

Healthy Kids. Successful Students.
Stronger Communities.
Improving Academic Achievement through
Healthy Eating and Physical Activity

National Center For Chronic Disease and Health Promotion
Division of Population Health

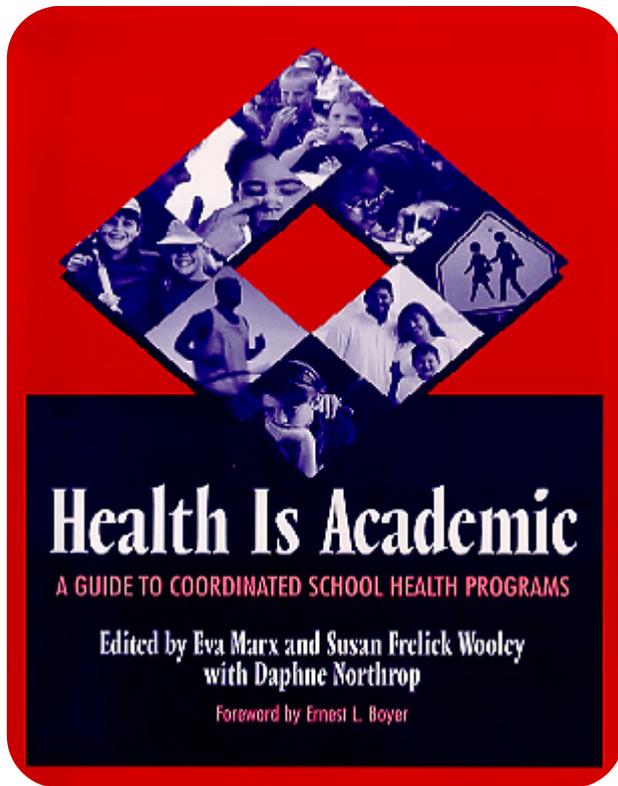




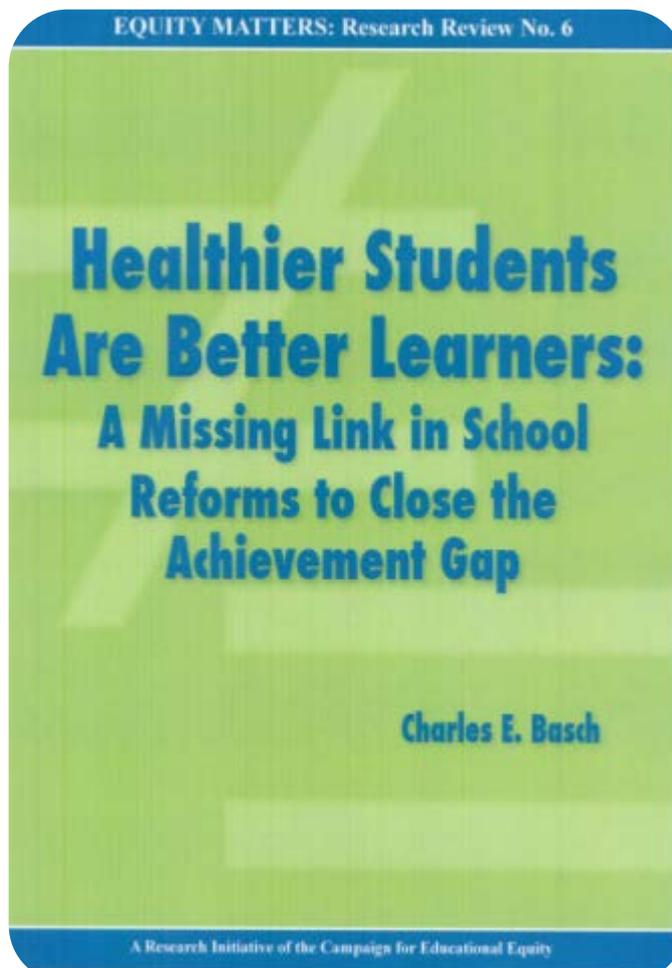
Objectives

- Describe the evidence supporting the link between healthy eating, physical activity, and improved academic achievement.
- Identify key messages and benefits of addressing healthy eating and physical activity in schools to improve academic achievement and motivate stakeholders to take action.
- Identify at least three actions that can be implemented by states, school districts, schools, parents, and/or students to support healthy eating and physical activity in schools and improve academic achievement.
- Identify at least two resources that can be used to explain the relationship between healthy eating, physical activity, and academic achievement.

Health is Academic Because . . .



- Helping young people stay healthy is a fundamental part of the mission of our schools
- Health behaviors are associated with academic achievement
- School health programs can help improve students' academic achievement



“No matter how well teachers are prepared to teach, no matter what accountability measures are put in place, no matter what governing structures are established for schools, educational progress will be profoundly limited if students are not motivated and able to learn. Health related problems play a major role in limiting the motivation and ability to learn...”

