

# 2009 Health and Risk Behaviors of Massachusetts Youth



February 2011

This document is available online at: [www.doe.mass.edu/cnp/hprograms/yrbs](http://www.doe.mass.edu/cnp/hprograms/yrbs) and [www.mass.gov/dph](http://www.mass.gov/dph)



The Commonwealth of Massachusetts  
MASSACHUSETTS DEPARTMENT OF ELEMENTARY AND  
SECONDARY EDUCATION  
MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH

DEVAL L. PATRICK  
GOVERNOR  
TIMOTHY P. MURRAY  
LIEUTENANT GOVERNOR

MITCHELL D. CHESTER  
COMMISSIONER, ESE  
JOHN AUERBACH  
COMMISSIONER, DPH

February 2011

Dear Colleagues, Parents, and Students:

The Massachusetts Departments of Elementary and Secondary Education and Public Health (ESE, DPH) are pleased to present the results of two coordinated surveys of Massachusetts adolescents, the 2009 Massachusetts Youth Risk Behavior Survey (ESE) and the Massachusetts Youth Health Survey (DPH). These two surveys were supported by funding from the Centers for Disease Control and Prevention (CDC) and administered in a random sample of 121 public secondary schools by the University of Massachusetts Center for Survey Research in the spring of 2009. Combining results from both surveys, *Health and Risk Behaviors of Massachusetts Youth, 2009* presents key indicators of the behavioral and health risks reported by middle school and high school youth.

*The Report* provides important information about behaviors and conditions that may compromise the health, safety, and wellbeing of young people across the Commonwealth. These behaviors include tobacco, alcohol, and other drug use; behaviors leading to injuries, such as drinking and driving, fighting, and suicide attempts; dietary behaviors and physical inactivity; and sexual behaviors that may lead to sexually transmitted disease or pregnancy. The report also discusses the prevalence of health-related conditions such as obesity, chronic disease, oral health problems, and mental health concerns among our youth.

Results presented here show continued improvements in many important areas, especially some indicators of substance use, including tobacco use, alcohol and drug use. These improvements attest to the success of efforts by schools, community programs, healthcare workers, and families to foster the healthy development of young people in Massachusetts. Even so, despite clear successes, there are still behaviors in which improvements have not been seen, most notably sexual risk behaviors, nutrition and physical activity, and areas that warrant continued concern and attention. Stronger efforts to address these problems and to promote the health of all young people remain a priority.

Thank you for your own continued commitment to improving the lives and health of youth in Massachusetts.

Sincerely,

Mitchell D. Chester  
Commissioner  
Department of Elementary  
and Secondary Education

John Auerbach  
Commissioner  
Department of Public Health

# TABLE OF CONTENTS

---

Acknowledgements .....	<i>i</i>
Executive Summary .....	1
Introduction.....	2
Demographics Table.....	3
Protective Factors.....	4
Alcohol Use.....	5
Tobacco Use.....	6
Marijuana Use.....	7
Other Illicit Drug Use.....	8
Substance Use at School.....	9
Dietary Behaviors.....	10
Physical Activity.....	11
Weight and Weight Control.....	12
Personal Safety.....	13
Violence-Related Behaviors and Experiences.....	14
Violence-Related Behaviors and Experiences at School.....	15
Mental Health and Learning Disabilities.....	16
Suicidality and Non-Suicidal Self-Inflicted Injury.....	17
Sexual Behaviors.....	18
Oral Health.....	19
Physical Disabilities and Chronic Conditions.....	20

# ACKNOWLEDGEMENTS

---

The joint administration of the Massachusetts Youth Risk Behavior Survey (MYRBS) and the Massachusetts Youth Health Survey (MYHS) was only successful through the collaborative efforts of the Massachusetts Departments of Elementary and Secondary Education (ESE) and Public Health (DPH), along with the University of Massachusetts' Center for Survey Research (CSR) and the Centers for Disease Control and Prevention (CDC). We would like to extend our thanks to the nearly 6,000 public high school students and nearly 3,000 public middle school students who participated in the 2009 MYRBS and MYHS. We would also like to thank the school principals, teachers, nurses and superintendents of the 52 high schools and 69 middle schools represented for welcoming us into their classrooms. Their commitment to the health of their students is apparent and commendable.

