

MICHIGAN ALCOHOL SURVEILLANCE BRIEF



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Weight Control Behavior of Current & Binge Drinking MI Youth

Obesity among adolescents is of public health concern given its high prevalence and potential adverse medical consequences.^{1,2} The use of disordered eating behaviors, such as binge eating and unhealthy weight control behaviors, is also a serious problem given that these behaviors are commonly used by adolescents. These behaviors are associated with poor eating patterns and dietary quality,^{3,4} eating disorders,⁵ depression,^{6,7} and have been found to longitudinally increase risk for weight gain and obesity.⁸⁻¹¹ In previous analyses of the Project EAT (Eating Among Teens) study population, the co-occurrence of overweight status and use of disordered eating behaviors was found to be high, particularly among female adolescents.^{12,13} Thus, while an important public health goal is to prevent obesity in adolescents, it may be even more important to prevent the co-occurrence of obesity and disordered eating in youth.

Data from the 2009 Michigan's Youth Risk Behavior Survey (MiYRBS) can be used to examine the prevalence of weight loss behaviors in Michigan teenagers that drink alcohol. Among MiYRBS respondents, the overall proportion of non-drinkers was 63.0%, while 37.0% of respondents reported being current drinkers and 23.2% reported binge drinking. Overall, high school males and females had similar prevalence of current (36.0% of males and 37.0% of females) & binge (23.8% of males and 22.4% of females) drinking.

Regardless of sex or drinking status, a higher percentage of students reported themselves as "overweight" than were overweight based on their body mass index (BMI*), as calculated from their reported height and weight. Current and binge drinkers were more likely to report trying to lose weight, eating less and exercising to lose weight than non-drinkers. Female drinkers were significantly more likely to report these behaviors than males, as seen in Table 1. While there was not a significant difference between drinking category, males were more likely to be physically active for 60 or more minutes on five or more days

Alcohol Use Definitions

"Non-drinkers" reported not drinking any alcohol in the past 30 days. "Current drinkers" reported having at least one drink of alcohol in the past 30 days. "Binge drinking" was defined as having five or more drinks of alcohol in a row during the past 30 days.

during the past week than females.

The table below demonstrates that current and binge drinkers were more likely to report using extreme and unhealthy methods of weight control than non-drinkers. All current drinkers and female binge drinkers were more likely to report fasting for 24 hours or longer in the past 30 days compared to non-drinkers. For current and binge drinkers of both sexes, the reported use of diet pills was significantly higher compared to non-drinkers. There was also a greater trend of vomiting and/or using laxatives as a method of weight control in the past 30 days in both male and female binge drinkers and female current drinkers than non-drinkers.

While a significant difference does not exist between being overweight and describing one's self as overweight by drinking category, (see Figures 1 & 2), the behavior to control weight is significantly different between drinkers and non-drinkers. Males were more likely to be overweight or obese, by calculated BMI, compared to females, (see Figures 1 & 2) regardless of drinking category. Females, on the other hand, were more likely than males to describe themselves as overweight, despite reporting lower frequencies of being overweight or obese by BMI status. As seen in Figures 3 and 4, female drinkers have higher prevalence estimates of fasting, vomiting and laxative use compared to male drinkers, while the frequency of diet pill use was similar across drinking status and sex.

Prevalence of Weight Control Behavior by Alcohol Consumption among 9th-12th grade students- 2009 MiYRBS