~Charles Basch

http://www.equitycampaign.org/i/a/document/12557_equitymattersvol6_web03082010.pdf

Success in School is More Than Just Academics

Schools must also consider other factors that affect
academic achievement:

Healthy Food Options



Opportunities To Be Physically Active





EVIDENCE

Healthy Eating

Academic Achievement

Physical Activity



MESSAGE

Know the Core Messages

AND

The Audience-Specific Messages



ACTION

Be Ready to Share with Key Stakeholders How They Can Take Action



KNOW THE EVIDENCE



Academic Achievement

Academic performance

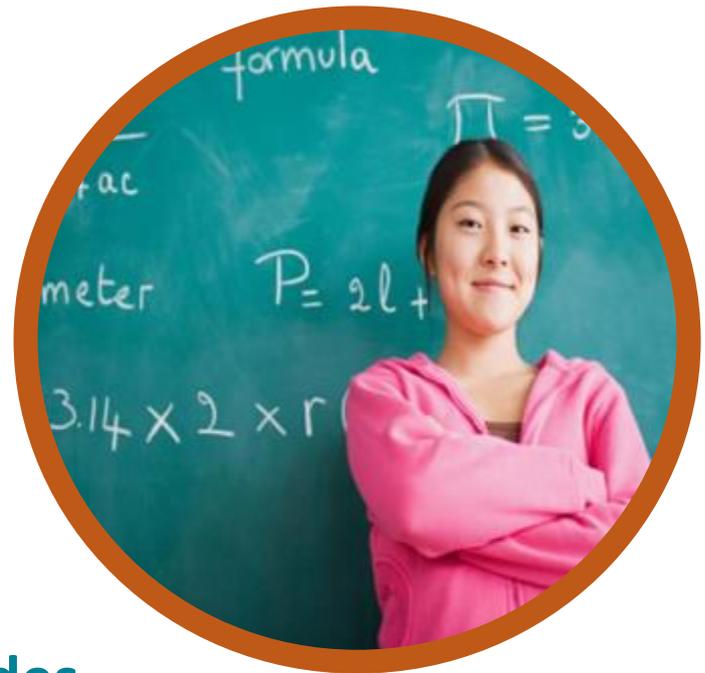
- Class grades
- Standardized tests
- Graduation rates

