

# Physical Activity and Nutrition and Academic Grades Among Vermont Middle School Students

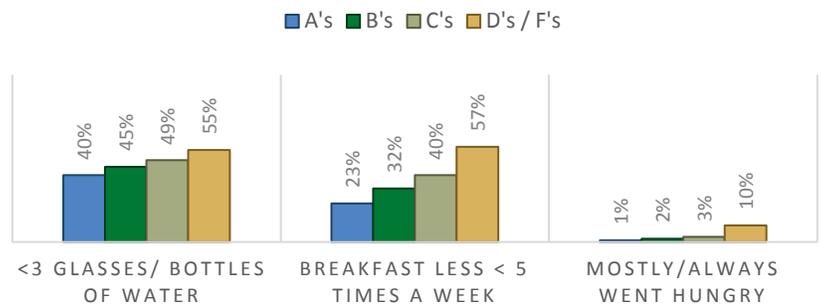
## Vermont Youth Risk Behavior Survey 2017

Research shows there is a strong relationship between health-related behaviors, such as physical activity and healthy diet, and educational outcomes. Students with lower grades are more likely to not be physically active or eat a healthful diet.<sup>1</sup> Less engagement in risk behaviors during adolescence is associated with higher achievement later in life while academic achievement during this period leads to fewer health risk behaviors.<sup>1,2</sup> Eating a healthy diet and being physically active gives students the energy they need to be productive and attentive learners. Results from the 2017 YRBS show similar trends among Vermont middle school students.

**In Vermont, middle school students with lower grades are more likely to report poor nutrition than their peers earning higher grades.**

*Daily Water Consumption.* As grades earned decrease, water consumption decreases. Students who earn mostly B's or lower are more likely to drink less than three glasses/bottles of water a day than their peers who earn mostly A's.

**NUTRITION CONSUMPTION, BY GRADES EARNED**

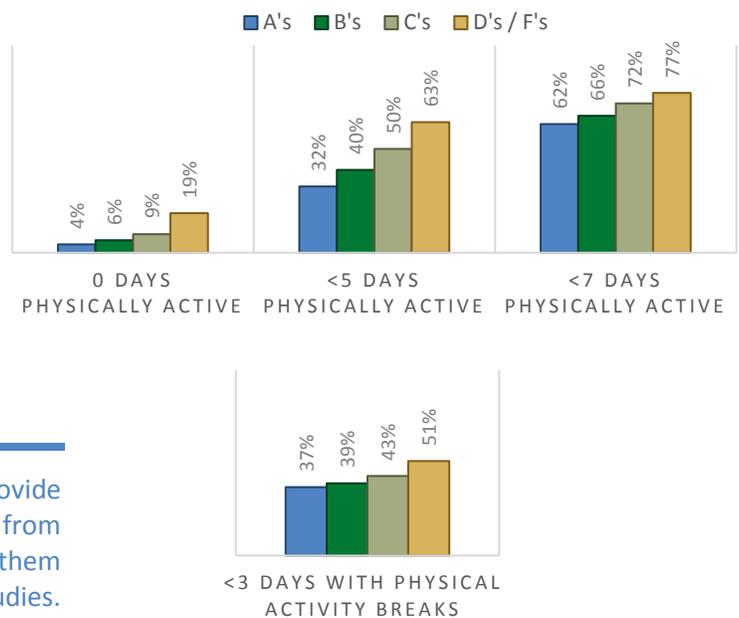


*Food Insecurity.* As grades earned in school declines, the rate of middle school students not eating breakfast at least five days a week increases. All differences by grade level are statistically significant. Students who earn mostly C's and D's and F's are significantly more likely to go hungry at least most of the time than those who earn mostly A's.

**As grades earned decreases, level of physical activity among middle school students decreases as well.**

*Physical Activity.* Students who earn mostly C's and D's and F's are more likely to not meet physical activity guidelines than students who earn mostly A's. All differences by grades earned among students who did not engage in at least 60-minutes of physical activity on any day in the last week (physically inactive; health risk) and did not approach meeting (<5 days physically active) or did not meet (<7 days physically active) recommended physical activity guidelines,<sup>3</sup> are statistically significant. Students who earn mostly C's and D's and F's are more likely to engage in less than three physical activity breaks a week during school than those who earn mostly A's.

**LEVEL OF WEEKLY PHYSICAL ACTIVITY, BY GRADES EARNED**



**Physical Activity Breaks** during the school day provide youth an opportunity to be active and take a break from sedentary activities (e.g. sitting, reading), leaving them more focused and ready to return to their academic studies.

<sup>1</sup> Rasberry CN, Tiu GF, Kann L, et al. Health-Related Behaviors and Academic Achievement Among High School Students — United States, 2015. *MMWR Morb Mortal Wkly Rep* 2017;66:921–927. DOI: <http://dx.doi.org/10.15585/mmwr.mm6635a1>.