Chiniqua Milligan of the Coordinated School Health Program, Massachusetts Department of Elementary and Secondary Education, and Mark Paskowsky, Bureau of Substance Abuse Services, Massachusetts Department of Public Health, prepared the report, in collaboration with Carol Goodenow, Coordinated School Health Program (ESE) and Robert Leibowitz, Bureau of Community Health Access and Promotion (DPH). A special thanks to Anthony Roman, University of Massachusetts, Boston Center for Survey Research, and the many people at both departments who provided invaluable input and feedback.

Data collection for the Massachusetts Youth Risk Behavior Survey was supported through the CDC's Cooperative Agreement with the Massachusetts Department of Elementary and Secondary Education, 5U87DP001251. Data collection for the Massachusetts Youth Health Survey was supported through funding from the Massachusetts Department of Public Health.

Mitchell D. Chester, Commissioner  
Massachusetts Department of  
Elementary and Secondary Education  
75 Pleasant Street  
Malden, MA 02148-5023  
Phone: 781-338-3000  
TTY: 800-439-2370  
[www.doe.mass.edu](http://www.doe.mass.edu)

John Auerbach, Commissioner  
Massachusetts Department of  
Public Health  
250 Washington Street  
Boston, MA 02108-4619  
Phone: 617-624-6000  
TTY: 617-624-6001  
[www.mass.gov/dph](http://www.mass.gov/dph)

# Executive Summary

---

## INTRODUCTION

*Health and Risk Behaviors of Massachusetts Youth, 2009*, is the product of a collaborative effort between the Massachusetts Department of Elementary and Secondary Education (ESE) and Department of Public Health (DPH) to conduct two youth surveys in Massachusetts public secondary schools in the spring of 2009. Altogether, 8,514 students in 121 schools participated in the surveys. ESE's Massachusetts Youth Risk Behavior Survey measures high school risk behaviors over time. DPH's Youth Health Survey provides a snapshot of middle school student risk behaviors as well as other health status indicators in high school.

## SUMMARY OF KEY FINDINGS

### **Several adolescent risk behaviors, especially those related to substance use, have decreased since 2003.**

Compared to 2003, a lower percentage of high school students in 2009 were drinking alcohol before age 13 (25% vs. 17%), ever smoking cigarettes (53% vs. 43%) or using methamphetamines (6% vs. 3%) or having been offered, sold or given drugs on school property in the past year (32% vs. 26%). Also, fewer students reported ever having been diagnosed with a sexually transmitted disease (2% vs. 6%).

**A few behaviors have become worse in recent years.** From 2003 to 2009, past month smokeless tobacco use increased from 4% vs. 6%, and drinking the recommended 3 glasses of milk per day decreased (19% to 13%). From 2007 to 2009, fewer high school athletes reported using mouth guards (57% to 47%).

**Many risk behaviors begin in middle school.** It is clear that many young adolescents engage in risky behaviors well before they reach the 9<sup>th</sup> grade. In 2009, some middle school students reported ever smoking cigarettes (15%), ever drinking alcohol (28%), ever using marijuana (9%), or injuring themselves on purpose (15%). Middle school students were substantially more likely than high school students to report having been bullied in school in the past year (36% vs. 19%).

**Many important risk areas remain statistically unchanged since 2003.** Among high school students, there have been no significant changes in the percent reporting any lifetime sexual intercourse (currently 46%), condom use at last intercourse among sexually active youth (35%), or ever having been/getting someone pregnant (6%). Also unchanged are high school students' reports of being in a physical fight at school (9%), riding with a driver who had been drinking (27%), or making a suicide attempt in the past year (7%).

Given the current national emphasis on the threat of obesity, it is notable that indicators of nutrition, physical activity, and weight among Massachusetts youth have also not shown improvement since 2003. Currently, 27% of middle school students and 25% of high school students are either overweight or obese according to their own self-reported height and weight. At the high school level, only 14% ate the recommended 5 servings of fruits and vegetables and only 36% ate breakfast every day – two behaviors associated with lower levels of overweight. Further, only one third of middle school (33%) and high school (34%) students engaged in the recommended 60 minutes of moderate to vigorous physical activity on at least 5 days of the week. Only 58% of high school students attended physical education class in an average week.