Education behavior

- Attendance
- Drop out rates
- Behavioral problems at school

Students' cognitive skills and attitudes

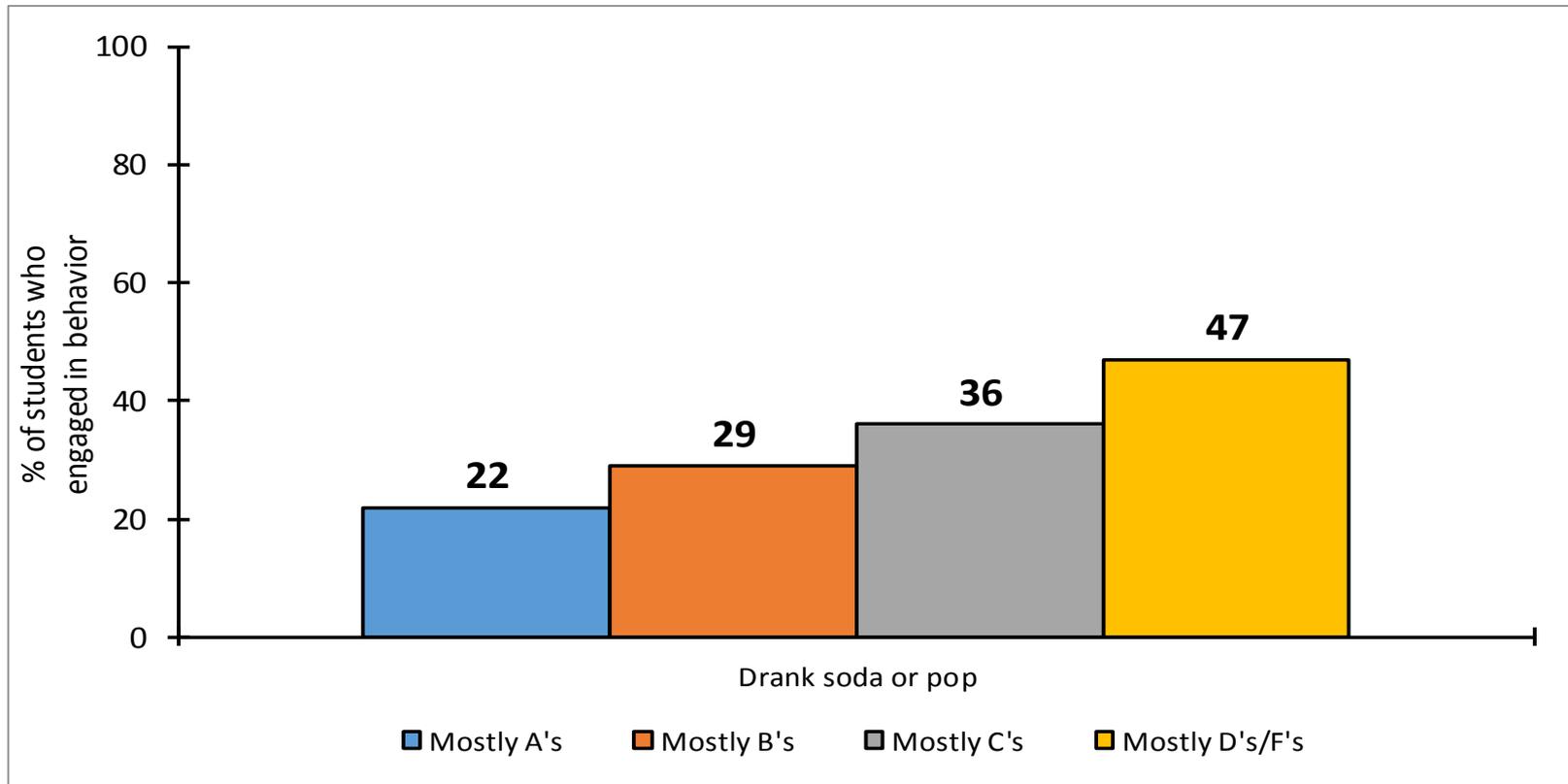
- Concentration
- Memory
- Mood



Healthy Eating and Academic Achievement

Dietary Behavior/Issue	Related Academic Achievement Outcomes
Participation in the School Breakfast Program (SBP)	<ul style="list-style-type: none">• Increased academic grades and standardized test scores• Reduced absenteeism• Improved cognitive performance
Skipping breakfast	<ul style="list-style-type: none">• Decreased cognitive performance
Lack of adequate consumption of specific foods	<ul style="list-style-type: none">• Lower grades
Deficits in specific nutrients	<ul style="list-style-type: none">• Lower grades• Higher rates of absenteeism and tardiness
Insufficient food intake	<ul style="list-style-type: none">• Lower grades• Higher rates of absenteeism• Repeating a grade• Inability to focus

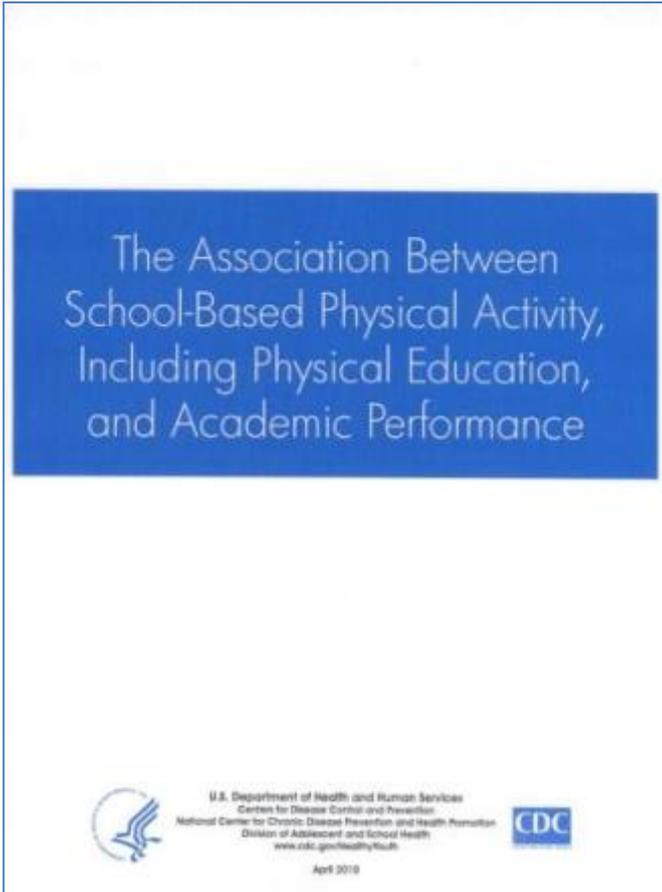
Percentage of High School Students Who Drank a Can, Bottle, or Glass of Soda or Pop at Least One Time Per Day,* by Type of Grades Earned (Mostly A's, B's, C's or D's/F's), 2009**



*Drank a can, bottle, or glass of soda or pop (not including diet soda or diet pop) at least one time per day during the 7 days before the survey.