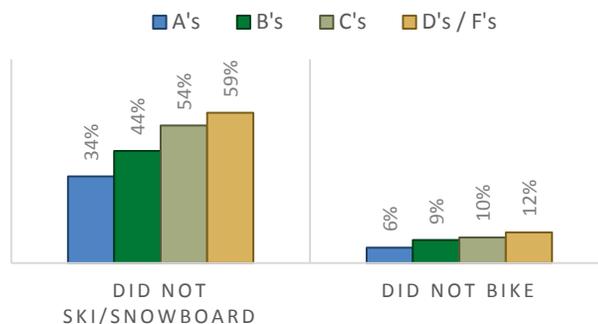
<sup>2</sup> Centers for Disease Control and Prevention (CDC). Health and Academics. [https://www.cdc.gov/healthyyouth/health\\_and\\_academics/index.htm](https://www.cdc.gov/healthyyouth/health_and_academics/index.htm); October 2017.

<sup>3</sup> U.S. Department of Health and Human Services. *Physical Activity Guidelines for Americans*. <https://health.gov/paguidelines/guidelines/chapter2.aspx>; 2008

**Middle school students with lower grades in school are less likely to engage in sports-related physical activity than their peers who earn higher grades.**

*Sports Activity.* Students who earn lower grades are more likely to not engage in sports-related physical activities such as skiing /snowboarding or biking than those who participate in them. Students who earn mostly C's or lower are more likely to not ski or snowboard than those who earn mostly B's or A's. Similarly, students who earn mostly D's and F's are twice as likely not to bike than their peers with mostly A's.

**SPORTS-RELATED ACTIVITY, BY GRADES**



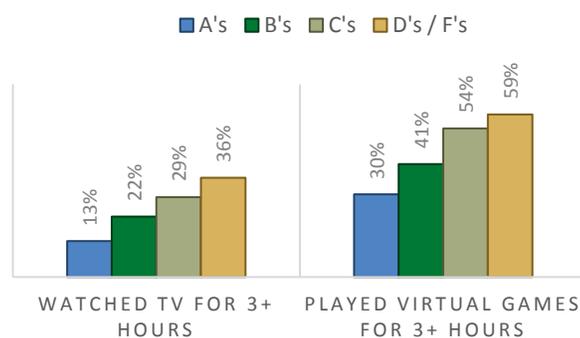
## Limits to Inactive Screen Time

As technology rapidly enters the classroom, educators may guide students to engage in appropriate, positive, and safe ways to utilize these helpful digital resources by setting limits to inactive media use.<sup>4,5</sup>

**Students with lower grades are more likely to report spending three or more hours a day watching TV or playing computer/video games than their peers with higher grades.**

*Screen Time.* As grades earned decreases, watching TV for three or more hours a day about triples. Similarly, students with mostly D's and F's are twice as likely to play virtual games for three or more hours a day than those with mostly A's.

**DAILY SCREEN TIME, BY GRADES EARNED**



## Strategies to Address Physical Activity and Nutrition Programs and Policies

- Use a coordinated approach that includes district and community stakeholders to develop, implement, and evaluate Local School Wellness Policies
- Implement strong nutrition standards that meet or exceed the USDA's "Smart Snacks in School" nutrition standards for all foods available in school
- Offer before, during, after school opportunities for students and staff to be active through development of a Comprehensive School Physical Activity Program (<https://www.shapeamerica.org/cspap/>)
- Include physical activity in the classroom, such as stretch breaks between subjects or as part of the curriculum. (<http://www.healthvermont.gov/sites/default/files/documents/2016/12/Active-Learning-Teacher-Toolkit-FINAL%202016.pdf>)
- Encourage school staff to model healthy eating and physical activity behaviors
- Provide and promote free and accessible drinking water
- Develop sustainable Farm to School programs (<https://vermontfarmtoschool.org/>)
- Communicate Results and Celebrate Success

Visit the VDH School Physical Activity & Nutrition Website for resources and information to support your school  
<http://www.healthvermont.gov/wellness/physical-activity-nutrition/school-and-early-child-care>

**For more information on this brief, please contact:** Paul Meddaugh, MS, paul.meddaugh@vermont.gov Vermont Department of Health  
**For more information on the YRBS, please contact:** Kristen Murray, PhD, kristen.murray@vermont.gov Vermont Department of Health  
**For past data briefs, statewide and local reports:** please see the YRBS website at: <http://healthvermont.gov/research/yrbs.aspx>

<sup>4</sup> American Academy of Pediatrics. Media Use in School-Aged Children and Adolescents. Pediatrics. 2016; 138(5):e20162592.