**More students report factors that help to protect against risky behavior.** Factors such as academic achievement, close relationships with parents or caregivers, a belief that school staff are supportive, and involvement in community service have been recognized as potential protective factors among adolescents, associated with lower rates of risk behaviors. Compared to 2003, significantly more students in 2009 reported that they felt there was a teacher in their school they could talk to about a problem (64% vs. 71%) or there was a parent or adult family member they could talk to about things important to them (78% vs. 83%).

**Many students are dealing with chronic and long-term health conditions.** In 2009, students reported troubling rates of asthma (middle school 20%; high school 23%), diabetes (middle and high school 1%) long-term emotional problems or learning disabilities (middle school 10%; high school 15%), and physical disabilities or long-term health problems (middle school 12%; high school 8%).

# INTRODUCTION

---

## BACKGROUND

*Health and Risk Behaviors of Massachusetts Youth, 2009* summarizes findings from the 2009 administration of the Massachusetts Youth Risk Behavior Survey (MYRBS) and the Massachusetts Youth Health Survey (MYHS).

The MYRBS is conducted every two years by the Massachusetts Department of Elementary and Secondary Education (ESE) with funding from the United States Centers for Disease Control and Prevention (CDC). The survey monitors youth risk behaviors related to the leading causes of morbidity and mortality among adolescents. Since 1993, the MYRBS has surveyed public high school students from a scientifically selected random sample of schools across the Commonwealth.<sup>1</sup>

At various times during the past 20 years, the Massachusetts Department of Public Health (DPH) has conducted surveys of Massachusetts youth to assess health behaviors and other health indicators. DPH surveys students in middle and high schools (grades 6 through 12). In 2003, the Center for Survey Research of the University of Massachusetts-Boston (CSR) began working with DPH to update and administer the questionnaire, which was at that time named the Massachusetts Youth Health Survey (MYHS).

As both surveys are conducted within Massachusetts public schools and cover many of the same topics, in 2005 ESE and DPH began a collaborative effort to coordinate survey administration in order to decrease the burden placed on the schools and increase the school response rate. Working with CSR, the two agencies developed revised versions of the MYRBS and MYHS. A core set of questions is common to both surveys. First in 2007 and again in 2009, CSR administered both the MYRBS and the MYHS surveys and released a joint report on the findings.

## SAMPLE AND PARTICIPATION

For the high school surveys, MYRBS and MYHS, the CDC used a two-stage sampling method to produce representative samples of students in grades 9 – 12; all public schools with at least one of grades 9 through 12 were eligible to participate. In the first stage, schools were selected with a probability proportional to school enrollment size. In the second stage, classes of a required subject or required period were selected randomly.<sup>1</sup> Once classes were selected, half were randomly assigned to receive the MYRBS and half the MYHS. Trained survey administrators from CSR administered the surveys in the participating schools. Including both surveys, usable data were collected from 5,655 high school students in 52 schools. The overall response rates (i.e., the school response rate multiplied by the student response rate) were 67% for the MYHS and 65% for the MYRBS.

For the middle school survey (MYHS), CSR used similar scientific procedures to select a representative random sample of middle schools and classrooms within those schools. CSR staff administered the MYHS in selected schools and classes. Data were collected from 2,859 middle school students from grades 6 through 8 in 69 schools. The overall response rate was 56%.

## ANALYSIS AND STATISTICS PRESENTED

The statistics presented in this report are weighted (i.e., adjusted for nonresponse and distribution of students by grade, sex and race/ethnicity) in order to be representative of Massachusetts high school and middle school students as a whole. Since each of the surveys includes a scientifically selected sample of public school students, not a complete census, 95% confidence intervals provide a range of values that most likely contain the true percent estimates for the population.

Results reported for high school students are derived from the MYRBS, except for a few instances when the data are from the MYHS and are noted as such. In most instances, results from 2003, 2005, 2007, and 2009 administrations are shown for key variables. All middle school results presented in this report were derived from the MYHS. Many statistics reported in this report are displayed graphically; however, on occasion the text will provide further information. Group or year comparisons depicted graphically are presented for illustrative purposes only, and do not necessarily indicate a statistically significant difference. Statistically significant differences across indicators are designated in the graphs with an asterisk and discussed in the text. Estimates were considered statistically significant if the 95% confidence intervals surrounding the estimates did not overlap.

