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## Coordinated School Health, 2019-20 Physical Education/Physical Activity (PE/PA) Annual Report

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# Coordinated School Health

## 2019-20 Physical Education/Physical Activity (PE/PA) Annual Report

Tennessee Department of Education | October 2020

Cover image provided by Oak Ridge Schools.

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# Introduction

The Tennessee Department of Education's office of coordinated school health (CSH) is responsible for monitoring the implementation of T.C.A. § 49-6-1021:

*(a) In accordance with § 49-6-1022, it shall be the duty of each LEA to integrate:*

*(1) For elementary school students, a minimum of one hundred thirty (130) minutes of physical activity per full school week; and*

*(2) For middle and high school students, a minimum of ninety (90) minutes of physical activity per full school week.*

*(b) Physical activity may include walking, jumping rope, playing volleyball, or other forms of physical activity that promote fitness and well-being; however, walking to and from class shall not be considered physical activity for purposes of this section. To satisfy the requirements of subdivision (a)(1), an LEA shall offer elementary students at least one fifteen-minute (15) minute period of physical activity per day.*

CSH works with every school district in the state to address all aspects of student health, with a special emphasis on reducing Tennessee's childhood obesity rates. Encouraging adequate physical activity and providing physical education for all students are the central tenets of the CSH model. With prevention as the focus of the CSH model, we hope to have a positive influence on physical, social and economic health of our students' future.

CSH state grant funds are used by school districts to provide schools with physical activity/physical education equipment, physical activity/physical education curriculums, teacher professional development, walking trails, climbing walls, fitness rooms, and student fitness assessment systems/tools. CSH also oversees state physical education standards as set forth in Tennessee curriculum standards and the Tennessee Physical Activity and Physical Education Policy (Tennessee State Board of Education, 2020).

## ***A Note about COVID-19:***

In March 2020, Tennessee schools implemented closure procedures in response to state and federal initial reports regarding the novel Coronavirus or COVID-19. While the information within this report indicates minor impact to Coordinated School Health priorities and outcomes, including physical education and physical activity programs and initiatives, the Tennessee Department of Education anticipates the 2020-21 report to more fully reflect the major effects. More than ever before, the health of our children will require the expertise and resources Coordinated School Health coordinators are positioned to directly provide and enhance.

## ***U.S. Physical Activity Guidelines for Children and Adolescents***

According to the U.S. Department of Health and Human Services (2018), children and adolescents need 60 minutes (one hour) or more of physical activity each day.

Aerobic activity should make up most of a child's or adolescent's daily physical activity. This can include either moderate-intensity aerobic activity, such as brisk walking, or vigorous-intensity activity, such as

running. Children and adolescents should include vigorous-intensity aerobic activity at least three days per week.

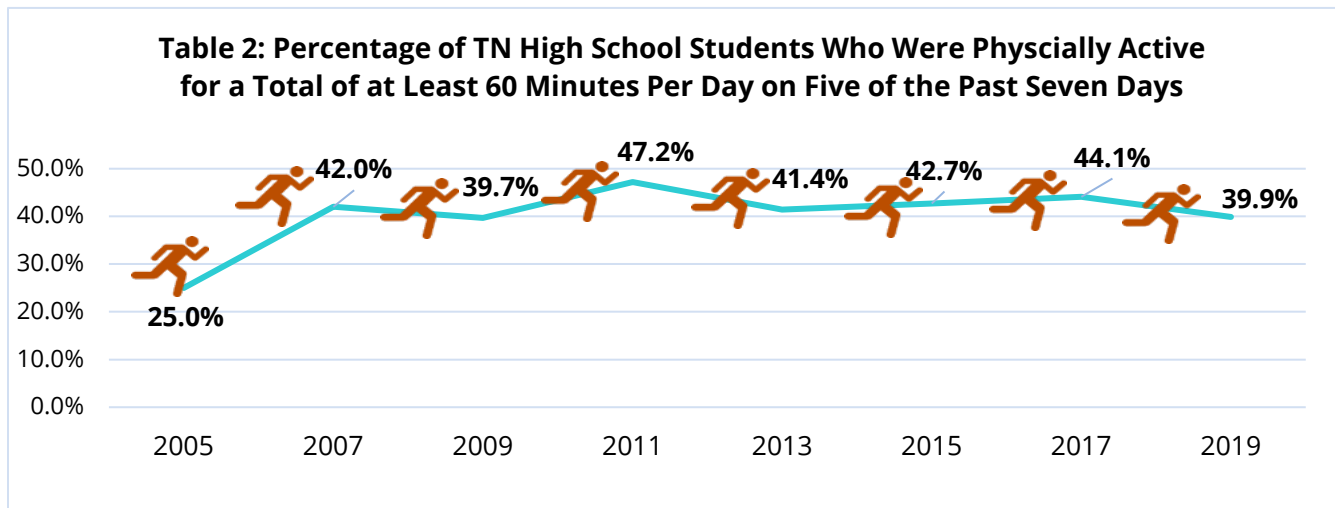
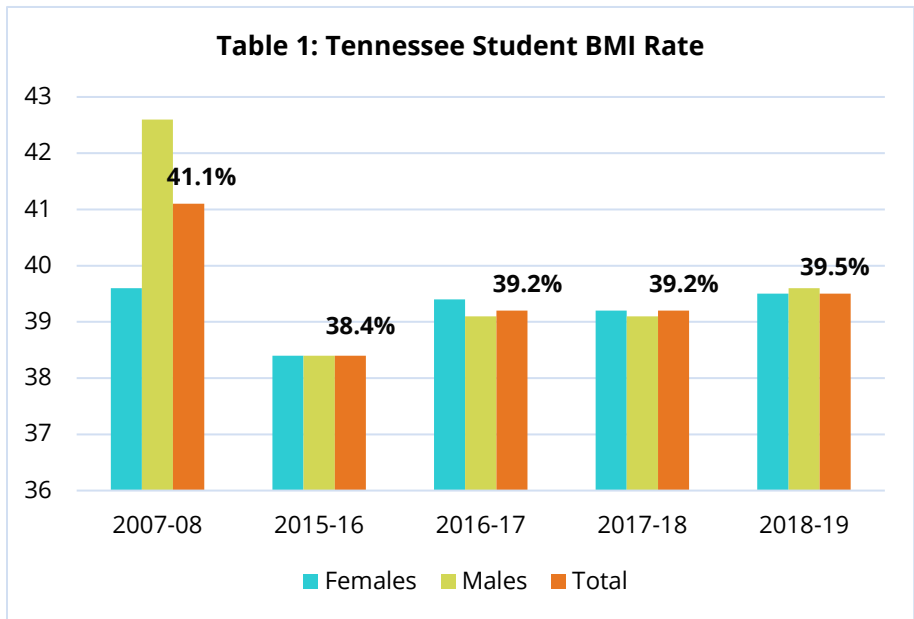
Physical activity should include muscle strengthening activities, such as gymnastics or push-ups, at least three days per week. In addition, physical activity should include bone strengthening activities, such as jumping rope or running, at least three days per week.

*T.C.A. § 49-6-1021 enables schools to supplement the national recommendation of one hour per day of physical activity during the school day by ensuring students receive 130 minutes per week in elementary schools and 90 minutes per week in middle and high schools.*

### Tennessee's Accomplishments

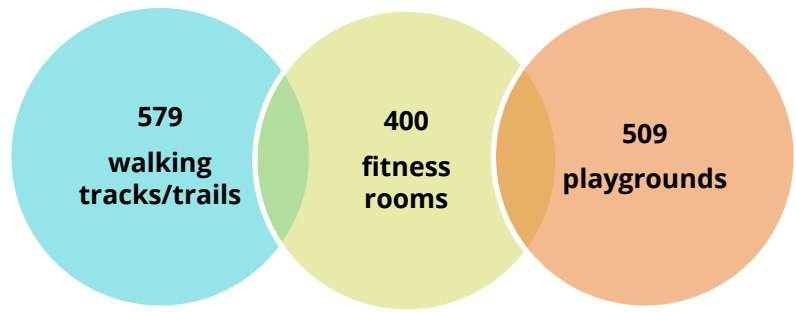
As indicated in Table 1, Tennessee student body mass index (BMI) rates have declined since the expansion of CSH statewide; BMI rates declined from **41.14** percent in 2007-08 to **39.5** percent in 2018-19, with a slight increase over the last four years (Tennessee Department of Education, 2019e).

As indicated in Table 2, according to Centers for Disease Control and Prevention's (CDC) Youth Risk Behavior Survey (CDC, 2020b), the percentage of Tennessee students who were physically active for a total of at least 60 minutes per day on five of the past seven days **increased** from **25 percent** in 2005 to **39.9 percent** in 2019. That total is down from an all-time high of **47.2 percent** in 2011.



Since the implementation of CSH statewide, coordinators have secured funds for the following (Tennessee Department of Education, 2020a):

- 579 walking tracks or trails,
- 400 in-school fitness rooms for students, and
- 509 new and/or updated playgrounds.





## Physical Education/Physical Activity (PE/PA)

T.C.A. § 49-6-1021 allows for a variety of activities to be used for schools to provide students with opportunity to move their bodies and for schools to demonstrate compliance with the minimum requirements. It is important, however, that utilization of this variety is the key to positive health, academic, and behavioral outcomes, as opposed to limiting options.

