



## OPPORTUNITY AREA

# PHYSICAL ACTIVITY: A CRUCIAL PILLAR OF SCHOOL WELLNESS

Fewer than one in four school-aged youth meets recommended physical activity guidelines despite the health and learning benefits physical activity provides. Experts have called on schools to adopt more strategies to help children participate in high-quality physical education and other physical activity opportunities before, during and after school. Schools and educators also are considering issues of equity, inclusion and accessibility as well as students' social and emotional well-being in the context of health, P.E. and other physical activities.



*Healthier School Communities* addresses why healthy schools matter today: what's at stake, what progress has been made, what challenges we face and what key opportunities exist. As a society we've learned a great deal over the past two decades about what's needed to create and sustain healthy schools and exactly what's at stake for students and for society if we don't. The report — and this related "opportunity area" brief on physical activity — provides information and inspiration to spur continued commitment and momentum to create the healthy school environments that whole child success demands.

# What's the Issue?

## A CRISIS OF INACTIVITY

Physical activity is linked with numerous health and educational benefits – yet the vast majority of children and youth do not meet national guidelines of 60 minutes of moderate to vigorous physical activity daily. Reductions in school recess and physical education programs, lack of equipment and lack of funding in school communities all play a role in the physical inactivity crisis. The result: many American students have few or no options when it comes to the before-, during- and after-school activity so crucial to their wellness and learning potential.

## P.E. PARTICIPATION STILL AN ISSUE

Rates of enrollment in physical education (P.E.) among high schoolers remained virtually flat in the 20 years from 1995 to 2015,<sup>6</sup> revealing that half of high school students do not attend physical education class. The participation of minority youth in P.E. has declined as schools have cut programs due to funding shortages.

Poor implementation of P.E. policies may be at play, as Michael et al. analyze the findings of a study that suggests that many schools “are implementing only a few of the physical education policies that can strengthen their physical education programs.”<sup>7</sup>

## DIFFERENCES BY GENDER, INCOME AND RACE

Girls still lag behind boys in reporting physical activity, with research confirming that white adolescent males are the most physically active and black adolescent females the least. According to Armstrong et al., “female adolescents and young adults are not meeting the recommended guidelines for physical activity, and substantial disparities by race and income levels are noted.” Most boys (88%) report physical activity in high school compared with 78% of girls; after graduation, the rate for girls drops to 62% and is even lower among young women of color and those living below the poverty line.<sup>8</sup>

Nearly 60% of American children lack cardiorespiratory fitness (CRF), according to a 2020 [American Heart Association Scientific Statement](#). CRF measurement provides insight into cardiovascular and overall health, including cognitive and academic functions, among children and teens. The statement notes that “lower-income families tend to have children with lower or unhealthy CRF, possibly because they do not have access to safe places to



## QUICK STATS

- ▶ **Students who are physically active tend to have better grades, school attendance, cognitive performance and classroom behaviors.**<sup>1</sup>
- ▶ **Regular physical activity can help children and adolescents improve cardiorespiratory fitness, build strong bones and muscles, control weight, reduce symptoms of anxiety and depression and reduce the risk of developing health conditions such as heart disease, cancer, Type 2 diabetes, osteoporosis and obesity.**<sup>2</sup>
- ▶ **Few schools have regular recess and daily physical education.**<sup>3</sup>
- ▶ **Only about 1 in 4 youth ages 6 to 17 get the recommended 60 minutes of daily physical activity.**<sup>4</sup>
- ▶ **By age 14, girls are dropping out of sports at approximately twice the rate of boys.**<sup>5</sup>
- ▶ **The median physical education budget for schools in the U.S. is only \$764 per school, per school year — and that was before the pandemic, which has put school budgets under increasing stress.**<sup>3</sup>

exercise, play sports and be physically active. In many communities, physical education is not provided in schools, and outdoor recess opportunities have been reduced or eliminated.”

## ORGANIZED SPORTS PARTICIPATION DOWN

As for organized youth sports, as of 2017 only 24% of youth regularly take part in high-calorie-burning sports, down from 29% in 2011, the Aspen Institute’s [“State of Play 2018”](#) reveals, citing more sedentary youth, unqualified volunteer coaches and prohibitively high costs to participate in organized sports. The Aspen report notes that over the past three years in households with incomes of less than \$25,000, fewer kids are participating in sports. It’s the same story with youth from homes with \$25,000 to \$49,999 in income.<sup>9</sup>

The nation’s poorest youth are significantly more likely to opt out of sports.<sup>10</sup> Whitaker et al. cite the fact that while costs for sports activities continue to grow, funding has remain flat or has decreased as a key reason behind this trend.<sup>11</sup>