All data collected by the MYRBS and the MYHS are based on self-report from students. Self-reported data may be subject to error for several reasons, including inaccurate recall of events or answers to questions that reflect what students think survey administrators would want to hear.

---

<sup>1</sup> “Centers for Disease Control and Prevention: Methodology of the Youth Risk Behavior Surveillance System”, MMWR: September 2004, Vol. 53, NO. RR-12, Centers for Disease Control and Prevention, U.S. Dept. of Health and Human Services, Atlanta Ga. 30323.

## Demographics

**Figure 1: Demographic Characteristics of the 2009 MYHS and MYRBS Student Samples N (weighted %)**

	Middle School MYHS (n=2,859)	High School	
		MYHS (n=2,948)	MYRBS (n=2,707)
<b>Sex</b>			
Female	1,358 (48.5%)	1,423 (49.2%)	1,334 (49.1%)
Male	1,440 (51.5%)	1,468 (50.8%)	1,367 (50.9%)
Missing	61	57	4
<b>Grade</b>			
6 <sup>th</sup> grade	934 (32.8%)	--	--
7 <sup>th</sup> grade	948 (33.2%)	--	--
8 <sup>th</sup> grade	968 (33.9%)	--	--
9 <sup>th</sup> grade	--	797 (27.1%)	700 (27.1%)
10 <sup>th</sup> grade	--	734 (25.0%)	635 (24.9%)
11 <sup>th</sup> grade	--	720 (24.5%)	747 (24.5%)
12 <sup>th</sup> grade	--	686 (23.4%)	600 (23.2%)
Ungraded or Other	1 (<0.1%)	-	7 (0.3%)
Missing	8	11	16
<b>Race/Ethnicity<sup>a</sup></b>			
White (non-Hispanic)	1,978 (66.6%)	2,101 (72.8%)	1,713 (71.6%)
Black or African-American (non-Hispanic)	228 (6.2%)	250 (6.8%)	244 (8.6%)
Hispanic or Latino	385 (18.3%)	384 (14.5%)	442 (13.1%)
Asian or Pacific Islander	116 (3.9%)	98 (3.1%)	131 (3.6%)
Other or Multiple Ethnicity	88 (4.9%)	97 (2.9%)	116 (3.1%)
Missing	64	18	61

(a) Students were allowed to indicate multiple ethnic categories. If Hispanic/ Latino was indicated as an ethnic identification, whether alone or in combination with other ethnic categories, the student was categorized as Hispanic/Latino. The Other or Multiple Ethnicity category includes American Indian or Alaskan Natives and youth who indicated several ethnicities that did not include Hispanic/Latino.

# PROTECTIVE FACTORS

## HIGH SCHOOL STUDENTS

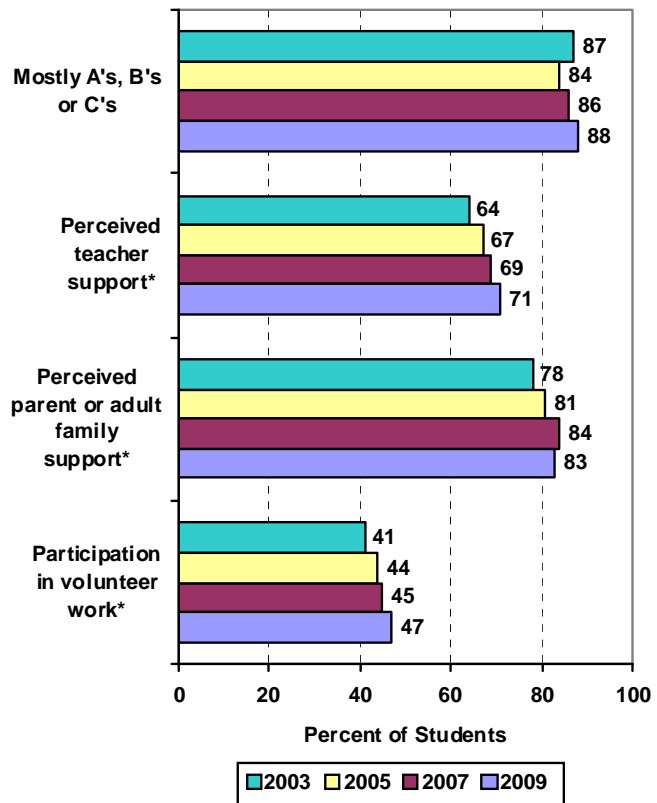
The 2009 Massachusetts Youth Risk Behavior Survey included several measures of potential protective factors among students. These included: (1) self-reported academic achievement, (2) perceived teacher or other adult support in school, (3) perceived parent or family support and (4) participation in volunteer work or community service.

