

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 2021 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, 2021.

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	13	19	18	Yes
Were overweight (\geq 85 th percentile but <95 th percentile for body mass index)	12	16	16	16	Yes
Described themselves as slightly or very overweight	23	29	36	39	Yes
Trying to lose weight	38	40	46	50	Yes
Nutrition and Dietary Behaviors					
Did not drink 100% fruit juice during past 7 days	36	32	33	36	No
Did not eat fruit during the past 7 days	9	9	14	17	Yes
Did not eat fruit or drink 100% fruit juice during the past 7 days	5	5	7	12	Yes
Ate fruit or drank 100% fruit juices one or more times per day during the past 7 days	56	52	47	44	Yes
Ate fruit or drank 100% fruit juices two or more times per day during the past 7 days	24	23	21	22	No
Did not eat green salad during the past 7 days	31	39	43	47	Yes
Did not eat potatoes during the past 7 days	33	32	36	38	No
Did not eat carrots during the past 7 days	39	47	49	53	Yes
Did not eat other vegetables during the past 7 days	13	16	22	24	Yes
Did not eat vegetables during the past 7 days	4	5	7	10	Yes
Ate vegetables one or more times per day during the past 7 days	66	57	53	50	Yes
Ate vegetables two or more times per day during the past 7 days	28	23	21	20	Yes
Ate vegetables three or more times per day during the past 7 days	13	10	8	11	Yes
Did not drink soda or pop (not including diet soda pop) during the past 7 days	39	26	23	20	Yes
Drank soda or pop daily during the past 7 days	8	13	18	21	Yes
Did not drink milk during the past 7 days	29	24	25	28	No
Drank one or more glasses of milk per day during the past 7 days	30	31	30	26	Yes
Drank three or more glasses of milk per day during the past 7 days	8	9	9	7	No
Did not drink a sports drink, such as Gatorade or PowerAde, during the past 7 days	54	42	42	40	Yes
Drank a sports drink daily during the past 7 days	7	10	11	15	Yes
Did not eat breakfast on any of the past 7 days	13	16	23	29	Yes
Ate breakfast on all of the past 7 days	38	28	21	13	Yes
Most of the time or always went hungry because there was not enough food in their home during the past 30 days	1	1	3	3	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, 2021.

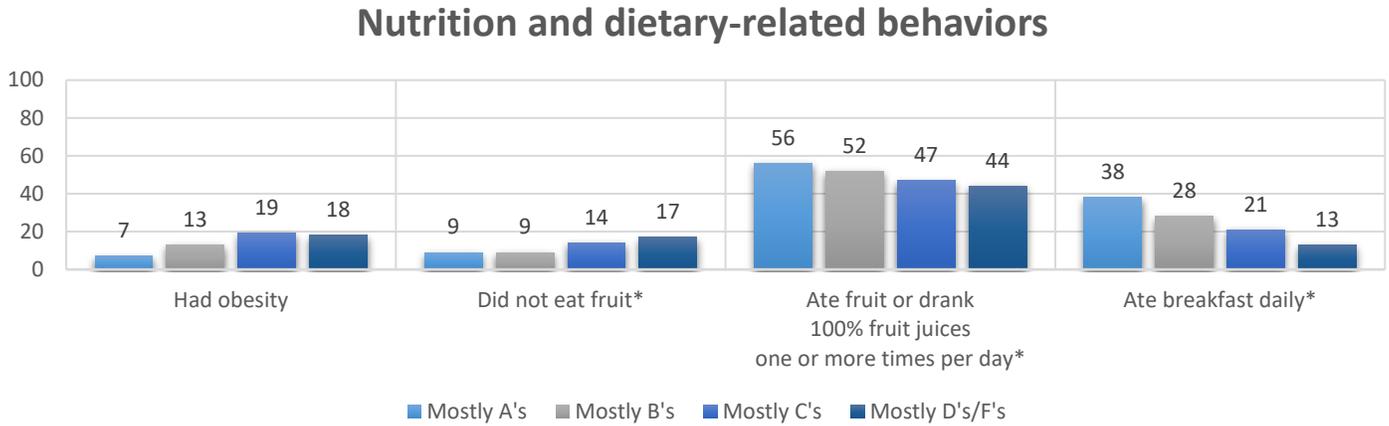
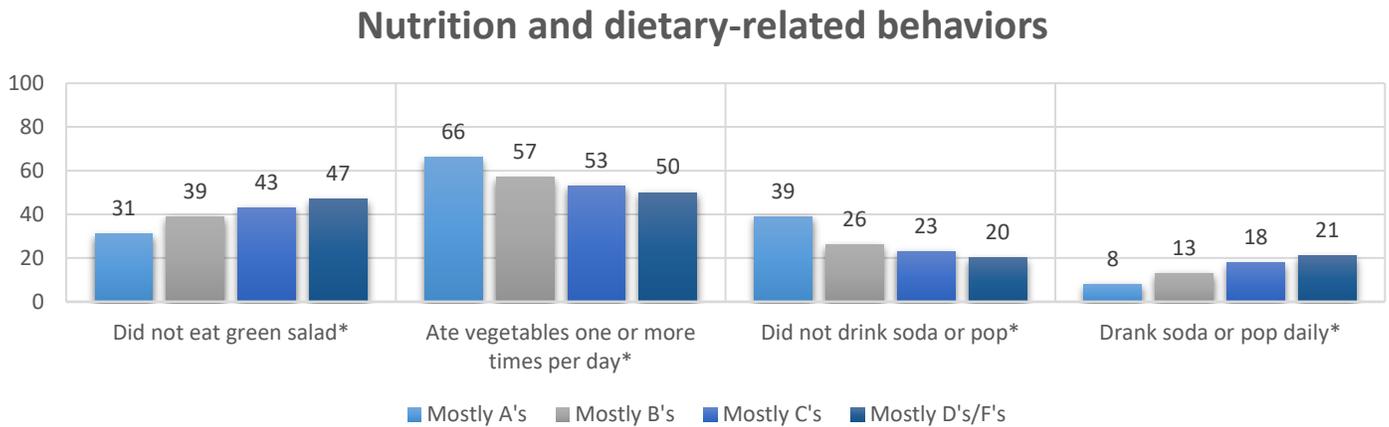


Figure 2. Percentage of high school students, by nutrition and dietary-related behavior, by grades earned. Montana YRBS, 2021.



* 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 2021, 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, and Not sure). In 2021, 46% of students received mostly A’s, 27% received mostly B’s, 15% received mostly C’s, 7% received mostly D’s or F’s, and 5% 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