# What's at Stake?

## PHYSICAL ACTIVITY HAS HEALTH BENEFITS NOW AND LATER

As hunger and poor nutrition persist among children and youth, the need for school nutrition continues to grow. This was acutely evident during the COVID-19 pandemic, during which school nutrition programs and staff showed amazing creativity and commitment in their efforts to address hunger in theirdemonstrated that eating school breakfast and school lunch every day by U.S. schoolchildren was associated with healthier dietary intakes, connecting the potential nutritional benefits of regularly consuming school meals.<sup>2</sup>

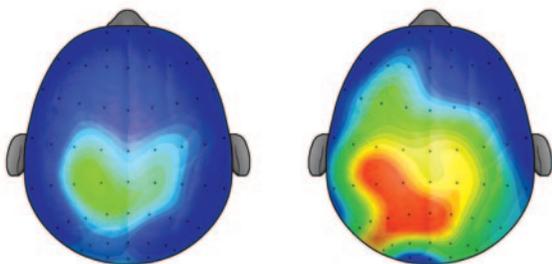
## THE LEARNING CONNECTION

Aerobic fitness plays a positive role in brain health.<sup>14</sup> Hillman et al.'s research (see box) is teasing out the relationship between physical activity and processes involved in attention, memory and academic performance in children. Their ongoing research findings "demonstrate a causal effect of a PA [physical activity] program on executive control, and provide support for PA for improving childhood cognition and brain health," providing particular evidence around the role of aerobic fitness for "attentional inhibition and cognitive flexibility."<sup>15</sup>

Another study finds research "supports the view that physical fitness, single bouts of PA [physical activity], and PA interventions [throughout the day] benefit children's cognitive functioning."<sup>16</sup>

### Cognitive Effects of Exercise in Preadolescent Children

Average composite of the brains of 20 students after they took the same test after sitting quietly (left) or after they took a 20-minute walk (right)



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## Girls and Physical Activity

Significant gender differences exist when it comes to physical activity. Between ages 5 and 10, girls and boys participate at similarly high rates. But the participation rate of girls between the ages of 11 and 13 is 8 percentage points less than boys, and the participation rate for adolescent girls is 20 percentage points lower.<sup>12</sup> At the high school level, 36% of boys and 18% of girls, respectively, participate in 60 minutes of physical activity every day, while girls enroll in P.E. less often than boys and participation drops significantly from the elementary to middle- and high-school years.<sup>4</sup>

## PROMISING NEW DIRECTIONS

Overcoming structural issues like costs and time constraints remains an issue in schools along with the need for new ways to engage today's children and youth in P.E. and other physical activities, especially adolescent and teen girls, where the inactivity gap is greatest. Examples of promising new directions include:

- ▶ A rising interest in free and unstructured play as a counterpoint and an accompaniment to more structured team sports
- ▶ Getting students outside to connect with the natural world as a way to offset too much screen time
- ▶ Active brain breaks throughout the school day to de-stress students and allow time for encoding new memories after concentrated periods of learning
- ▶ Providing schools with fun-for-all-kids activities like GENYOUth's NFL FLAG-In-Schools model (see next page)

# What We Can Do

Innovative physical activity and physical education in school provide space for students to develop their bodies and their minds — helping students move more, strengthen skills and instill a lifelong love of movement. Some opportunity areas include:

## P.E. AND SEL

Health and physical educators are on the front lines of the social-emotional learning (SEL) movement. Needed: P.E., sport and physical activity initiatives that help students “acquire and effectively apply the knowledge, attitudes and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions.”<sup>17</sup>

## TURNKEY, ADAPTABLE SOLUTIONS

Whether students are learning in school or remotely, they need opportunities to stay active. Educators are seeking turnkey solutions for physical activity that are flexible, standards-based, accessible to all students and adaptable for students with different skills, interests and physical abilities.



## FUN-FOR-ALL-KIDS SPORTS

One of the notable physical activity success stories in recent years has been the rise and success of flag football. In November 2018, *The New York Times* reported that since 2015, more than 1.5 million children ages 6 to 12 have played flag football, an increase of 38%, and about 100,000 more are playing flag than those who currently play tackle football.<sup>18</sup> That year, the total number of youth participants in flag football, aged 6 years and above, was estimated at 6.57 million. For the first time, in 2018 flag football outpaced tackle in youth aged 6 to 12.<sup>19</sup> In 2014, GENYOUth partnered with the NFL Foundation and USA Football to support high-quality physical education and grow opportunities for students to be physically active before, during and after school through the **NFL FLAG-In-Schools program**.