Most students (88%) reported receiving mostly A's, B's, or C's for grades in the past year.

Since 2003, there have been significant increases in the percentage of students reporting that there was at least one teacher or adult in their school they could talk to if they had a problem, that they could talk to their parents about issues important to them, and that they participated in volunteer work.

Female students were significantly more likely than males to receive A's, B's or C's (91% vs. 85%), but males and females were similar with regard to other protective factors.

**Figure 2: Protective Factors Reported by High School Students, 2003-2009**



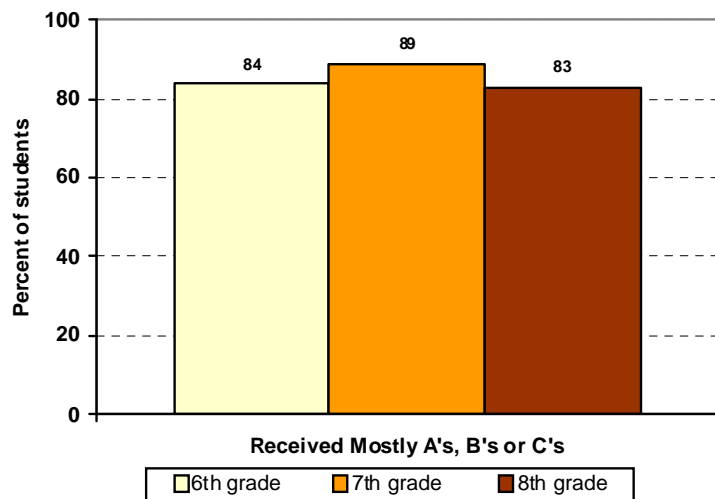
Data source: MYRBS 2003-2009

## MIDDLE SCHOOL STUDENTS

The 2009 Massachusetts Youth Health Survey for middle school students included one measure for a potential protective factor: self-reported academic achievement. Academic achievement is considered as having received mostly A's, B's, or C's for grades in the past year.

Most students (85%) reported receiving mostly A's, B's, or C's for grades in the past year. The remaining students reported they received D's or F's, were not sure what grades they received, or received other grades.

**Figure 3: Academic Achievement Across MA Middle School Grades, 2009**



Data source: MYHS

\*Statistically significant difference comparing 2003 and 2009 \*\* Some charts use an abbreviated scale of less than 100% to increase readability

# ALCOHOL USE

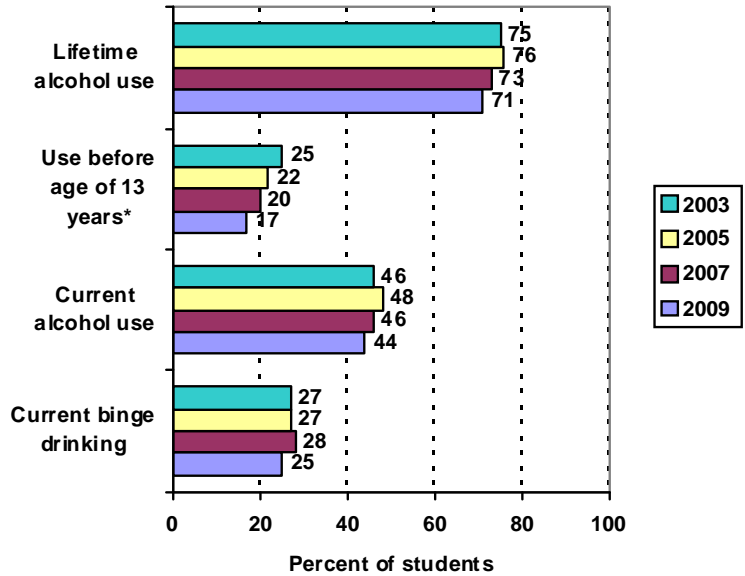
## HIGH SCHOOL STUDENTS

The percentage of students who report having their first alcoholic drink, other than a few sips, before the age of 13 years decreased significantly from 25% in 2003 to 17% in 2009.