** $p < .0001$ after controlling for sex, race/ethnicity, and grade level.

United States, Youth Risk Behavior Survey, 2009, http://www.cdc.gov/healthyyouth/health_and_academics/data.htm



The Association Between
School-Based Physical Activity,
Including Physical Education,
and Academic Performance

Physical Activity

- Physical education
- Recess
- Classroom-based
- Extracurricular

Results

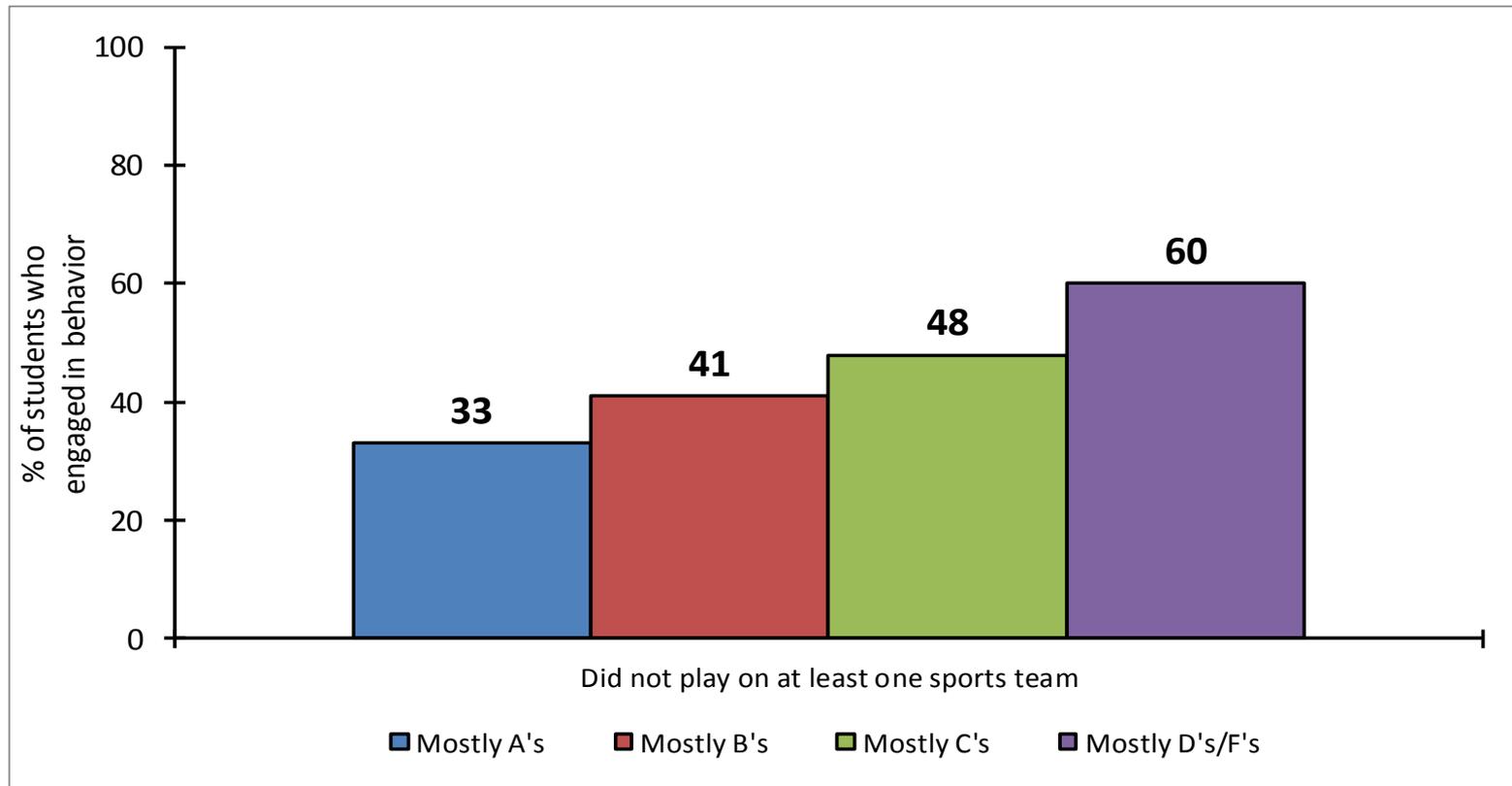
- School-based physical activity can:
 - Help improve academic performance.
 - Have a positive impact on education behaviors and cognitive skills.

www.cdc.gov/HealthyYouth/health_and_academics/pdf/pa-pe_paper.pdf

Physical Activity and Academic Achievement

Physical Activity Practice	Related Academic Achievement Outcomes
Students who are physically active	<ul style="list-style-type: none">• Have better grades, better school attendance, and better classroom behaviors
Higher physical activity and physical fitness levels	<ul style="list-style-type: none">• Improved cognitive performance
More participation in physical education class	<ul style="list-style-type: none">• Better grades, standardized test scores, and classroom behavior
Time spent in recess	<ul style="list-style-type: none">• Improved cognitive performance and classroom behaviors
Participation in brief classroom physical activity breaks	<ul style="list-style-type: none">• Improved cognitive performance, classroom behaviors, and education outcomes
Participation in extracurricular physical activities	<ul style="list-style-type: none">• Higher GPAs, lower drop-out rates, and fewer disciplinary problems

Percentage of High School Students Who Did Not Play on at Least One Sports Team,* by Type of Grades Earned (Mostly A's, B's, C's or D's/F's), 2009**



*Run by their school or community groups during the 12 months before the survey.

