

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 2009 National Youth Risk Behavior Survey (YRBS) show a negative association between physical inactivity and unhealthy dietary behaviors and academic achievement after controlling for sex, race/ethnicity, and grade level. This means that students with higher grades are less likely to be physically inactive and engage in unhealthy dietary behaviors than their classmates with lower grades, and students who are physically active and do not engage in unhealthy dietary behaviors receive higher grades than their classmates who are physically inactive and engage in unhealthy dietary behaviors. These associations do not prove causation. Further research is needed to determine whether low grades lead to physical inactivity and unhealthy dietary behaviors, physical inactivity and unhealthy dietary behaviors lead to low grades, or some other factors lead to both of these problems.

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** (doing 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 pop** (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 grades earned (mostly A's, B's, C's, or D's/F's)—United States, Youth Risk Behavior Survey, 2009*

Physical Inactivity and Unhealthy Dietary Behaviors	Percentage of U.S. high school students who engaged in each risk behavior, by type of grades mostly earned			
	A's	B's	C's	D's/F's
Physical Inactivity				
Physically active at least 60 minutes per day on fewer than 5 days (doing 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)	56	63	68	76
Did not play on at least one sports team (run by their school or community groups during the 12 months before the survey)	33	41	48	60
Watched television 3 or more hours per day (on an average school day)	24	32	39	49
Used 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)	20	24	29	36
Unhealthy Dietary Behaviors				
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)	22	29	36	47
Did not eat for 24 or more hours (to lose weight or to keep from gaining weight during the 30 days before the survey)	7	10	13	19
Took diet pills, powders, or liquids without a doctor's advice (to lose weight or to keep from gaining weight during the 30 days before the survey)	4	4	5	11
Vomited or took laxatives (to lose weight or to keep from gaining weight during the 30 days before the survey)	4	3	4	9

* All associations are significant at $p < 0.0001$, using logistic regression and controlling for sex, race/ethnicity, and grade level.

Figure 1. Percentage of high school students who were physically active at least 60 minutes per day on fewer than 5 days, did not play on at least one sports team, and watched television 3 or more hours per day, by type of grades earned (mostly A's, B's, C's, or D's/F's)—United States, Youth Risk Behavior Survey, 2009