	Non-Drinkers		Current Drinkers				Binge Drinkers					
	Male	Female	Male	Female	Male	Female	Male	Female				
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)		
Described Self as Overweight	24.4	(21.9-26.9)	30.7	(27.1-34.4)	24.8	(21.7-28.0)	32.6	(28.0-37.1)	23.6	(20.4-26.7)	30.4	(25.4-35.4)
Trying to Lose Weight	31.0	(27.6-34.3)	55.0	(51.3-58.7)	33.2	(29.0-37.3)	67.5	(62.7-72.3)	31.2	(26.4-35.9)	67.1	(61.8-72.4)
Exercising to Lose Weight	56.7	(53.9-59.5)	66.8	(63.4-70.1)	56.8	(51.9-61.8)	75.9	(71.8-78.0)	57.0	(51.9-62.2)	75.1	(69.7-80.6)
Physically Active ≥ 60 Minutes	55.3	(51.0-59.7)	42.1	(37.9-46.3)	56.1	(50.1-62.2)	40.3	(35.0-45.7)	53.4	(46.8-59.9)	38.5	(31.7-45.3)
Ate Less Food to Lose Weight	24.7	(20.5-28.9)	46.3	(42.2-50.4)	28.8	(24.2-33.4)	60.0	(55.1-64.8)	28.1	(24.0-32.3)	60.6	(54.3-66.9)
Fasting 24 Hours	5.1	(3.3-6.9)	10.0	(7.9-12.1)	10.3	(7.7-12.8)	24.3	(19.9-28.6)	10.4	(6.9-13.9)	26.9	(21.7-32.0)
Diet Pill Use	3.6	(2.5-4.6)	3.9	(2.3-5.5)	8.8	(5.9-11.7)	10.0	(7.8-12.2)	11.3	(7.9-14.8)	11.1	(7.6-14.7)
Vomiting/Laxative Use	2.5	(1.5-3.5)	4.3	(2.9-5.6)	5.9	(3.0-8.8)	12.3	(9.2-15.4)	7.7	(4.2-11.1)	13.9	(10.6-17.1)
Overweight (BMI)	14.7	(12.3-17.2)	13.3	(10.4-16.2)	15.5	(12.5-18.6)	12.6	(8.6-16.7)	16.4	(13.2-19.5)	12.6	(8.6-16.6)
Obese (BMI)	16.7	(14.2-19.2)	7.9	(6.1-9.7)	12.7	(9.3-16.0)	7.9	(6.1-9.7)	11.8	(9.1-14.4)	6.2	(3.9-8.6)

All **bolded values** indicate a significant difference of $p < 0.05$ (χ^2 test) compared to non-drinkers. "Overweight" defined as being at or above the 85th percentile but below 95th percentile for body mass index. "Obese" defined as being at or above the 95th percentile for body mass index.

*BMI= weight (lb) / [height (in)]² x 703

Weight Control Behavior of Current & Binge Drinking MI Youth (Cont.)

Overall, 2009 MiYRBS data demonstrate that current and binge drinkers are more likely to report unhealthy weight control behaviors and trying to lose weight compared to non-drinkers. Drinkers were more likely to report higher percentages of vomiting and/or laxative use, fasting and diet pill use than non-drinkers.

The data suggest that Michigan youth engaging in unhealthy weight control behaviors are at risk for inadequate dietary intakes. While the obesity epidemic continues to be an issue of concern, especially in adolescents, interventions aimed at preventing unhealthy weight control behaviors should include both educational and environmental components that also address alcohol use, social norms and perceptions.

Figure 1. Weight Control Behavior of Non-drinkers, Current & Binge Drinking Male Youth

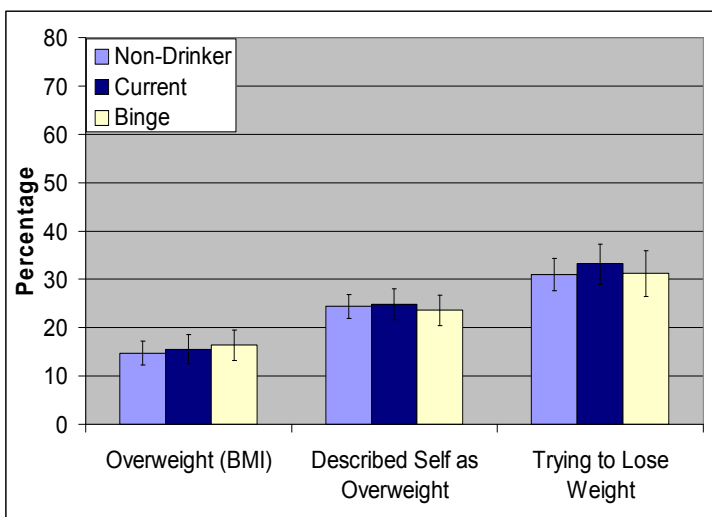


Figure 2. Weight Control Behavior of Non-drinkers, Current & Binge Drinking Female Youth