A significantly larger percentage of males reported having their first drink of alcohol before the age of 13 compared to females (18% vs. 14%).

Forty-four percent (44%) of students reported having an alcoholic beverage in the previous 30 days (current use). One quarter (25%) of high school students reported binge drinking (having five or more drinks of alcohol in a row within a couple of hours) in the previous 30 days.

**Figure 4: Alcohol Use Among High School Students, 2003-2009**



Data source: MYRBS 2003-2009

## MIDDLE SCHOOL STUDENTS

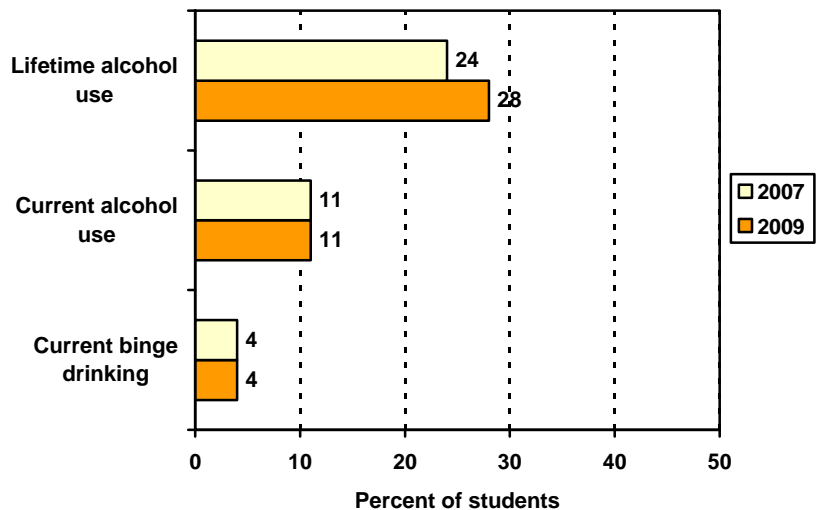
The percent of middle school students who reported ever having at least one drink of alcohol in their lifetime (lifetime use) was 28% in 2009.

The percent of middle school students who used alcohol within the past 30 days was the same in 2007 (11%) as 2009 (11%).

Binge drinking within the past 30 days was reported by 4% of middle school students in 2007 and 2009.

Alcohol use indicators show an increase as grade level increases. In 2009, lifetime use of alcohol was 18% for 6<sup>th</sup> graders and 39% for 8<sup>th</sup> graders. Current use of alcohol was 5% in 6<sup>th</sup> grade and 18% in 8<sup>th</sup> grade. Current binge drinking was 2% for 6<sup>th</sup> graders and 6% for 8<sup>th</sup> graders.

**Figure 5: Alcohol Use Among Middle School Students, 2007-2009**



Data source: MYHS

# TOBACCO USE

## HIGH SCHOOL STUDENTS

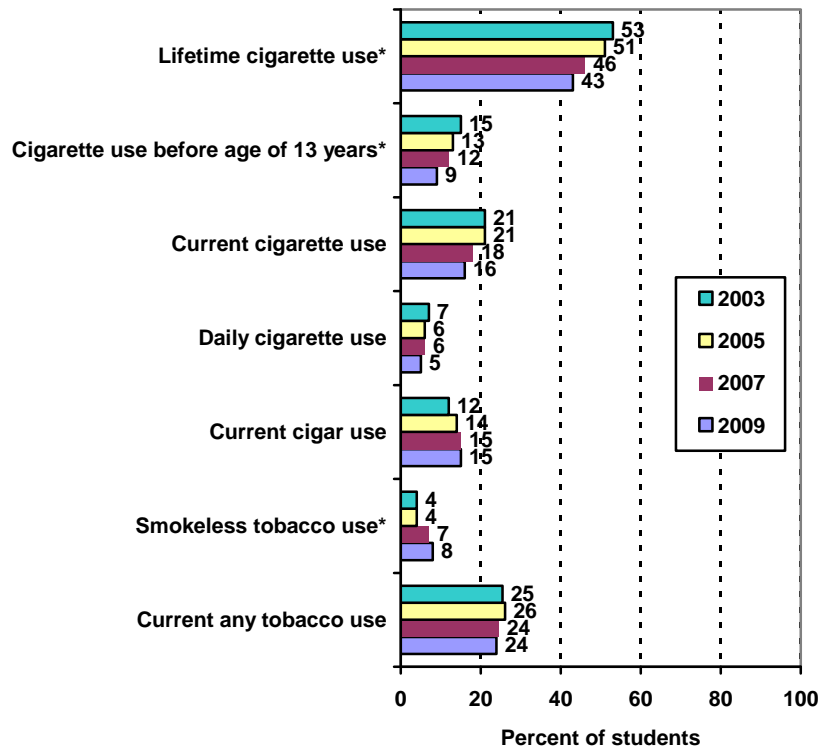
Indicators of cigarette smoking have significantly declined among Massachusetts high school students since 2003. However, the prevalence of smokeless tobacco use has risen.