The Society for Health and Physical Educators (2019) encourages the use of regular physical education classes in addition to other physical activities in the instructional school

day and make clear that physical activity is neither an equivalent to nor substitute for physical education—both contribute meaningfully to the development of healthy, active children.

Both help...

<p style="text-align: center; font-weight: bold;">the brain</p>  <ul style="list-style-type: none"> <li>• decrease stress</li> <li>• increase academic performance</li> </ul>	&	<p style="text-align: center; font-weight: bold;">the body</p>  <ul style="list-style-type: none"> <li>• improve fitness level</li> <li>• prevent injury and disease</li> </ul>
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Physical Education...



is taught by a teacher certified in physical education



has lessons based on National Physical Education Standards and Outcomes



has sequential activities that are designed to meet outcomes

Physical Activity...



is led or supervised by any adult



can be structured or unstructured



may include any type of movement

## **Physical Activity and Academic Performance**

According to the CDC (2010), when children and adolescents participate in the recommended level of physical activity—at least 60 minutes daily—multiple academic benefits accrue. Physical activity can help improve academic achievement (including grades and standardized test scores) as well as have an impact on cognitive skills and attitudes, such as improved concentration, attention, classroom behavior.

Additionally, this research indicates that increasing or, at the very least, maintaining time dedicated to physical education does not appear to adversely impact academic performance.

Specifically, this report (CDC, 2010) notes that students benefit from the following components:

*Substantial evidence shows physical activity can help improve academic achievement (including grades and standardized test scores) as well as have an impact on cognitive skills and attitudes, such as enhanced concentration and attention and improved classroom behavior.*

### **Physical Education**

Devoting time to physical education may have a positive relationship to academic achievement or may not negatively affect it. There are also favorable associations with cognitive skills and attitudes.

### **Physical Activity Breaks**

Offering breaks for physical activity may be associated with decreases in classroom misbehavior, increases in cognitive functioning (including memory and concentration), and increases in academic achievement.

### **Recess**

Offering students recess has been associated with improved cognitive skills such as time on task, attitudes, and academic behavior. Barros, Silver, and Stein (2009) found that overall classroom behavior was better for students who had at least 15 minutes of recess every day.

### **Extracurricular Activities**

Providing extracurricular activities like intramural sports, interscholastic sports, and other physical activity outside of regular school time was found to have a positive association with academic performance, including higher grades and grade points averages, as well as lower high school dropout rates (CDC, 2010).

Research from Singh, et al. (2012) links physical activity with academic performance, with the authors concluding that “according to the best-evidence synthesis, we found strong evidence of a significant positive relationship between physical activity and academic performance. The findings of one high-quality intervention study and one high-quality observational study suggest that being more physically active is positively related to improved academic performance in children.”

*“Movement, or physical activity, is thus an essential factor in intellectual growth, which depends upon the impressions received from outside. Through movement we come in contact with external reality, and it is through these contacts that we eventually acquire even abstract ideas.” -Maria Montessori, The Secret of Childhood*

## Physical Activity and Health Outcomes

According to the Physical Activity Guidelines Advisory Committee (2008), regular physical activity:

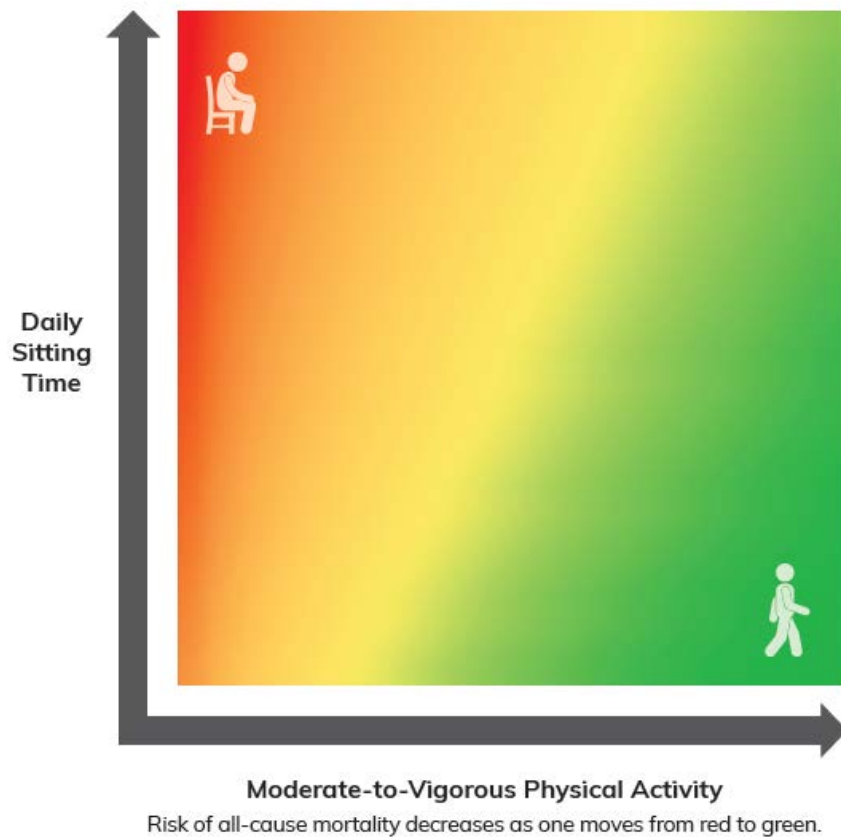
- helps build and maintain healthy bones and muscles;
- helps reduce the risk of developing obesity and chronic diseases, such as diabetes, cardiovascular disease, and colon cancer; and
- reduces feelings of depression and anxiety and promotes psychological well-being.

Long-term consequences of physical inactivity include:

- being overweight and obese, which are influenced by physical inactivity and poor diet and can increase one's risk for diabetes, high blood pressure, high cholesterol, asthma, arthritis, and poor health status (Dietz, 2004); and
- increased risk for premature death, death by heart disease, development of diabetes, colon cancer, and high blood pressure (Physical Activity Guidelines Advisory Committee, 2008).

*“Give about two (hours) every day to exercise; for health must not be sacrificed to learning. A strong body makes the mind strong.”*  
–Thomas Jefferson

The figure below (U.S. Department of Health and Human Services, 2018) shows the relationship between moderate-to-vigorous physical activity and sitting time and the impact of this relationship on the risk of all-cause mortality in adults.





# Tennessee 2019-20 Physical Activity/Physical Education Data

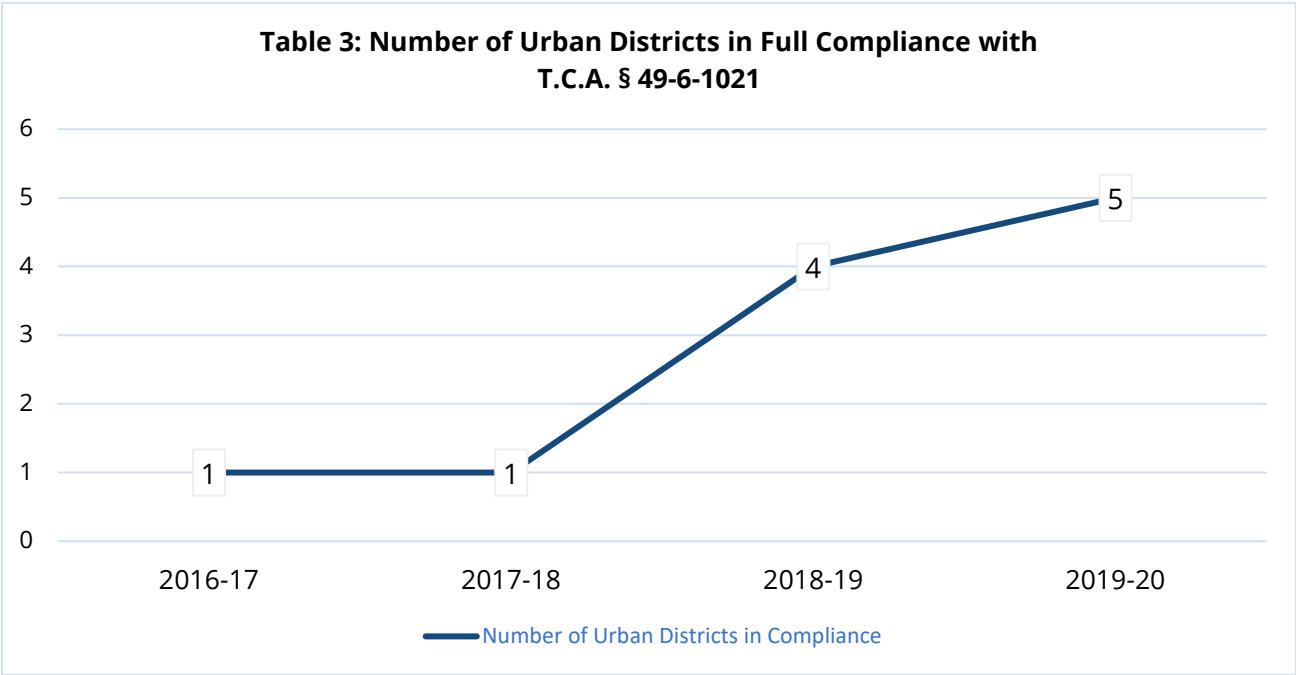
## Tennessee Physical Activity Compliance Rates in Schools

**During the 2019-20 school year:** **100 schools systems (74 percent)** of Tennessee districts, according to district school health coordinators, were in full compliance with T.C.A. § 49-6-1021 (Tennessee Department of Education, 2020b).

