

Nutrition and Dietary-Related Behaviors and Academic Achievement



Montana Office of Public Instruction • Elsie Arntzen, Superintendent • www.opi.mt.gov

What is the relationship between nutrition and dietary-related behaviors and academic achievement?

Data presented below from the 2017 Montana Youth Risk Behavior Survey (YRBS) show a negative association between nutrition and dietary-related behaviors and academic achievement. This means that students with higher grades are more likely to engage in healthy nutrition and dietary-related behaviors than their classmates with lower grades, and students who do engage in healthy nutrition and dietary-related behaviors receive higher grades than their classmates who do not engage in healthy nutrition and dietary-related behaviors. These associations do not prove causation. Further research is needed to determine whether low grades lead to unhealthy nutrition and dietary-related behaviors, unhealthy nutrition and dietary-related behaviors lead to low grades, or some other factors lead to both of these problems.

Percentage of high school students who engaged in nutrition and dietary-related behaviors, by type of grades earned – Montana Youth Risk Behavior Survey, 2017.

| Nutrition and Dietary-Related Behaviors | Percentage of Montana high school students who engaged in each risk behavior, by type of grades mostly earned | | | | Significant Association* |
|--|---|-----|-----|---------|--------------------------|
| | A's | B's | C's | D's/F's | |
| Weight Management | | | | | |
| Were obese (\geq 95 th percentile for body mass index) | 8 | 13 | 16 | 23 | Yes |
| Were overweight (\geq 85 th percentile but <95 th percentile for body mass index) | 13 | 15 | 18 | 21 | Yes |
| Described themselves as slightly or very overweight | 25 | 33 | 35 | 50 | Yes |
| Trying to lose weight | 39 | 42 | 45 | 48 | Yes |
| Nutrition and Dietary Behaviors | | | | | |
| Did not drink 100% fruit juice during past 7 days | 28 | 27 | 24 | 33 | No |
| Did not eat fruit during the past 7 days | 8 | 10 | 13 | 17 | Yes |
| Did not eat fruit or drink 100% fruit juice during the past 7 days | 4 | 5 | 5 | 8 | No |
| Ate fruit or drank 100% fruit juices one or more times per day during the past 7 days | 62 | 58 | 53 | 48 | Yes |
| Ate fruit or drank 100% fruit juices two or more times per day during the past 7 days | 28 | 25 | 21 | 20 | Yes |
| Ate fruit or drank 100% fruit juices three or more times per day during the past 7 days | 14 | 13 | 13 | 11 | No |
| Did not eat a green salad during the past 7 days | 26 | 32 | 40 | 51 | Yes |
| Did not eat potatoes during the past 7 days | 27 | 29 | 33 | 28 | No |
| Did not eat carrots during the past 7 days | 40 | 47 | 51 | 54 | Yes |
| Did not eat other vegetables during the past 7 days | 12 | 17 | 19 | 31 | Yes |
| Did not eat vegetables during the past 7 days | 4 | 5 | 5 | 8 | No |
| Ate vegetables one or more times per day during the past 7 days | 67 | 62 | 56 | 49 | Yes |
| Ate vegetables two or more times per day during the past 7 days | 29 | 28 | 23 | 19 | Yes |
| Ate vegetables three or more times per day during the past 7 days | 11 | 12 | 11 | 11 | No |
| Did not drink soda or pop (not including diet soda pop) during the past 7 days | 33 | 22 | 13 | 13 | Yes |
| Drank soda or pop daily during the past 7 days | 9 | 18 | 21 | 31 | Yes |
| Drank soda or pop two or more times per day during the past 7 days | 4 | 10 | 14 | 26 | Yes |
| Drank soda or pop three or more times per day during the past 7 days | 2 | 4 | 7 | 16 | Yes |
| Did not drink milk during the past 7 days | 19 | 18 | 20 | 19 | No |
| Drank one or more glasses of milk per day during the past 7 days | 39 | 38 | 38 | 33 | Yes |
| Drank two or more glasses of milk per day during the past 7 days | 24 | 24 | 25 | 23 | No |
| Drank an energy drink daily during the past 7 days (e.g., Red Bull or Jolt) | 2 | 4 | 5 | 14 | Yes |
| Did not eat breakfast on any of the past 7 days | 8 | 11 | 15 | 27 | Yes |
| Ate breakfast on all of the past 7 days | 46 | 33 | 27 | 19 | Yes |

*Based on logistic regression analysis controlling for sex, race/ethnicity, and grade in school, $p < 0.05$.

Figure 1. Percentage of high school students, by nutrition and dietary-related behavior, by grades earned. Montana YRBS, 2017.