## RESOURCES

**SHAPE America** provides programs, resources and advocacy that support an inclusive, active, healthier school culture

**Fuel Up to Play 60 Playbook** has best-practice initiatives for increasing access to and participation in P.E./physical activity in school

**Aspen Institute Project Play** develops, applies and shares knowledge to help stakeholders build healthy communities through sports

**Physical Activity Guidelines for Americans** are published by the U.S. Department of Health and Human Services

## ENDNOTES

1. Centers for Disease Control and Prevention. Health and academic achievement. May 2014. Retrieved from [https://www.cdc.gov/healthyyouth/health\\_and\\_academics/pdf/health-academic-achievement.pdf](https://www.cdc.gov/healthyyouth/health_and_academics/pdf/health-academic-achievement.pdf).
2. US Department of Health and Human Services. *Physical Activity Guidelines for Americans*. 2nd ed. 2019. Retrieved from [https://health.gov/sites/default/files/2019-09/Physical\\_Activity\\_Guidelines\\_2nd\\_edition.pdf](https://health.gov/sites/default/files/2019-09/Physical_Activity_Guidelines_2nd_edition.pdf).
3. SHAPE America. 2016 shape of the nation: status of physical education in the USA. 2016. Retrieved from [https://www.shapeamerica.org/uploads/pdfs/son/Shape-of-the-Nation-2016\\_web.pdf](https://www.shapeamerica.org/uploads/pdfs/son/Shape-of-the-Nation-2016_web.pdf).
4. National Physical Activity Plan Alliance. The 2018 United States report card on physical activity for children and youth. 2018. Retrieved from [http://physicalactivityplan.org/projects/PA/2018/2018\\_USReportCard\\_UPDATE\\_12062018.pdf?pdf=page-link](http://physicalactivityplan.org/projects/PA/2018/2018_USReportCard_UPDATE_12062018.pdf?pdf=page-link).
5. Zarrett N, Veliz PT, Sabo D. Keeping girls in the game: factors that influence sport participation. Women's Sports Foundation. 2020. Retrieved from <https://www.womenssportsfoundation.org/wp-content/uploads/2020/02/Keeping-Girls-in-the-Game-FINAL-web.pdf>.
6. National Physical Activity Plan Alliance. Secular changes in physical education attendance among U.S. high school students: YRBS 1991-2013. Fall 2016. Retrieved from [http://physicalactivityplan.org/projects/secular/Secular\\_Trends\\_PE\\_508\\_FINAL.pdf](http://physicalactivityplan.org/projects/secular/Secular_Trends_PE_508_FINAL.pdf).
7. Michael SL, Brener N, Lee SM, et al. Physical education policies in US schools: differences by school characteristics. *Journal of School Health*. 2019;89(6):494-502. Retrieved from <https://onlinelibrary.wiley.com/doi/abs/10.1111/josh.12762>.
8. Committee on Physical Activity and Physical Education in the School Environment; Food and Nutrition Board; Institute of Medicine; Kohl HW III, Cook HD, editors. *Educating the Student Body: Taking Physical Activity and Physical Education to School*. Washington (DC): National Academies Press (US); 2013 Oct 30. 3, Physical Activity and Physical Education: Relationship to Growth, Development, and Health. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK201497/>.