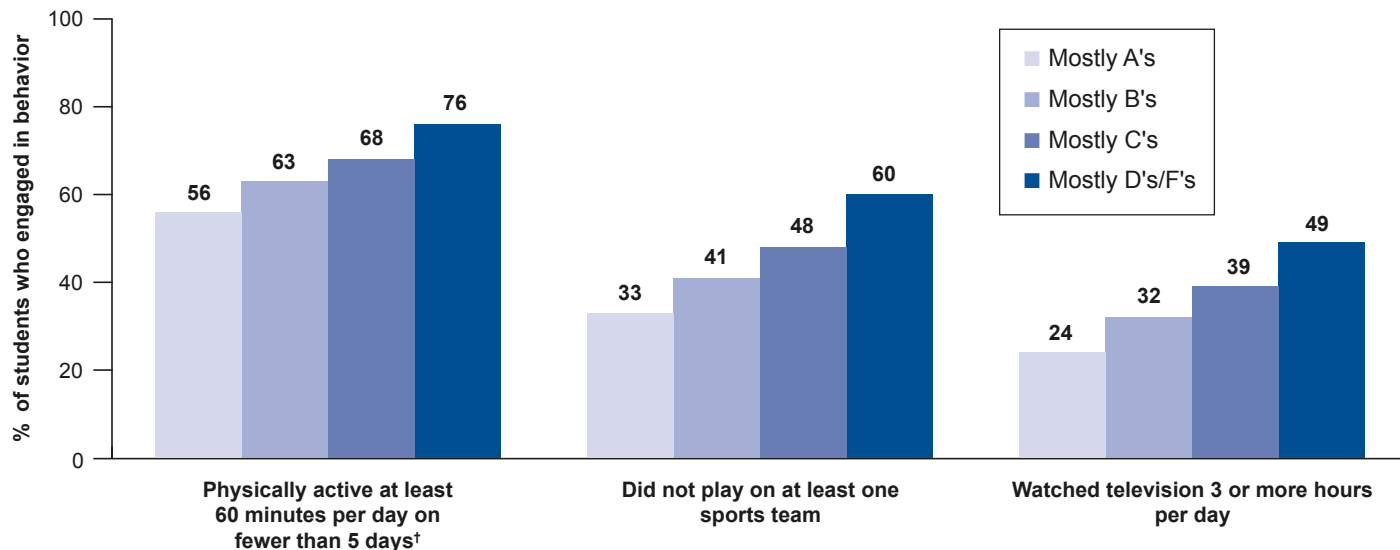
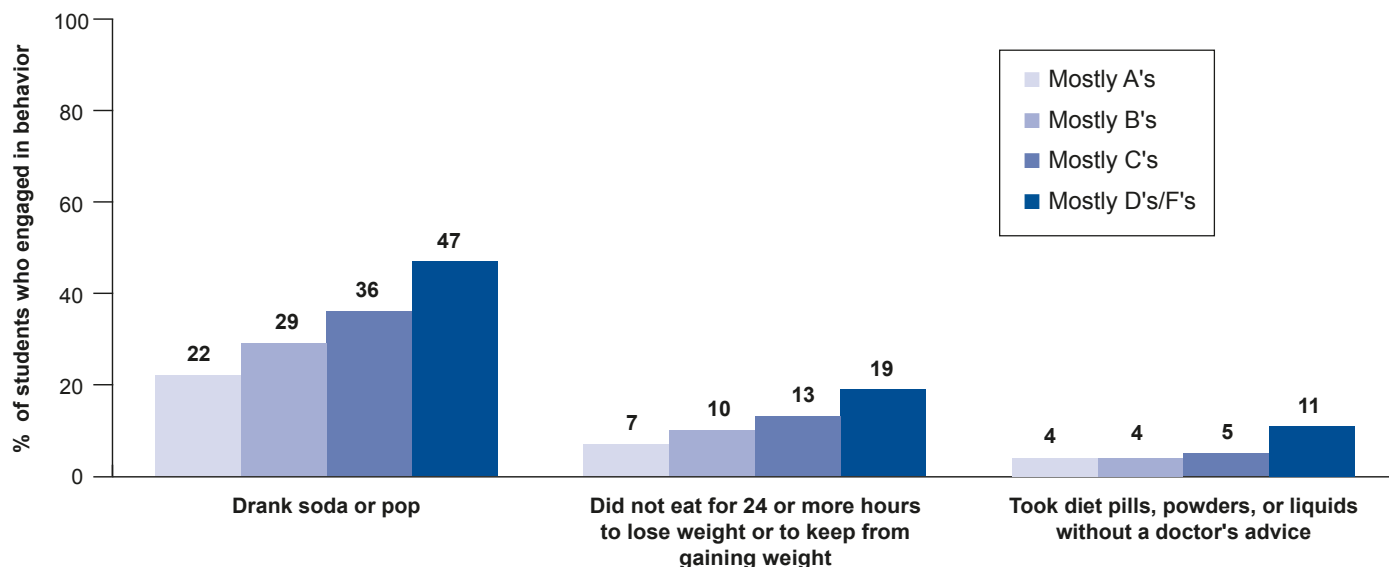


Figure 2. Percentage of high school students who drank soda or pop during the 7 days before the survey, did not eat for 24 or more hours to lose weight or to keep from gaining weight, and took diet pills, powders, or liquids to lose weight or keep from gaining weight, by type of grades earned (mostly A's, B's, C's, or D's/F's)—United States, Youth Risk Behavior Survey, 2009



† This means that 56% of students with mostly A's were physically active at least 60 minutes per day on fewer than 5 days during the 7 days before the survey, and 76% of students with mostly D's/F's were physically active at least 60 minutes per day on fewer than 5 days during the 7 days before the survey.

The national YRBS monitors priority health-risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. It 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 2009, students completing the YRBS were asked, "During the past 12 months, how would you describe your grades in school?" and given seven response options (Mostly A's, Mostly B's, Mostly C's, Mostly D's, Mostly F's, None of these grades, Not sure). In 2009, 31% of students received mostly A's, 40% received mostly B's, 19% received mostly C's, 6% received mostly D's or F's, and 4% reported receiving none of these grades or not sure.

For more information visit www.cdc.gov/HealthyYouth/health_and_academics or call 800-CDC-INFO (800-232-4636).



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion
Division of Adolescent and School Health
www.cdc.gov/HealthyYouth