Of the **1246 schools** who completed a compliance survey request, **1197 principals reported full compliance** for the student body within their building (Tennessee Department of Education, 2020c).

### Tennessee Physical Activity Compliance Rates Among Urban School Districts

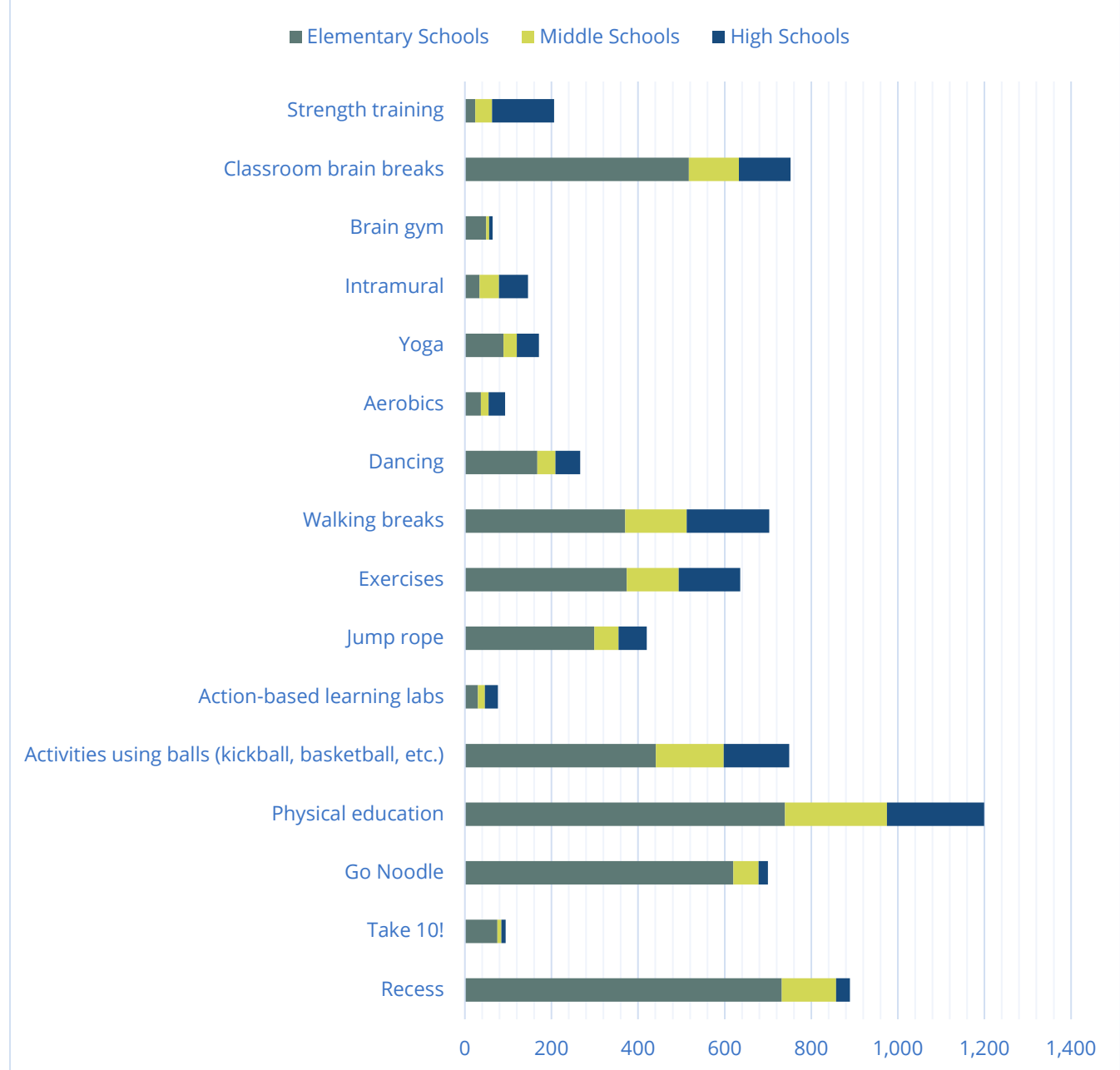
Among Tennessee’s eight urban school districts (districts serving 25,000 or more students), the rate of compliance with T.C.A. § 49-6-1021 is **63 percent** for the 2019-20 school year. **Five** out of **eight** urban school districts reported 100 percent compliance for all schools in their district. The eight urban school districts include Hamilton County Schools, Knox County Schools, Metropolitan Nashville Public Schools, Clarksville-Montgomery County School System, Rutherford County Schools, Shelby County Schools, Sumner County Schools, and Williamson County Schools. Table 3 indicates the change of compliance among these districts over time.



## Types of Physical Activities Used in Schools to Meet Physical Activity Requirement

The most prevalent types of activities schools used to meet the requirements of T.C.A. § 49-6-1021 were physical education (**99 percent** of reporting schools), recess (**71 percent** of reporting schools), and classroom brain breaks (**60 percent** of reporting schools) (Tennessee Department of Education, 2020c).

**Table 4: Number of schools implementing activities to facilitate compliance with T.C.A. § 49-6-1021 (2019-20)**

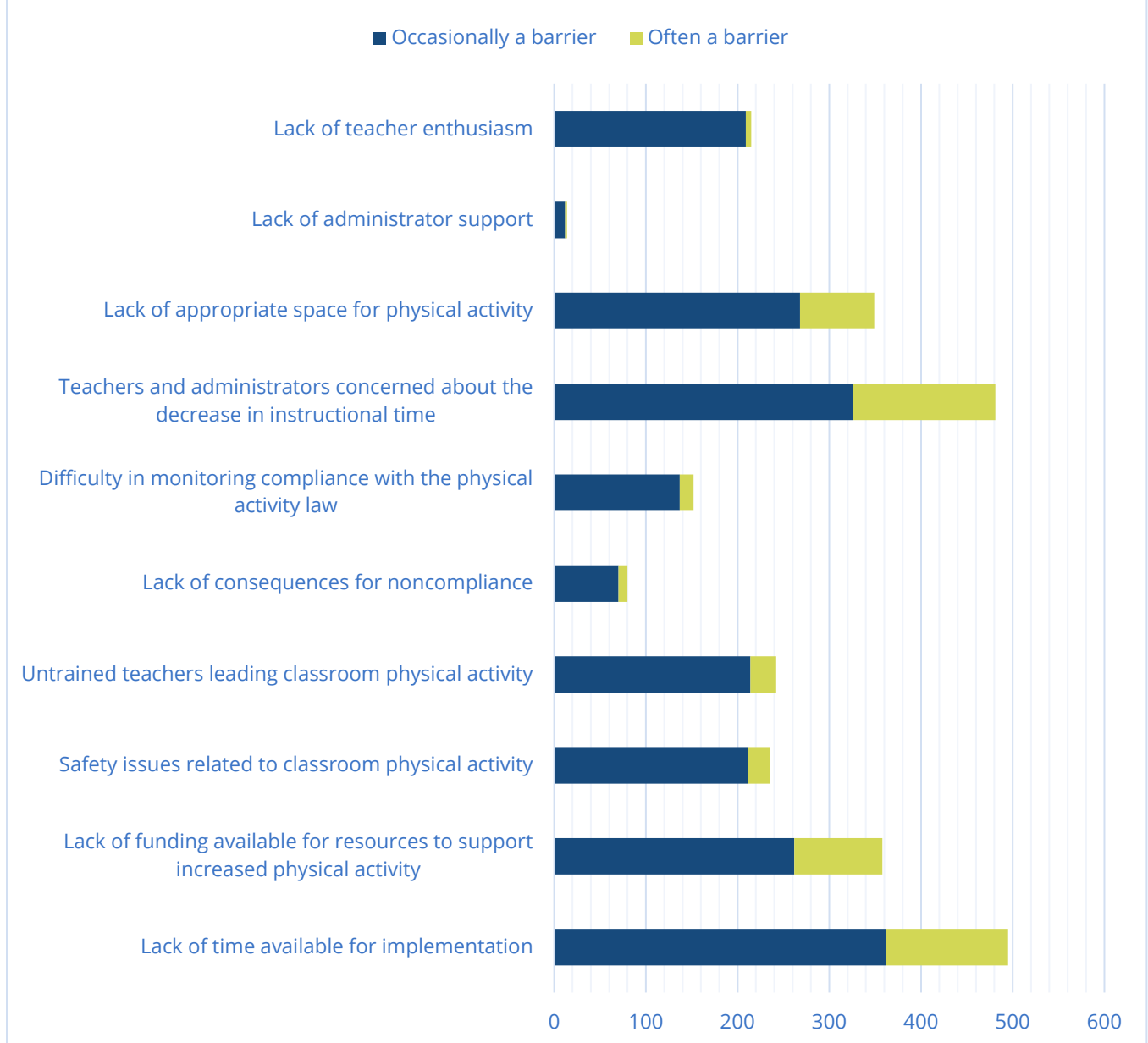


## Reported Barriers Inhibiting Compliance with T.C.A. § 49-6-1021 by Type of School

### Elementary School Barriers

The most often cited barrier to implementing physical activity in elementary schools is lack of time available for implementation (**495** schools or **66 percent** of all reporting elementary schools), followed by teachers/administrators concerned about decreased academic time (**481** schools or **64 percent** of all reporting elementary schools), and lack of funding available for resources to support increased physical activity (**358** school districts or **48 percent** of all reporting elementary schools) (Tennessee Department of Education, 2020c).