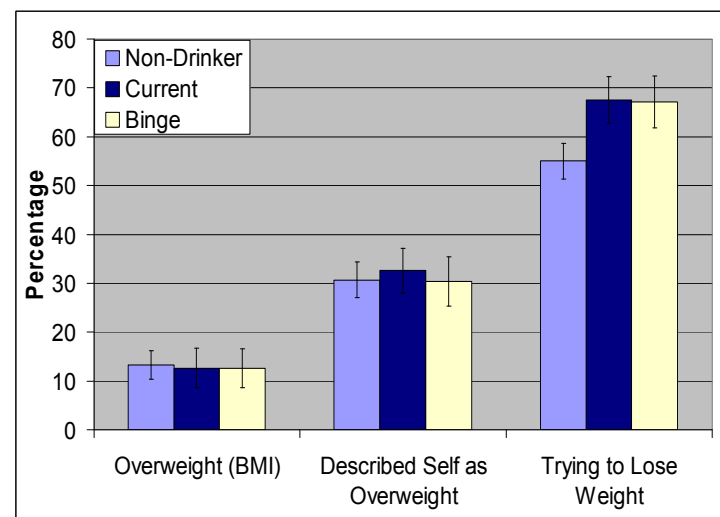


Figure 3. Weight Loss Behavior in Male Non-drinkers, Current & Binge Drinking Youth

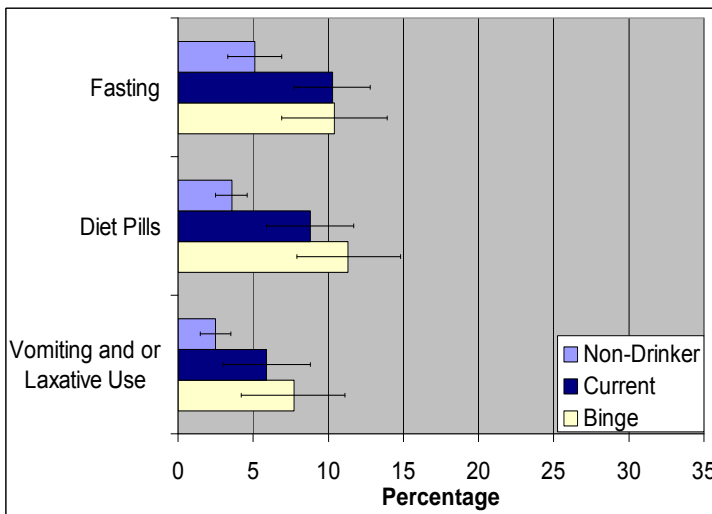
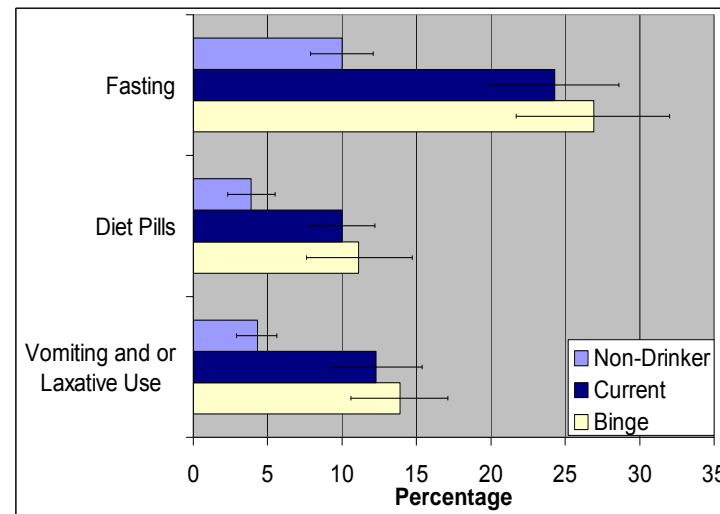


Figure 4. Weight Loss Behavior in Female Non-drinkers, Current & Binge Drinking Youth



The 2009 Michigan Youth Risk Behavioral Survey was designed by the Centers for Disease Control and Prevention for Michigan Department of Education and MDCH as part of the national Youth Risk Behavior Surveillance System (YRBSS). The MiYRBS was completed by 3,411 12- to 18-year old students in grades 9-12 in 43 public high schools in Michigan during the spring of 2009. The overall response rate in Michigan was 69% compared to the national overall response rate of 71%. Prevalence estimates are representative of all students in grades 9-12 attending public schools in the State of Michigan. For more information on the YRBS, <http://www.michigan.gov/yrbs>

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