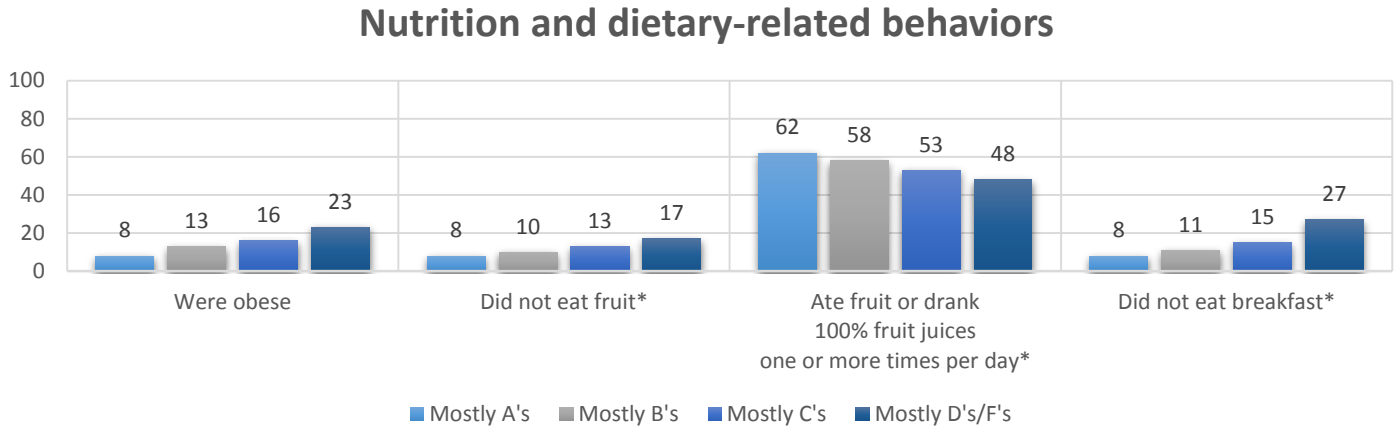
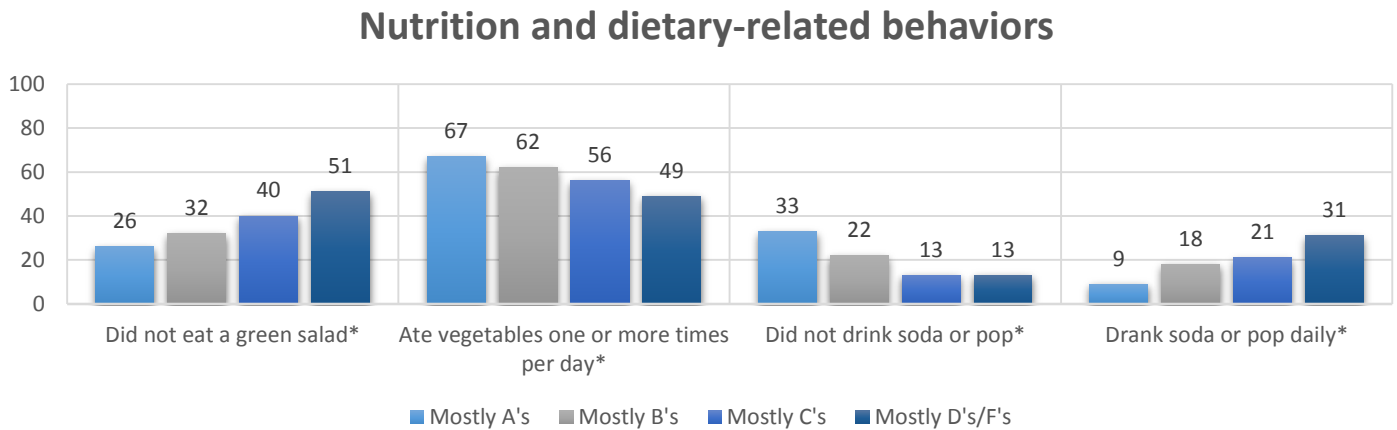


Figure 2. Percentage of high school students, by nutrition and dietary-related behavior, by grades earned. Montana YRBS, 2017.



* During the past 7 days.

The Montana 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 late winter and provides data representative of high school students in Montana. In 2017, 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 2017, 45% of students received mostly A’s, 33% received mostly B’s, 15% received mostly C’s, 4% received mostly D’s or F’s, and 3% reported receiving none of these grades or not sure. The YRBS has been administered by the Office of Public Instruction in collaboration with Montana schools since 1991. For more information on the YRBS please visit www.opi.mt.gov/yrbs.

Montana High School Students - Grades Earned