** $p < .0001$ after controlling for sex, race/ethnicity, and grade level.

United States, Youth Risk Behavior Survey, 2009, http://www.cdc.gov/healthyyouth/health_and_academics/data.htm



SHARE THE MESSAGE



Core Messages



- Healthy students are better learners
- Schools can influence eating and physical activity behaviors
- Healthy, successful students help build strong communities.
- All students deserve the opportunity to be healthy and successful

Audience-specific Messages

Audience	Benefits to the Audience
States	<ul style="list-style-type: none">• Help reduce barriers to learning• More likely to have higher levels of education• Contributes to a better prepared workforce
School Districts	<ul style="list-style-type: none">• Increased attendance rates• Increased graduation rates• Higher district-wide test scores and grades
Schools	<ul style="list-style-type: none">• Meet educational goals• Decreased rates of student absenteeism• Fewer behavioral problems• Higher school-wide test scores and grades
Parents	<ul style="list-style-type: none">• Opportunities for your child to practice healthy behaviors• Help your child become better learners
Students	<ul style="list-style-type: none">• Feel better• Increase their concentration• Have better grades and test scores



Share the Message

- Consistently share the evidence, key messages, and benefits with key stakeholders
- Include this topic in professional development for district and school staff
- Ask parents to support and promote the healthy eating and physical activity as a way to improve academic achievement
- Use meaningful success stories that support healthy eating and physical activity as a way to improve academic achievement

Remember . . .

It is our responsibility to share the evidence and important link between healthy eating, physical activity, and improved academic achievement with state and local policy makers, state and local school boards, key community organizations, parents, and anyone else interested in equipping children to be healthy and successful in school.



TAKE ACTION



Who Can Take Action?



States



Schools Districts



Schools



Parents



Students



Take Action

- ✓ Establish an agenda to support health in schools
- ✓ Develop and implement key policies
- ✓ Provide appropriate guidance, technical assistance, and professional development
- ✓ Implement effective, high-quality programs and practices
- ✓ Ensure accountability



Examples of Actions

State

- Create a partnership between departments of health and education to support the connection between health and academic achievement
- Provide professional development and technical assistance to school districts and schools on healthy school nutrition environments and a comprehensive approach to physical activity in schools

School Districts

- Establish, implement, and monitor local school wellness policies
- Collect data on health and educational behaviors and outcomes to assess the benefits of school health policies and practices



Examples of Actions

Schools

- Establish a school health advisory council or wellness committee
- Provide healthy food
- Provide physical education programs

Parents

- Be involved in school health activities at your child's school
- Ask the school to provide educational opportunities for you to help increase access to healthy eating and physical activity in your child's school

Students

- Participate on state, district, and/or school health advisory councils or other health-related committees
- Lead activities in your school that promote eating healthy and being physically active



USE THE RESOURCES





Adolescent and School Health

Home

Adolescent Health

School Health

Coordinated School Health (CSH)

► Health & Academics

Data & Statistics

Publications & Resources

National Health Education Standards

Characteristics of an Effective Curriculum

School Health Policies and Practices Study

School Health Profiles

BAM! Body and Mind

[Home](#) > [School Health](#)



Health and Academics

The academic achievement of America's youth is strongly linked with their health.

Healthy Students Are Better Learners

Health-related factors such as hunger, physical and emotional abuse, and chronic illness can lead to poor school performance.¹ Health-risk behaviors such as early sexual initiation, violence, unhealthy eating, and physical inactivity are consistently linked to poor grades, test scores, and lower educational attainment.²⁻⁵

Leading national education organizations recognize the close relationship between health and education, as well as the need to foster health and well-being within the educational environment for all students.⁶⁻⁹

Schools are the Right Place for a Healthy Start



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[What's this?](#)



Related CDC Tools

[School Health Index \(SHI\)](#)

[Health Education Curriculum Analysis Tool](#)

http://www.cdc.gov/HealthyYouth/health_and_academics/

Health-Risk Behaviors and Academic Grades Fact Sheets

Tobacco Use and Academic Achievement

What is the relationship between tobacco use and academic achievement?

Data presented below from the 2010 National Youth Risk Behavior Survey (YRBS) show a negative association between tobacco use and academic achievement among high school students after controlling for sex, race/ethnicity, and grade level. This means that students who use tobacco are less likely to engage in health-risk behaviors than their classmates who do not use tobacco, and students who do not engage in health-risk behaviors receive higher grades than their classmates who do engage in health-risk behaviors. Further research is needed to determine whether the grades receive health-risk behaviors, health-risk behaviors lead to low grades, or some other factor leads to both of these outcomes.

Students with higher grades are significantly less likely to have engaged in behaviors such as:

- Ever having sex
- Having sex without using a condom
- Being sexually active before the survey
- Drinking alcohol
- Not using a car seat

Percentage of high or D/F+ (A, B, C, D) — United States

Behavior	Grade 9	Grade 10	Grade 11	Grade 12
Ever smoked cigars	17	15	12	10
Ever smoked cigars for 30 days	10	9	7	6
Current cigarette use before the survey	10	9	7	6
Current frequent use (at least 5 days during the 30 days before the survey)	10	9	7	6
Current cigarette use during the 30 days before the survey	10	9	7	6
Current tobacco use of current cigar use	10	9	7	6
Smoked a whole cigarette during the survey	10	9	7	6
Current e-cigarette use (at least 1 day during the 30 days before the survey)	10	9	7	6
Used e-cigarettes for at least 1 day during the 30 days before the survey	10	9	7	6

* All percentages are reported by type of grade earned (A, B, C, D, or D/F+).

