

Making the Connection: Physical Activity and Sedentary Behaviors and Academic Grades

Data from the 2019 national Youth Risk Behavior Survey (YRBS) show that students with higher grades are more likely to engage in physical activity compared to students with lower grades. Students with higher grades are also less likely to engage in sedentary behaviors compared to students with lower grades. It is important to remember that these associations do not prove causation. School health professionals, school officials, and other decision makers can use this fact sheet to better understand the connection between physical activity and sedentary behaviors and grades and reinforce policies and practices that support physical activity in schools.

Key Findings

Compared to students with lower grades, **students with higher grades are**

more likely to



- Engage in physical activity for at least 60 minutes per day on all 7 days.
- Play on at least one sports team.

less likely to

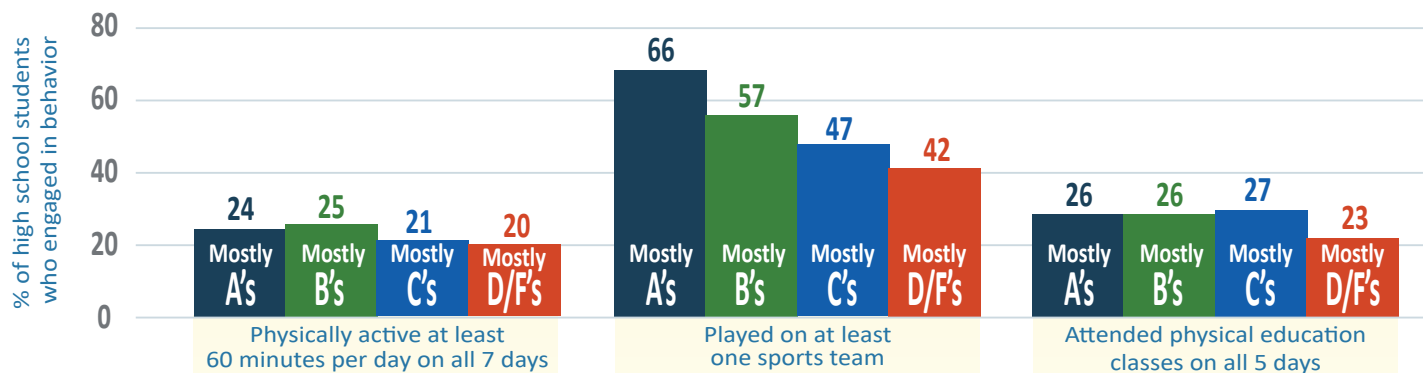


- Watch television for 3 or more hours per day.
- Play video games or use a computer 3 or more hours per day.

The findings do not show that academic grades are associated with participation in physical education (PE) classes on all 5 days.

FIGURE 1A

Physical Activity Behaviors, by Type of Academic Grades Earned
- United States, Youth Risk Behavior Survey, 2019



SUMMARY



24% of US high school students with mostly A's were **physically active for at least 60 minutes per day on all 7 days**, compared to **20%** of students with mostly D/F's.