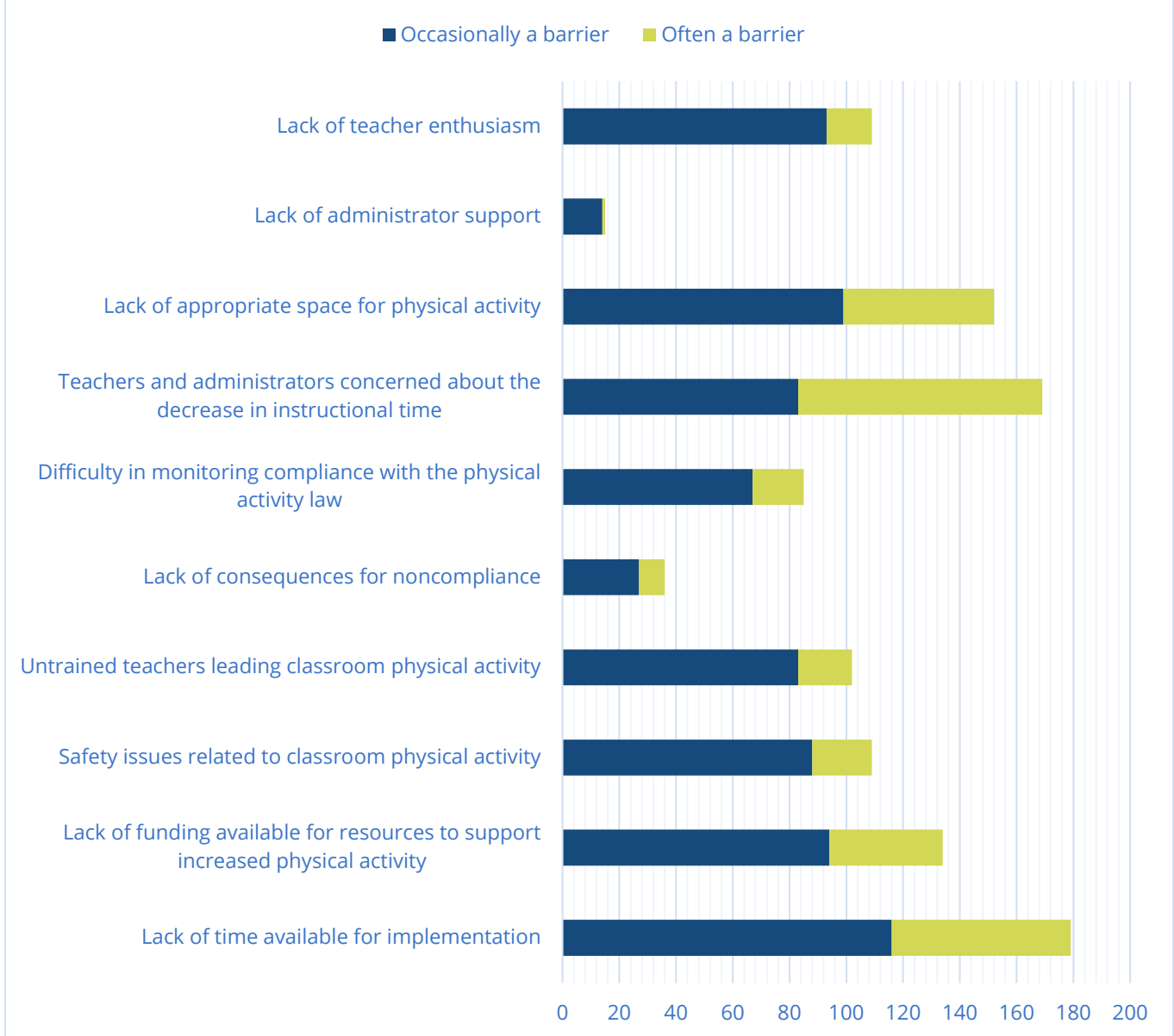
**Table 5: Number of ELEMENTARY schools reporting types of barriers encountered concerning compliance with T.C.A. § 49-6-1021 (2019-20)**



### Middle School Barriers

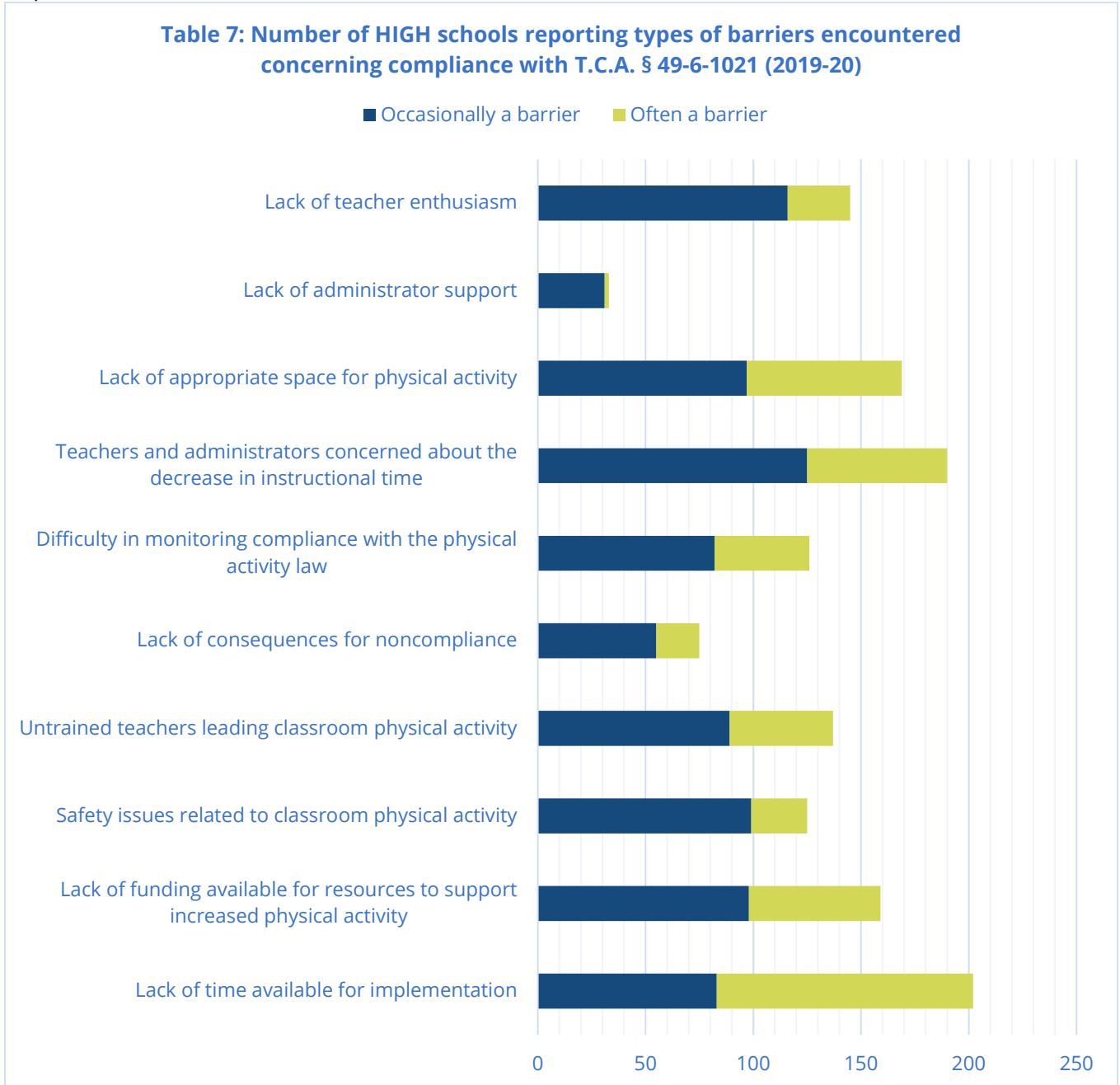
The most often cited barrier to implementing physical activity in middle schools is lack of time available for implementation (**179** schools or **70 percent** of all reporting middle schools), followed by teachers/administrators concerned about decreased academic time (**169** schools or **67 percent** of all reporting middle schools), and lack of appropriate space for physical activity (**152** schools or **60 percent** of all reporting middle schools) (Tennessee Department of Education, 2020c).