Alcohol and Other Drug Use and Academic Achievement

What is the relationship between alcohol and other drug use and academic achievement?

Data presented below from the 2010 National Youth Risk Behavior Survey (YRBS) show a negative association between alcohol and other drug use and academic achievement among high school students after controlling for sex, race/ethnicity, and grade level. This means that students who use alcohol or other drugs are less likely to engage in health-risk behaviors than their classmates who do not use alcohol or other drugs, and students who do not engage in health-risk behaviors receive higher grades than their classmates who do use alcohol or other drugs. Further research is needed to determine whether the grades receive alcohol and other drug use, alcohol and other drug use lead to low grades, or some other factor leads to both of these outcomes.

Students with higher grades are significantly less likely to have engaged in behaviors such as:

- Carrying a weapon (for example, a gun, knife, or club) on at least 1 day during the 30 days before the survey
- Current cigarette use (smoking cigarettes on at least 1 day during the 30 days before the survey)
- Current alcohol use (having at least one drink of alcohol on at least 1 day during the 30 days before the survey)
- Being sexually sexually active (having sexual intercourse with at least one person during the 3 months before the survey)
- Watching television 3 or more hours per day (on an average school day)
- Being physically active at least 60 minutes per day on fewer than 5 days during the 30 days before the survey

Percentage of high school students who carried a weapon, smoked cigarettes, drank alcohol, were sexually active, watched television 3 or more hours per day, and were physically active at least 60 minutes per day on fewer than 5 days, by type of grade earned (A, B, C, D, or D/F+).

Behavior	Grade 9	Grade 10	Grade 11	Grade 12
Carried a weapon	17	15	12	10
Current cigarette use	10	9	7	6
Current alcohol use	10	9	7	6
Current e-cigarette use	10	9	7	6
Sexually active	10	9	7	6
Watched television 3 or more hours per day	10	9	7	6
Physically active at least 60 minutes per day on fewer than 5 days	10	9	7	6

Sexual Risk Behaviors and Academic Achievement

What is the relationship between sexual risk behaviors and academic achievement?

Data presented below from the 2010 National Youth Risk Behavior Survey (YRBS) show a negative association between sexual risk behaviors and academic achievement among high school students after controlling for sex, race/ethnicity, and grade level. This means that students who engage in sexual risk behaviors are less likely to receive higher grades than their classmates who do not engage in sexual risk behaviors. Further research is needed to determine whether the grades receive sexual risk behaviors, sexual risk behaviors lead to low grades, or some other factor leads to both of these outcomes.

Students with higher grades are significantly less likely to have engaged in behaviors such as:

- Ever having sex
- Having sex without using a condom
- Being sexually active before the survey
- Drinking alcohol
- Not using a car seat

Percentage of high or D/F+ (A, B, C, D) — United States

Behavior	Grade 9	Grade 10	Grade 11	Grade 12
Ever had sexual intercourse	17	15	12	10
Had sexual intercourse during the survey	10	9	7	6
Had sexual intercourse during the 30 days before the survey	10	9	7	6
Currently sexually active during the 30 days before the survey	10	9	7	6
Drank alcohol or used other drugs during the 30 days before the survey	10	9	7	6
Did not use a condom during the survey	10	9	7	6

* All percentages are reported by type of grade earned (A, B, C, D, or D/F+).

Physical Inactivity and Unhealthy Dietary Behaviors and Academic Achievement

What is the relationship between physical inactivity and unhealthy dietary behaviors and academic achievement?

Data presented below from the 2010 National Youth Risk Behavior Survey (YRBS) show a negative association between physical inactivity and unhealthy dietary behaviors and academic achievement among high school students after controlling for sex, race/ethnicity, and grade level. This means that students who are physically inactive and engage in unhealthy dietary behaviors receive lower grades than their classmates who are physically active and engage in healthy dietary behaviors. Further research is needed to determine whether the grades receive physical inactivity and unhealthy dietary behaviors, physical inactivity and unhealthy dietary behaviors lead to low grades, or some other factor leads to both of these outcomes.

Students with higher grades are significantly less likely to have engaged in behaviors such as:

- Being physically active at least 60 minutes per day on fewer than 5 days during any kind of physical activity that increased their heart rate and made them breathe hard some of the time on fewer than 5 days during the 7 days before the survey
- Watching television 3 or more hours per day (on an average school day)
- Using computers 3 or more hours per day (played video or computer games or used a computer for something that was not school work on an average school day)
- Drinking a can, bottle, or glass of soda or juice (not including diet soda or diet pop) at least one time per day during the 7 days before the survey
- Not eating for 24 or more hours (to lose weight or to keep from gaining weight) during the 30 days before the survey

Percentage of high school students who engaged in physical inactivity or unhealthy dietary behaviors, by type of grade earned (A, B, C, D, or D/F+).

