

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 2019 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, 2019.

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)	7	12	22	20	Yes
Were overweight (\geq 85 th percentile but <95 th percentile for body mass index)	13	13	13	13	No
Described themselves as slightly or very overweight	26	31	40	37	Yes
Trying to lose weight	39	42	44	47	Yes
Nutrition and Dietary Behaviors					
Did not drink 100% fruit juice during past 7 days	34	30	33	31	No
Did not eat fruit during the past 7 days	8	11	14	24	Yes
Did not eat fruit or drink 100% fruit juice during the past 7 days	4	5	7	9	No
Ate fruit or drank 100% fruit juices one or more times per day during the past 7 days	59	53	49	44	Yes
Ate fruit or drank 100% fruit juices two or more times per day during the past 7 days	27	22	22	17	Yes
Did not eat green salad during the past 7 days	28	36	43	56	Yes
Did not eat potatoes during the past 7 days	31	31	32	42	No
Did not eat carrots during the past 7 days	38	46	49	63	Yes
Did not eat other vegetables during the past 7 days	12	17	24	33	Yes
Did not eat vegetables during the past 7 days	3	4	10	16	Yes
Ate vegetables one or more times per day during the past 7 days	68	60	59	47	Yes
Ate vegetables two or more times per day during the past 7 days	30	22	23	24	Yes
Ate vegetables three or more times per day during the past 7 days	13	10	12	10	No
Did not drink soda or pop (not including diet soda pop) during the past 7 days	36	26	17	15	Yes
Drank soda or pop daily during the past 7 days	8	13	21	27	Yes
Drank soda or pop two or more times per day during the past 7 days	4	6	12	19	Yes
Did not drink milk during the past 7 days	24	24	22	26	No
Drank one or more glasses of milk per day during the past 7 days	33	31	32	28	No
Drank three or more glasses of milk per day during the past 7 days	9	8	10	10	No
Drank an energy drink daily during the past 7 days (e.g., Red Bull or Jolt)	3	3	8	11	Yes
Did not eat breakfast on any of the past 7 days	10	14	17	33	Yes
Ate breakfast on all of the past 7 days	41	30	21	15	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, 2019.

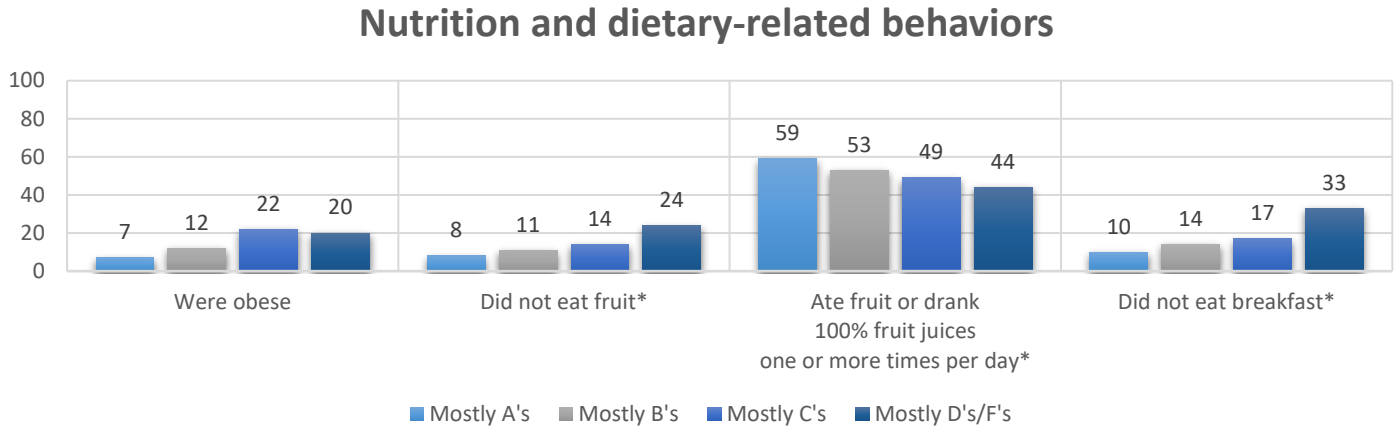
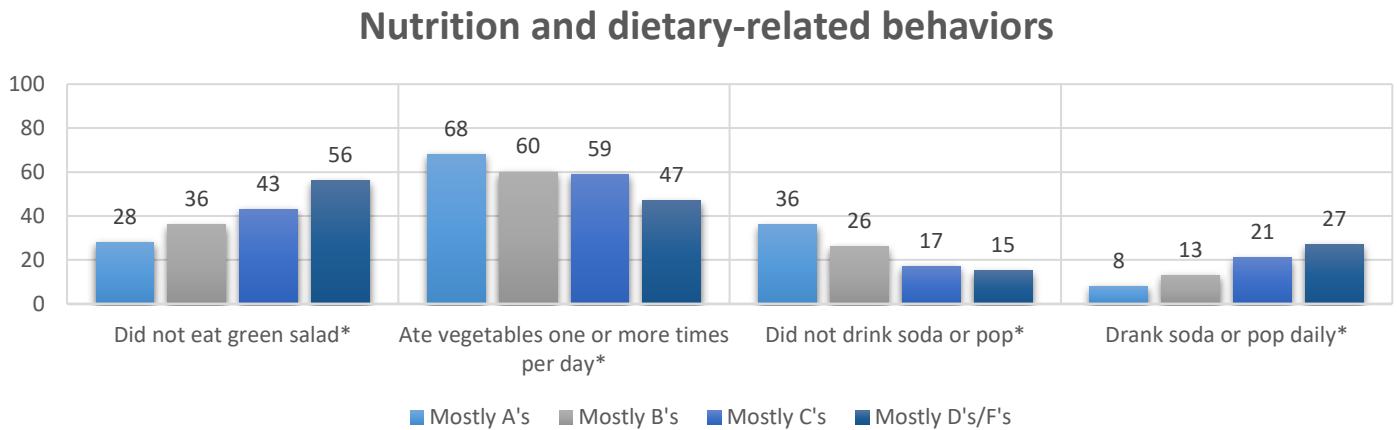


Figure 2. Percentage of high school students, by nutrition and dietary-related behavior, by grades earned. Montana YRBS, 2019.



* 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 2019, 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 2019, 46% of students received mostly A’s, 31% received mostly B’s, 15% received mostly C’s, 5% received mostly D’s or F’s, and 4% 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