**Table 6: Number of MIDDLE schools reporting types of barriers encountered concerning compliance with T.C.A. § 49-6-1021 (2019-20)**



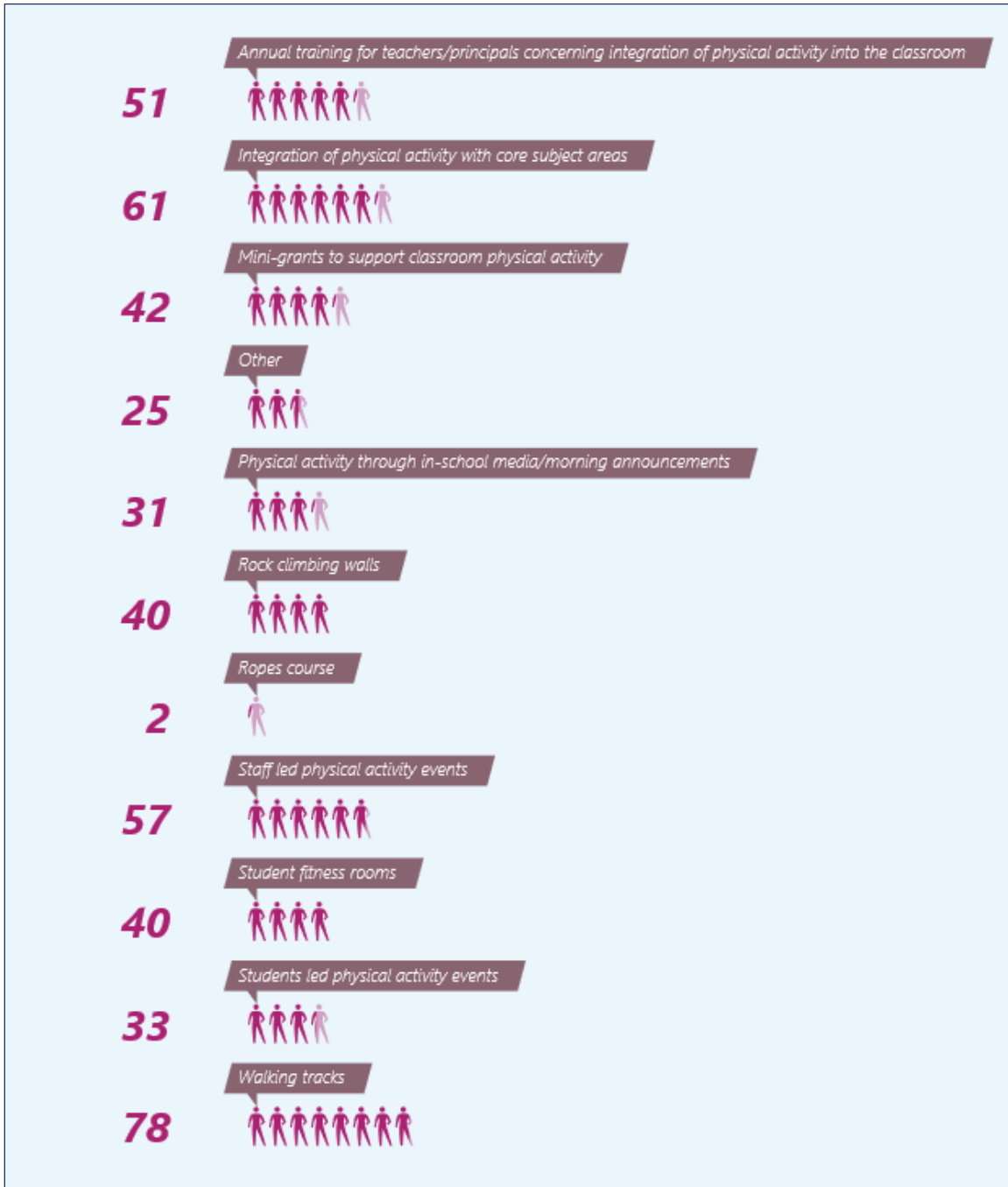
### High School Barriers

The most often cited barrier to implementing physical activity in high schools is lack of time available for implementation (**202** schools or **81 percent** of all reporting high schools), teachers and administrators concerned about decreased academic (**190** schools or **77 percent** of all reporting high schools), and lack of appropriate space for physical activity (**169** schools or **68 percent** of all reporting high schools) (Tennessee Department of Education, 2020c).



## ***Innovative Methods Schools Use to Comply with the Physical Activity Requirement***

During the 2019-20 school year (Tennessee Department of Education, 2020b), the most common types of innovative methods used by school systems to ensure compliance with T.C.A. § 49-6-1021 were use of walking tracks (**78** school districts), integration of physical activity with core subject areas (**61** school districts), and staff-led physical activity events (**57** school districts).



## ***Using or Denying Physical Activity, Physical Education, or Recess as Punishment***

Tennessee State Board of Education Policy 4.206 states that physical activity shall not be withheld from a student as a punishment (Tennessee State Board of Education, 2020). Examples of inappropriate use of physical activity include:

- withholding physical education class or recess time for students to complete unfinished school work or as a consequence for misbehavior;
- forcing students to run laps or perform push-ups because of behavioral infractions (e.g., showing up late, talking, or disruptive behavior); or
- threatening students with physical activity or no physical activity (e.g., no recess, no game time), and then removing the threat because of good behavior (SHAPE America, 2009).

Administering or withholding physical activity as a form of punishment and/or behavior management is inappropriate and constitutes an unsound education practice. Meaningful engagement in physical activity is an essential aspect of physical education and sport. Building a sense of competence, advocating the joy of physical activity and moving, expanding movement and motor skills, and developing fitness levels are among the numerous practices that support appropriate behavior and the development of positive attitudes toward physical activity (SHAPE America, 2009).

While some people believe that physical activity used as punishment and/or a behavior-management tool is effective, experts perceive this practice as a “quick fix” that actually might discourage the behavior it is intended to elicit. Using negative consequences to alter behavior suppresses the undesirable behavior only while the threat of punishment is present; it does not teach self-discipline or address the actual behavior problem. Therefore, student behavior patterns are not changed (Weinberg & Gould, 2007).

*A student’s motivation for being physically active by engaging in the important subject matter content of physical education and sport should never fall victim to the inappropriate use of physical activity as a disciplinary consequence.*  
–SHAPE America

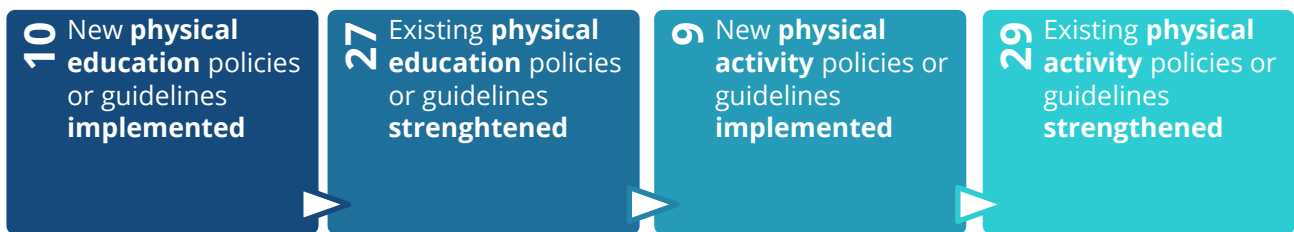
Resources are available for alternatives to withholding recess as punishment from the CDC, Springboard to Active Schools, and the Alliance for a Healthier Generation. Suitable alternatives to using or withholding physical activity as punishment are (SHAPE America, 2009):

- including students in establishing expectations and outcomes early in the year and review those expectations and outcomes frequently,
- including students in meaningful discussions about goals and how to reach them,
- being consistent with enforcing behavioral expectations within the learning environment,
- practicing and rewarding compliance with rules and outcomes,
- offer positive feedback and catch students doing things right,
- avoiding reinforcing negative behavior by drawing attention to it,
- holding students accountable for misbehavior,
- developing efficient routines that keep students involved in learning tasks, and
- waiting for students to be attentive before providing directions.

The data below lists the number of school districts that do not have a documented policy against the inappropriate behaviors described within (Tennessee Department of Education, 2020b).

- 46 districts (34%) have no policy on denying recess as punishment.
  - **Improved** from 38% in 2018-19
- 52 districts (38%) have no policy on denial of physical activity as punishment.
  - **Improved** from 42% in 2018-19
- 50 districts (37%) have no policy on use of physical activity of any kind as punishment.
  - **Improved** from 41% in 2018-19
- 45 districts (33%) have no policy on denial of physical education as punishment.
  - **Improved** from 39% in 2018-19

The figure below represents data on the number of district-wide policies improved or strengthened in the 2019-20 school year (Tennessee Department of Education, 2020b).





## **Professional Development Provided by Number of Schools**

During the 2019-20 school year (Tennessee Department of Education, 2020b), school health coordinators worked to support a physically active school climate by providing relevant professional development to staff.

**490 schools provided physical education best practices training.**

• Physical education is a planned, sequential, K-12 standards-based program with written curricula and appropriate instruction designed to develop the motor skills, knowledge, and behaviors of active living, physical fitness, sportsmanship, self-efficacy, and emotional intelligence (SHAPE America, 2015).