Behavior	Grade 9	Grade 10	Grade 11	Grade 12
Physically active at least 60 minutes per day on fewer than 5 days	10	9	7	6
Watched television 3 or more hours per day	10	9	7	6
Used computers 3 or more hours per day	10	9	7	6
Drank a can, bottle, or glass of soda or juice at least one time per day	10	9	7	6
Did not eat for 24 or more hours (to lose weight or to keep from gaining weight) during the 30 days before the survey	10	9	7	6

Health-Risk Behaviors and Academic Achievement

What is the relationship between health-risk behaviors and academic achievement?

Data presented below from the 2010 National Youth Risk Behavior Survey (YRBS) show a negative association between health-risk behaviors and academic achievement among high school students after controlling for sex, race/ethnicity, and grade level. This means that students who engage in health-risk behaviors are less likely to receive higher grades than their classmates who do not engage in health-risk behaviors. Further research is needed to determine whether the grades receive health-risk behaviors, health-risk behaviors lead to low grades, or some other factor leads to both of these outcomes.

Students with higher grades are significantly less likely to have engaged in behaviors such as:

- Carrying a weapon (for example, a gun, knife, or club) on at least 1 day during the 30 days before the survey
- Current cigarette use (smoking cigarettes on at least 1 day during the 30 days before the survey)
- Current alcohol use (having at least one drink of alcohol on at least 1 day during the 30 days before the survey)
- Being sexually sexually active (having sexual intercourse with at least one person during the 3 months before the survey)
- Watching television 3 or more hours per day (on an average school day)
- Being physically active at least 60 minutes per day on fewer than 5 days during any kind of physical activity that increased their heart rate and made them breathe hard some of the time on fewer than 5 days during the 7 days before the survey

Figure 1. Percentage of high school students who carried a weapon, smoked cigarettes, drank alcohol, were sexually active, watched television 3 or more hours per day, and were physically active at least 60 minutes per day on fewer than 5 days, by type of grade earned (A, B, C, D, or D/F+).

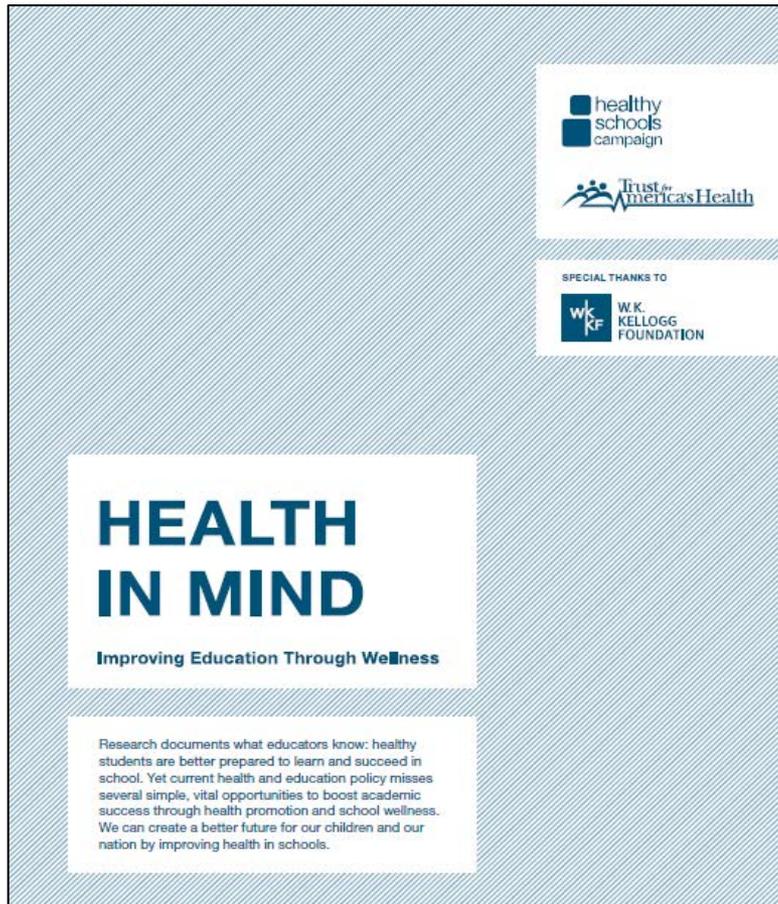
* This figure is based on 100% of students who had data for each behavior and 76% of students who had data for each grade level.