9. The Aspen Institute/Project Play. State of play 2018: trends and developments. 2018. Retrieved from [https://assets.aspeninstitute.org/content/uploads/2018/10/StateofPlay2018\\_v4WEB\\_2FINAL.pdf?\\_ga=2.90553690.1116431382.1587927338-1989037080.1587927338](https://assets.aspeninstitute.org/content/uploads/2018/10/StateofPlay2018_v4WEB_2FINAL.pdf?_ga=2.90553690.1116431382.1587927338-1989037080.1587927338).
10. C.S. Mott Children's Hospital. Mott Poll Report: pay-to-participate: impact on school activities. March 18, 2019. Retrieved from <https://mottpoll.org/reports/pay-participate-impact-school-activities>.
11. Whitaker AA, Baker G, Matthews LJ, et al. Who plays, who pays? funding for and access to youth sports. RAND. 2019. Retrieved from [https://www.rand.org/pubs/research\\_reports/RR2581.html](https://www.rand.org/pubs/research_reports/RR2581.html).
12. The Council of Economic Advisers. The potential for youth sports to improve childhood outcomes. May 2018. Retrieved from <https://www.whitehouse.gov/wp-content/uploads/2018/05/The-Potential-for-Youth-Sports-to-Improve-Childhood-Outcomes.pdf>.
13. Janz KF, Thomas DQ, Ford MA, et al. Top 10 research questions related to physical activity and bone health in children and adolescents. *Research Quarterly for Exercise and Sport*. 2015;86(1):5-12. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/O2701367.2014.995019?journalCode=urqe20>.
14. Chaddock-Heyman L, Erickson KI, Kienzler C, et al. The role of aerobic fitness in cortical thickness and mathematics achievement in preadolescent children. *PLoS One*. 2015;10(8):e0134115. Retrieved from <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0134115>.
15. Hillman CH, Pontifex MB, Castelli DM, et al. Effects of the FITKids randomized controlled trial on executive control and brain function. *Pediatrics*. 2014;134(4):e1063-e1071. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4179093/>.
16. Donnelly JE, Hillman CH, Castelli DM, et al. Physical activity, fitness, cognitive function, and academic achievement in children: a systematic review. *Medicine & Science in Sports & Exercise*. 2016;48(6):1197-1222. Retrieved from [https://journals.lww.com/acsm-msse/Fulltext/2016/06000/Physical\\_Activity,\\_Fitness,\\_Cognitive\\_Function.,.27.aspx](https://journals.lww.com/acsm-msse/Fulltext/2016/06000/Physical_Activity,_Fitness,_Cognitive_Function.,.27.aspx).
17. Collaborative for Academic, Social, and Emotional Learning (CASEL). Overview of SEL. 2013. Retrieved from [https://casel.org/overview-sel/#:~:text=Social%20and%20emotional%20learning%20\(SEL,maintain%20positive%20relationships%2C%20and%20make](https://casel.org/overview-sel/#:~:text=Social%20and%20emotional%20learning%20(SEL,maintain%20positive%20relationships%2C%20and%20make)
18. Drape J, Belson K. The future of football has flags. *New York Times*. November 20, 2018. Retrieved from <https://www.nytimes.com/2018/11/20/sports/football/flag-football-nfl.html>.
19. Gough C. Number of participants in flag football in the United States from 2011 to 2018 (in millions). Statista. March 26, 2019. Retrieved from <https://www.statista.com/statistics/763674/flag-football-participants-us/>.

For a copy of the complete report, *Healthier School Communities: What's at Stake Now and What We Can Do About It*, visit [www.genyouthnow.org](http://www.genyouthnow.org).



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## GENYOUth<sup>®</sup> CREATING HEALTHIER SCHOOL COMMUNITIES<sup>™</sup>

GENYOUth empowers students to create a healthier future for themselves and their peers by convening a network of private and public partners to raise funds for youth wellness initiatives that bolster healthy, high-achieving students, schools and communities. We believe that all students are change-agents who deserve the opportunity to identify and lead innovative solutions that positively impact nutrition, physical activity and success. [www.genyouthnow.org](http://www.genyouthnow.org)



AASA, the School Superintendents Association, is the professional organization for more than 13,000 educational leaders in the United States and throughout the world. AASA members range from chief executive officers, superintendents and senior-level school administrators to cabinet members, professors and aspiring school system leaders. AASA members advance the goals of public education and champion children's causes in their districts and nationwide. As school system leaders, AASA members set the pace for academic achievement. They help shape policy, oversee its implementation and represent school districts to the public at large. [www.aasa.org](http://www.aasa.org)



National Dairy Council (NDC) is the nonprofit organization dedicated to bringing to life the dairy community's shared vision of a healthy, happy, sustainable world —with science as the foundation. NDC provides science-based nutrition information to, and in collaboration with, a variety of stakeholders committed to fostering a healthier nation, including health and wellness professionals, educators, school nutrition directors, academia, industry, consumers and media. NDC has taken a leadership role in promoting child health and wellness through programs such as Fuel Up to Play 60. Developed by NDC and the National Football League (NFL), Fuel Up to Play 60 encourages youth to consume nutrient-rich foods and achieve at least 60 minutes of physical activity every day. [www.USDairy.com](http://www.USDairy.com)



The Urban School Food Alliance consists of 12 of the nation's largest school districts, which represent 3,600,000 students, serving 635 million meals annually. School districts include: New York City Public Schools; Dallas Independent School District; Baltimore City Public Schools; Chicago Public Schools; Orange County Public Schools (Fla.); Boston Public Schools; Los Angeles Unified School District; Broward County Schools (Fla.); Palm Beach County (Fla.); Miami-Dade County Public Schools (Fla.); The School District of Philadelphia; and DeKalb County School District (Ga.). These districts work together to leverage their collective voice to transform school meals and make sure all students have access to high-quality, healthy meals. [www.urbanschoolfoodalliance.org](http://www.urbanschoolfoodalliance.org)