**381 schools provided physical activity in classrooms training.**

• Physical activity has a positive impact on cognitive skills and attitudes, including enhanced concentration and attention and improved classroom behavior (Physical Activity Guidelines Advisory Committee, 2008).

**517 schools provided connection between PE/PA and academic outcomes training.**

• There is a growing body of research that has made the link between physical activity and fitness and academic achievement, including grades and standardized test scores (Physical Activity Guidelines Advisory Committee, 2008).

## ***Physical Education in Tennessee – Survey Responses***

In compliance with T.C.A. § 49-6-1021, the department worked with the American Heart Association to develop a survey to generate data on physical education in Tennessee. The survey was sent to the lead physical education teacher in each school. Of the 1,526 schools where physical education teachers received the survey, 1,106 completed the questionnaire for an overall response rate of **73 percent**. The following data is based on these survey results from the 2019-20 school year.

### **Success to reinforce** (Tennessee Department of Education, 2020d):

- **72 percent** of Tennessee physical education teachers stated that they used a planned K-12 sequential curriculum.
- **72 percent** of Tennessee physical education teachers stated that they require some type of physical assessments.
- **48 percent** of Tennessee physical education teachers report their schools have physical activity clubs.
- **76 percent** of Tennessee physical education teachers report that their schools incorporate classroom physical activity breaks.

### **Opportunities for improvement** (Tennessee Department of Education, 2020d):

- **27 percent** of Tennessee physical education teachers stated that students were withheld from physical education class for academic remediation.
- **12 percent** of Tennessee physical education teachers stated that they do not have adequate space for all students to safely and simultaneously participate in physical education class.
- **14 percent** of Tennessee physical education teachers stated that teachers or administrators withheld physical activity as punishment.
- **12 percent** of Tennessee physical education teachers stated that they spend more than six hours or more of an instructional week being utilized in other ways than teaching physical education, including but not limited to RTI, assisting classroom teachers with academics, tutoring, lunch duty, and bus duty.

# Physical Activity and Physical Education in Tennessee – Priority Health Behaviors

## CDC Youth Risk Behavior Survey

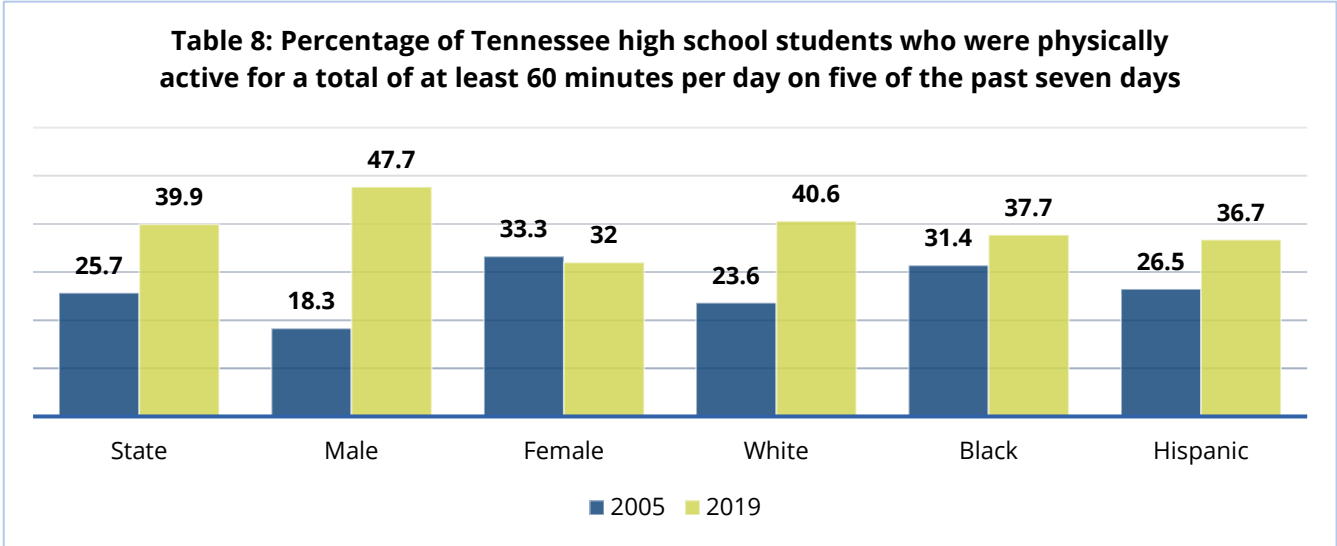
In 1991, the CDC developed the Youth Risk Behavior Surveillance (YRBS) survey, a national survey system to monitor the prevalence of youth behavior that most influences health. The priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States include tobacco use, unhealthy dietary behaviors, inadequate physical activity, alcohol and other drug use, sexual behaviors that contribute to unintended pregnancy and sexually transmitted diseases including HIV infection, and behaviors that contribute to unintentional injuries and violence.

High school students reported the following weighted YRBS data related to physical activity. The Tennessee-specific data is detailed in Tables 8-12, below (CDC, 2020b):

- Table 8: Percentage of high school students who were physically active for a total of at least 60 minutes per day on **five of the past seven** days
- Table 9: Percentage of students who attended physical education (PE) classes **daily** in an average week when they were in school
- Table 10: Percentage of high school students who attended physical education (PE) classes on **one or more days** in an average week
- Table 11: Percentage of students who played video or computer games or used a computer for something that was not school work three or more hours a day in an average school day
- Table 12: A Side-by-Side Comparison of screen time and meeting daily physical activity recommendations.

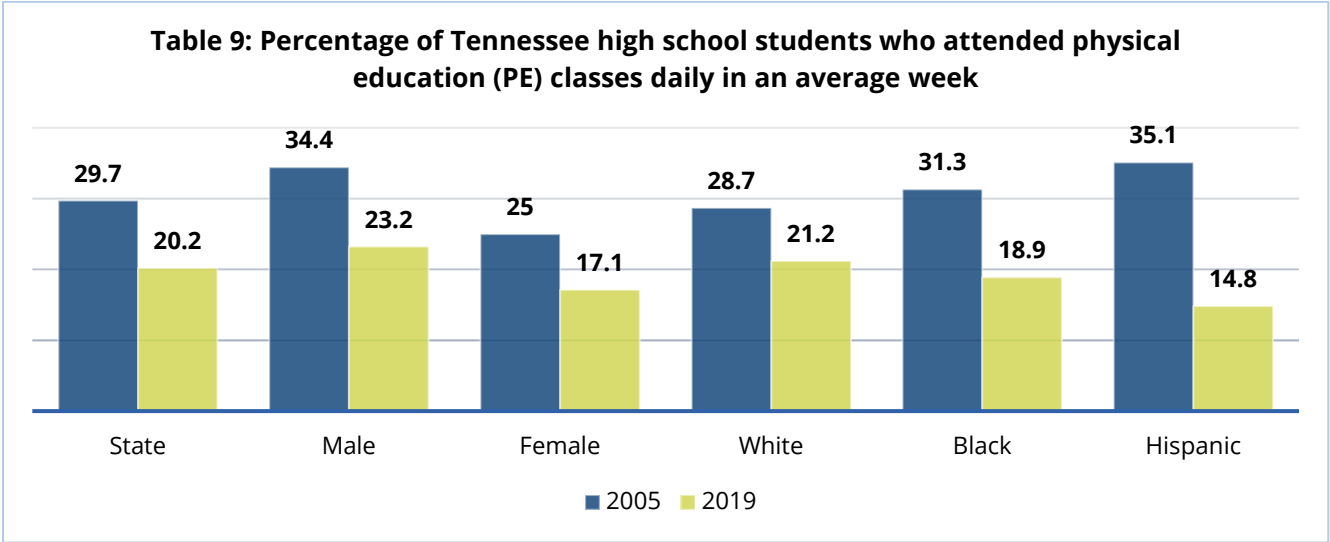
*(Note that Hispanic data was collected during CDC’s 2007 YRBS survey administration.)*

Between 2005 and 2019, the percentage of Tennessee students who reported being physically active for a total of at least 60 minutes per day on five of the past seven days increased from **25.7 percent** to **39.9 percent**.