New CDC Health and Academic Resources



- Health and Academic Achievement overview document
- Presentation slides with notes
- Podcast for health and academics
 - Nutrition
 - Physical activity

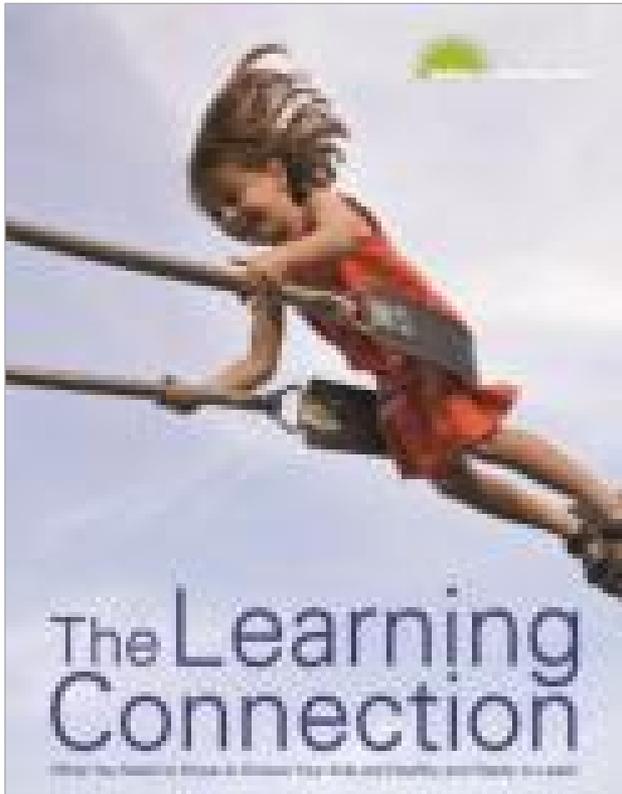
Health in Mind



- Focuses on several initiatives and policies that can benefit the health and well-being of students
- Provides strategies that federal agencies can support to create the conditions for health and learning in our nation's schools
- Provides recommendations that can be addressed at the state, district, and school levels

http://www.nasmhpd.org/docs/PreventionResources/Health_in_Mind_Report.pdf

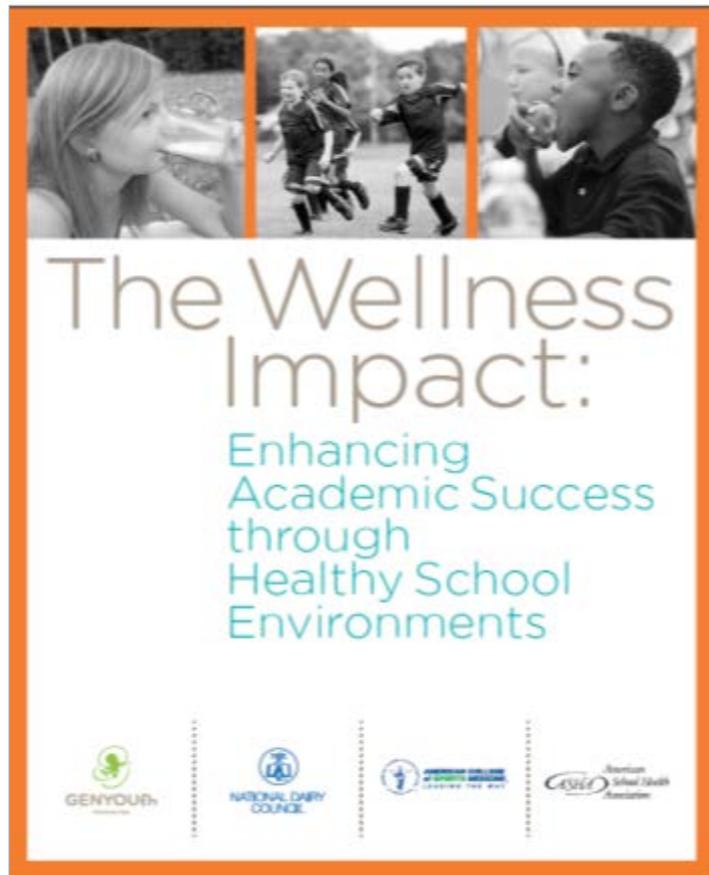
The Learning Connection



- Demonstrates that physical activity supports academic achievement, well-nourished kids learn better and that healthier practices in schools can increase school revenue
- Provides a roadmap for parents, educators, school administrators and school volunteers to create healthier school environments

http://www.actionforhealthykids.org/storage/documents/pdfs/afhk_thelearningconnection_digitaledition.pdf.

The Wellness Impact



- Highlights that improved nutrition and physical activity can help lead to better academic performance
- Serves as a launch pad to ignite the conversation about how all sectors of society can work together to create an environment for children to reach their full potential.

<http://www.nationaldairyCouncil.org/ChildNutrition/Pages/The-Wellness-Impact-Healthy-Eating-and-Physical-Activity-Helps-Improve-Academic-Performance.aspx>



THANK YOU!





Healthy Kids. Successful Students. Better Communities.

Improving Academic Achievement through
Healthy Eating and Physical Activity

WEB INFORMATION

www.cdc.gov/healthyyouth

www.cdc.gov/BAM