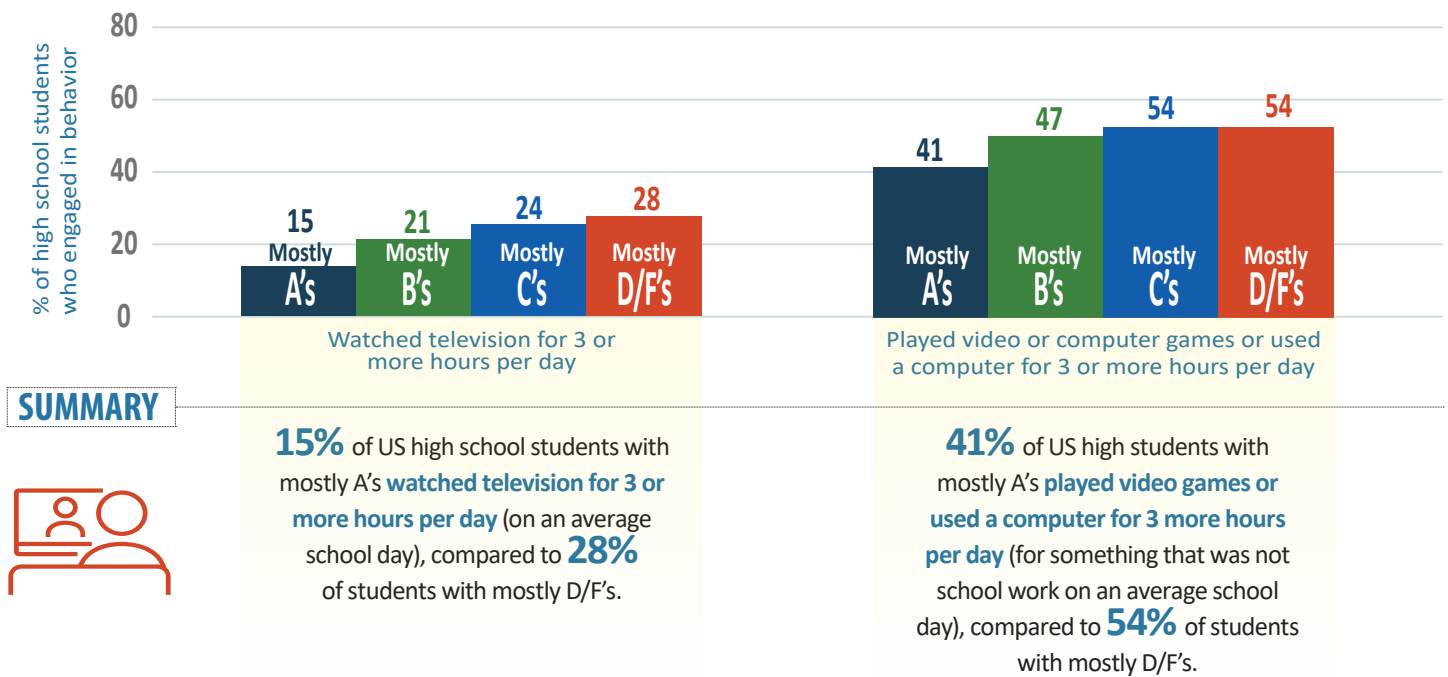
66% of US high school students with mostly A's **played on at least one sports team** (run by their school or community groups during the 12 months before the survey), compared to only **42%** of students with D/F's.

26% of US high school students with mostly A's **attended physical education classes on all 5 days** (in an average week when they were in school), compared to only **23%** of students with mostly D/F's.

*Figure 1A and Figure 1B illustrate the percentage of students who engaged in each health-related behavior, by type of grades mostly earned in school (mostly A's, B's, C's, D's/F's) (row proportions). The percentage of students who did not engage in each health-related behavior are not shown. However, the percentages of students who did and did not engage in each health-related behavior, by type of grades mostly earned in school, sum to 100%. Logistic regression analyses (not shown) controlling for sex, race/ethnicity, and grade in school confirmed a significant association between physical activity/sedentary behaviors and academic grades.

FIGURE 1B

Sedentary Behaviors, by Type of Academic Grades Earned - United States, Youth Risk Behavior Survey, 2019



Conclusions

These results from the YRBS provide evidence of a significant association between physical activity or sedentary behaviors and academic grades. Further research is warranted to determine whether higher grades in school lead to physical activity behaviors, if physical activity behaviors lead to higher grades, or some other factors lead to these physical activity behaviors. Similarly, further research is needed to determine whether lower grades in school lead to sedentary behaviors, if sedentary behaviors lead to lower grades, or some other factors lead to these sedentary behaviors.

There is a close relationship between health and education. By working together, education and health agencies, parents, and communities can ensure that students are healthy and ready to learn in school. Find out more about the connection between health and academic achievement on [CDC's Healthy Schools Health and Academics website](https://www.cdc.gov/healthyschools/health-and-academics).

About the Data

The [Youth Risk Behavior Surveillance System](https://www.cdc.gov/youthriskbehavior/) (YRBSS) monitors health-related behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The YRBS is conducted every 2 years during the spring and provides data representative of 9th through 12th grade students in public and private schools throughout the nation. In 2019, students completing the YRBS were asked, "During the past 12 months, how would you describe your grades in school?" and given 7 response options (Mostly A's, Mostly B's, Mostly C's, Mostly D's, Mostly F's, None of these grades, Not sure). In 2019, 38.0% of students received mostly A's, 37.1% received mostly B's, 16.0% received mostly C's, 4.6% received mostly D's or F's, and 4.3% reported receiving none of these grades or not sure.



For more information, visit the [CDC's Healthy Schools website](https://www.cdc.gov/healthyschools/) or call 800-CDC-INFO (800-232-4636).