of having incurred a concussion should be removed from play, practice or training immediately, and be assessed by a qualified person with experience in diagnosing a concussion, and should not return to activity until medical clearance has been given. <sup>12,20-22</sup>

#### **About the Authors**

Dr. John O. Spengler, Professor and Director of the University of Florida's Sport Policy & Research Collaborative (SPARC), authored this research brief on behalf of the Aspen Institute's Project Play with assistance, and in consultation with Dr. Neeru Jayanthi, Dr. Michael Bergeron, Dr. Cedric Bryant, Jim Whitehead and Anjie Emanuel, and with feedback from Aspen roundtable participants. SPARC undergraduate researcher, Annabelle Walker, provided research assistance. Editorial observations were provided by Tom Farrey, director of the Aspen Institute's Sports & Society Program.



The SPARC is an interdisciplinary research collaborative within the Sport Management Program in the Department of Tourism, Recreation and Sport Management at the University of Florida. SPARC is comprised of Sport Management faculty within the UF Sport Management Program, as well as research and policy experts serving as associate members from both within and external to the University of Florida. SPARC serves to bring together talented faculty, and cohesion to individual research efforts and successes. Dr. J.O. Spengler serves as the director of SPARC and Dr. Michael Sagas, professor and chair of the Department of Tourism, Recreation and Sport Management, provides support and oversight to the collaborative. The purpose of SPARC is to produce relevant and timely research that addresses sport as a facilitator of the physical, social, and emotional health of individuals, and the economic health of communities. SPARC is the official research partner of the Aspen Institute Project Play.



The Aspen Institute Project Play is a multi-year initiative that aims to lay the foundation for the nation to get and keep more children active through sports, with a focus on building a culture of health. The Sports & Society Program convenes sport, policy and other leaders in a series of roundtable and other events, and will produce a framework for action that can help U.S. stakeholders create "Sport for All, Play for Life" communities. Project partners and sponsors include the Robert Wood Johnson Foundation, David & Lucile Packard Foundation, ESPN, the Clinton Health Matters Initiative, Nike, American College of Sports Medicine, and the University of Florida's Sport and Policy Research Collaborative. More: <a href="https://www.AspenProjectPlay.org">www.AspenProjectPlay.org</a>

## RESEARCH BRIEF

#### References

- 1. Strong WB, Malina RM, Blimkie CJ, et al. Evidence based physical activity for school-age youth. *J Pediatr.* 2005;146(6):732-737.
- 2. DiFiori JP, Benjamin HJ, Brenner JS, Gregory A, Jayanthi N, Landry GL, Luke A. Overuse injuries and burnout in youth sports: a position statement from the American Medical Society for Sports Medicine. *Clin J Sport Med*. 2014;24(1):3-20.
- 3. Valovich McLeod TC, Decoster LC, Loud KJ, Micheli LJ, Parker JT, Sandrey MA, White C. National Athletic Trainers' Association position statement: prevention of pediatric overuse injuries. *J Athl Train*. 2011;46(2):206-20.
- 4. Anderson SJ, Greisemer BA, Johnson MD, Martin TJ, McLain LG, Rowland TW, Small E. Intensive training and sports specialization in young athletes. *Pediatrics*. 2000;106(1):154-157.
- 5. Brenner JS; American Academy of Pediatrics Council on Sports Medicine and Fitness. Overuse injuries, overtraining, and burnout in child and adolescent athletes. *Pediatrics*. 2007;119(6):1242-5. Reaffirmed 2012;129:4 e1103.
- 6. Jayanthi N, Pinkham C, Dugas L, Patrick B, Labella C. Sports specialization in young athletes: evidence-based recommendations. *Sports Health*. 2013;5(3):251-7.
- 7. DiFiori JP. Evaluation of overuse injuries in children and adolescents. Curr Sports Med Rep. 2010 Nov-Dec;9(6):372-8.
- 8. Bergeron MF; the National Youth Sports Health and Safety Institute. (2013). *Youth Sports Health and Safety: Preventable Injuries*. Retrieved from: http://nyshsi.org/resources/special-populations-the-young-athlete/
- 9. Selected issues for the adolescent athlete and the team physician: a consensus statement. Med Sci Sports Exerc. 2008;40(11):1997-2012.
- 10. Bergeron MF. Youth sports in the heat: recovery and scheduling considerations for tournament play. *Sports Medicine*, 2009;39(7): 513-522.
- 11. Institute of Medicine and National Research Council of the National Academies. (2013). *Sports-related concussions in youth: improving the science, changing the culture.* Washington, DC: Author. Retrieved from: http://www.iom.edu/Reports/2013/Sports-Related-Concussions-in-Youth-Improving-the-Science-Changing-the-Culture.aspx
- 12. Sanford Orthopedics Sports Medicine. (n.d.). *Concussion fact sheets for parents & athletes.* Retrieved from http://nyshsi.org/wp-content/uploads/2012/08/Concussion-Fact-Sheets-for-Parents-Athletes.pdf
- 13. National Center for Injury Prevention and Control. (2013). *Implementing return of play: learning from the experiences of early implementers*. Retrieved from <a href="http://www.cdc.gov/concussion/policies/rtp">http://www.cdc.gov/concussion/policies/rtp</a> implementation.html
- 14. Guskiewicz KM, Bruce SL, Cantu RC, et al. National athletic trainers' association position statement: management of sport-related concussion. *J Athl Train.* 2004;39(3):280-297.
- 15. Centers for Disease Control and Prevention. Guidelines for school and community programs to promote lifelong physical activity among young people. *MMWR Recomm Rep.* 1997;46:1-36.

- 16. Milteer RM, Ginsburg KR; Council on Communications and Media Committee on Psychosocial Aspects of Child and Family Health. The importance of play in promoting healthy child development and maintaining strong parent-child bond: focus on children in poverty. Pediatrics. 2012;129(1):204-213.
- 17. Jayanthi NA, Pinkham C, Dugas L, Patrick B, LaBella C. "Risks of Specialized Training and Growth in Young Athletes: A Prospective Cohort Study". Clin J Sports Med. March 2013;23(2):125.
- 18. Bergeron MF. The young athlete: challenges of growth, development, and society. Curr Sports Med Rep. 2010 Nov-Dec;9(6):356-8.
- 19. Council on sports Medicine and Fitness, Council on School Health. Policy statement: climatic heat stress and exercising children and adolescents. Pediatrics. 2011;128(3):1-7.
- 20. Herring SA, Cantu RC, Guskiewicz KM, Putukian M, Kibler WB. Concussion (mild traumatic brain injury) and the team physician: a consensus statement. Med Sci Sports Exerc. 2006 Feb;38(2):395-9.
- 21. Harmon KG, Drezner JA, Gammons M, Guskiewicz KM, Halstead M, Herring SA, Kutcher JS, Pana A, Putukian M, Roberts WO. American Medical Society for Sports Medicine position statement: concussion in sport. Br J Sports Med. 2013 Jan;47(1):15-26.
- 22. Halstead ME, Walter KD; Council on Sports Medicine and Fitness. American Academy of Pediatrics. Clinical report--sportrelated concussion in children and adolescents. Pediatrics. 2010 Sep;126(3):597-615.