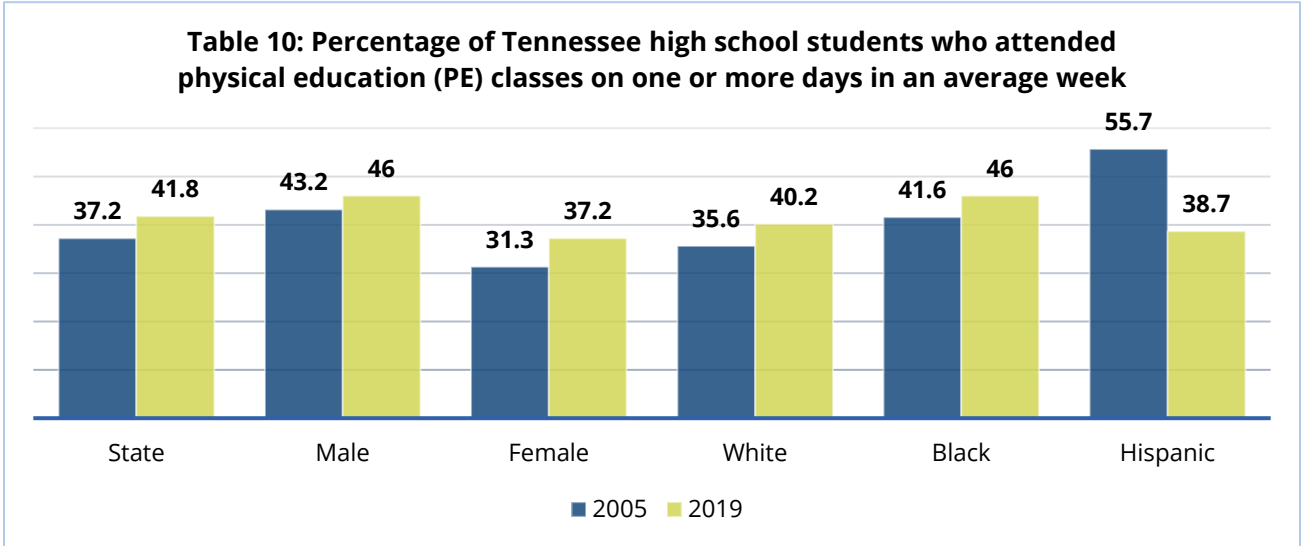


Male students reported a significantly higher regular rate of physical activity at **47.7 percent** compared to female who were at **32 percent**. White students reported the greatest amount of increase in this area increasing from **23.6 percent** in 2005 to **40.6 percent** in 2019. Both black and Hispanic students showed an increase on this measure from **31.4 percent** to **37.7 percent** and **26.5 percent** to **36.7 percent**, respectively.

The rate of Tennessee students reporting they attended daily physical education classes in an average week declined from **29.7 percent** in 2005 to **20.2 percent** in 2019. The most significant decrease was reported by Hispanic students whose participation rate declined from **35.1 percent** in 2005 to **14.8 percent** in 2019. Black and white students also had a decrease in this area from **31.3 percent** to **18.9 percent** and **28.7 percent** to **21.2 percent**, respectively.

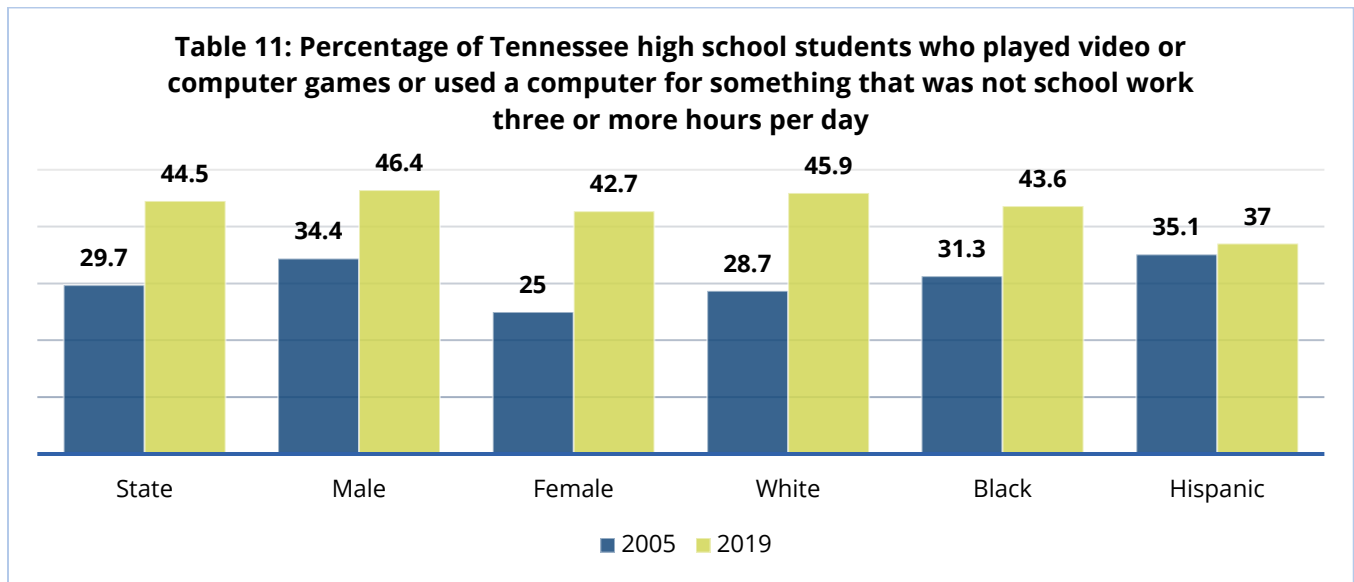


Since 2005, the percentage of high school students reporting they attended physical education classes on one or more days in an average week when in school increased from **37.2 percent** in 2005 to **41.8 percent** in 2019. Male students reported attending classes more than female students; however, female students

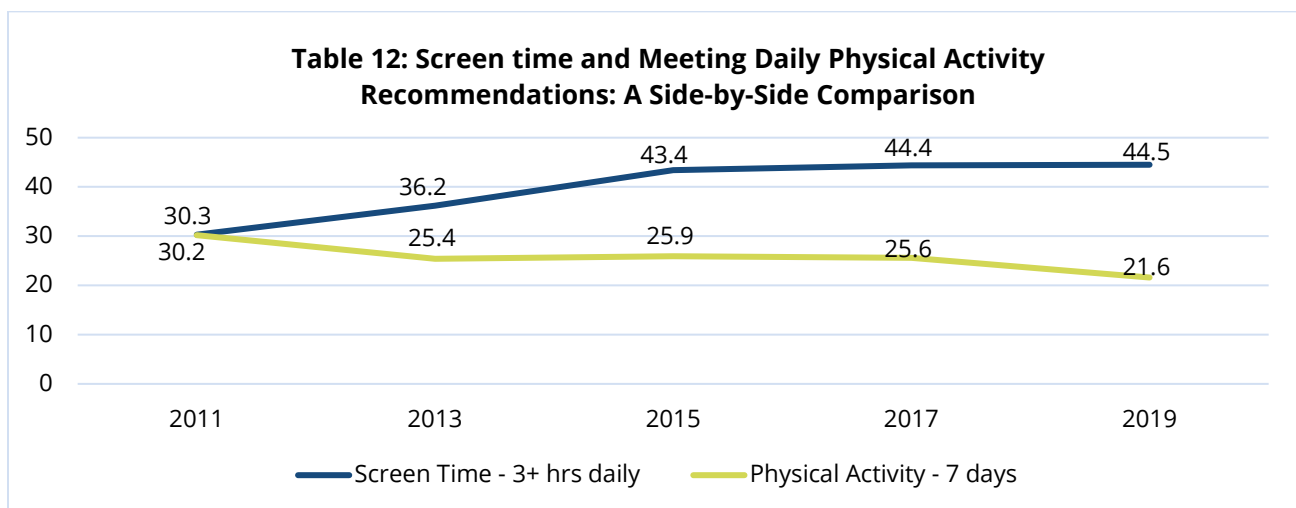


have increased in this area by **five percent** since 2005. Black students have the highest percentage of participation over Hispanic and white students at **46 percent**.

The percentage of Tennessee high school students who played video or computer games or used a computer for something not related to school work for three or more hours a day in an average school day increased from 29.7 **percent** in 2005 to **44.8 percent** in 2019. Male students (**46.4 percent**) were slightly more likely to be engaged in this activity compared to female students (**42.7 percent**). Black students (**43.6 percent**) and Hispanic students (**37 percent**) reported lower rates than white students (**45.9 percent**). This behavior has had an upward trend across all races and both sexes since 2005, suggesting that Tennessee students are increasing the amount of screen time daily.

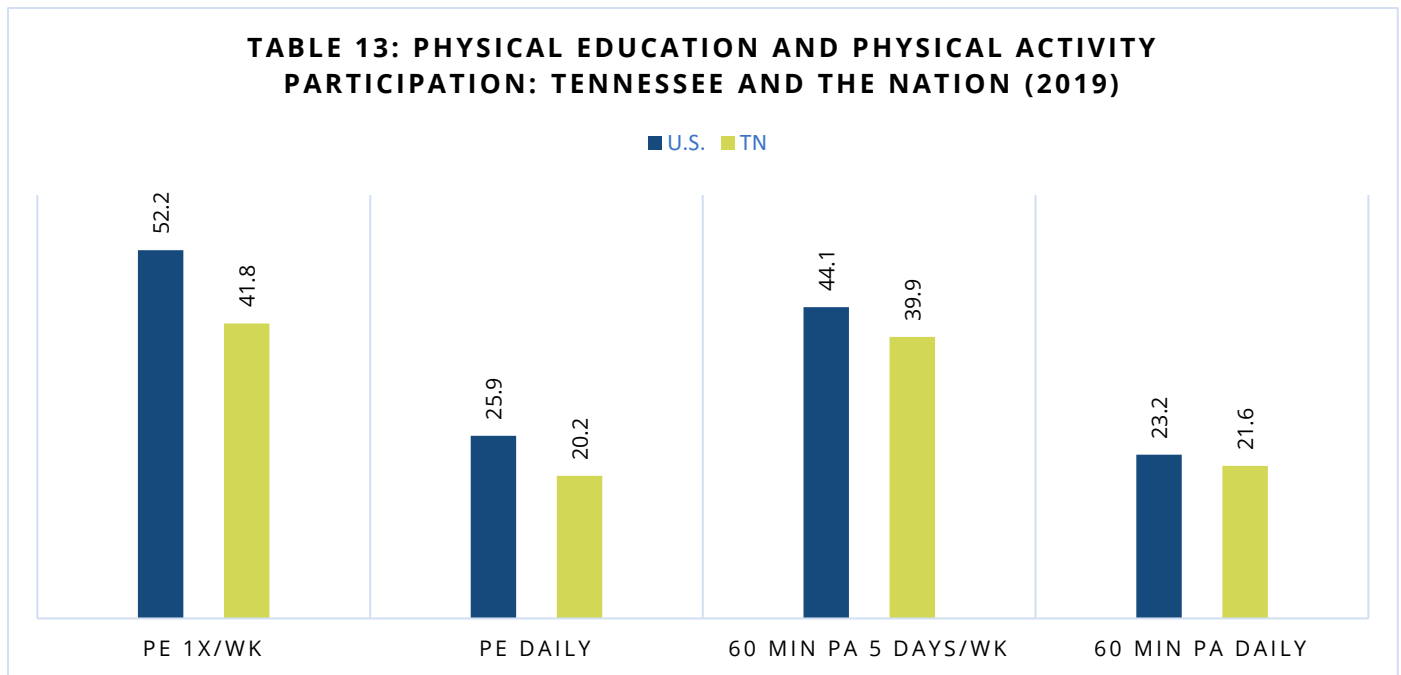


Engaging in high quantities of screen time (3+ hours daily) is a health risk behavior that is showing a positive trend among Tennessee students since the question was included in 2011, represented on Table 12 by percentage of students. Conversely, the percentage of students meeting the recommended amount of physical activity daily over the course of seven days has decreased since that time.



## Tennessee and the Nation

Tennessee is a diverse state within a diverse nation. A comparison of behaviors related to positive health outcomes shows Tennessee below the national average in all categories (CDC, 2020b). Tennessee students participating in physical education once during the last week was reported at **41.8 percent**, compared to **52.2 percent** nationally. **44.1 percent** of average American high school students met the recommended daily amount of physical activity time of 60 minutes on at least five days during the previous week, compared to **39.90 percent** in Tennessee.

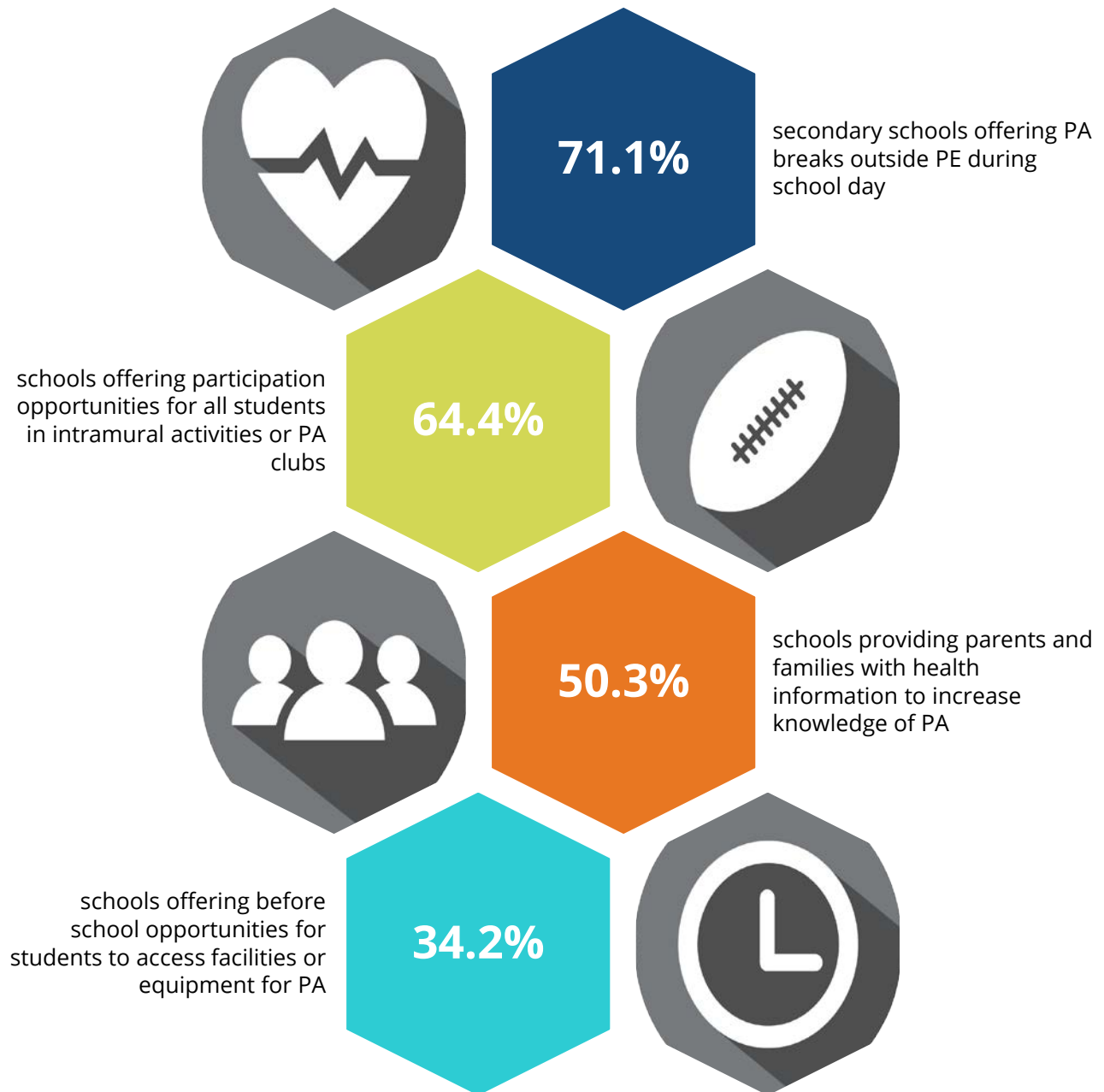


Tennessee requires 0.5 high school credits in physical education for graduation. There is also a 1 credit graduation requirement for a Lifetime Wellness course, but this course has its own set of standards and is not considered a physical education class. In the 2016 Shape of the Nation Report, more than half the nation (30 states) require 1 credit or more of physical education for high school students to graduate. Some of these credit totals represent a cumulative total of annual requirements.

U.S. Physical Education Graduation Requirements: State Totals	
2.0 or more	6
1.5	5
1.0	19
0.5	9
No Requirement	11

## CDC School Health Profiles Survey

CDC's *School Health Profiles* is a system of surveys assessing school health policies and practices in states, territories, and large urban school districts. *Profiles* surveys are conducted biennially among representative samples of middle and high school principals and lead health education teachers. The following selected data is from the 2018 Tennessee survey results (CDC, 2018a).



# Summary and Recommendations

Schools play a pivotal role in their capacity to support the development of life-long habits of physical activity behaviors among their students. By developing and implementing physical activity policies and practices for students, schools can create environments supportive of not only the development of healthy American adults but also increase student academic outcomes. Therefore, CSH coordinators, teachers, coaches, school administrators, and school district officials need to take a leadership role in implementing the following strategies in Tennessee schools.

## ***CDC School Health Physical Activity Guidelines***

The CDC synthesized research and best practices related to promoting physical activity in schools culminating in the development of several guidelines. The guidelines serve as the foundation for developing, implementing, and evaluating school-based physical activity policies and practices for students (CDC, 2011).

Although the ultimate goal is to implement all guidelines in Tennessee, not every strategy will be appropriate for every school, and some schools, due to resource limitations, might need to implement the guidelines incrementally.

Guideline 1. Use a coordinated approach to develop, implement, and evaluate healthy eating and physical activity policies and practices.

Guideline 2. Establish school environments that support healthy eating and physical activity.

Guideline 3. Provide a quality school meal program and ensure that students have only appealing, healthy food and beverage choices offered outside of the school meal program.

Guideline 4. Implement a comprehensive physical activity program with quality physical education as the cornerstone.

Guideline 5. Implement health education that provides students with the knowledge, attitudes, skills, and experiences needed for healthy eating and physical activity.

Guideline 6. Provide students with health, mental health, and social services to address healthy eating, physical activity, and related chronic disease prevention.

Guideline 7. Partner with families and community members in the development and implementation of healthy eating and physical activity policies, practices, and programs.

Guideline 8. Provide a school employee wellness program that includes healthy eating and physical activity services for all school staff members.

Guideline 9. Employ qualified persons, and provide professional development opportunities for physical education, health education, nutrition services, and health, mental health, and social services staff members, as well as staff members who supervise recess, cafeteria time, and out-of-school-time programs.



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