Fifteen percent (15%) of high school students reported smoking cigars, cigarillos, or little cigars during the previous 30 days. A significantly greater proportion of males (22%) reported this behavior in comparison to females (8%).

Overall, 8% of high school students reported smokeless tobacco use (chewing tobacco, snuff, or dip) in the past 30 days, a rate double that reported in 2003 (4%). Males were seven times more likely to report this behavior than females (14% vs. 2%).

Male students were significantly more likely than female students to have ever smoked cigarettes (46% vs. 41%), smoked in the past month (18% vs. 14%) or used smokeless tobacco in the past month (14% vs. 2%).

**Figure 6: Tobacco Use Among High School Students, 2003-2009**



Data source: MYRBS 2003-2009

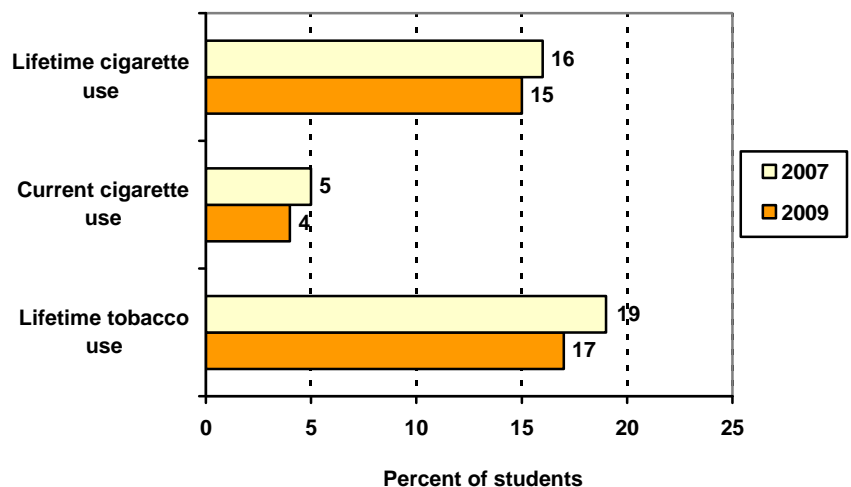
## MIDDLE SCHOOL STUDENTS

Among Massachusetts middle school students, the percentage of students in 2009 who reported ever trying a cigarette (lifetime use) was 15%. This was not statistically different from 2007 (16%). Lifetime use of cigarettes increases over the middle school grades, from 8% in 6<sup>th</sup> grade to 14% in 7<sup>th</sup> grade and 22% in 8<sup>th</sup> grade.

The percentage of middle school students who smoked cigarettes in the past 30 days (current cigarette use) was 4% in 2009 and 5% in 2007.

Seventeen percent (17%) of middle school students have tried using a tobacco product including cigarettes, smokeless, or cigars. Lifetime use of tobacco increases with grade level (9% in 6<sup>th</sup> grade, 16% in 7<sup>th</sup> grade, and 25% in 8<sup>th</sup> grade).

**Figure 7: Cigarette Smoking Among Middle School Students, 2007-2009**



Data source: MYHS

\*Statistically significant difference comparing 2003 and 2009 \*\* Some charts use an abbreviated scale of less than 100% to increase readability

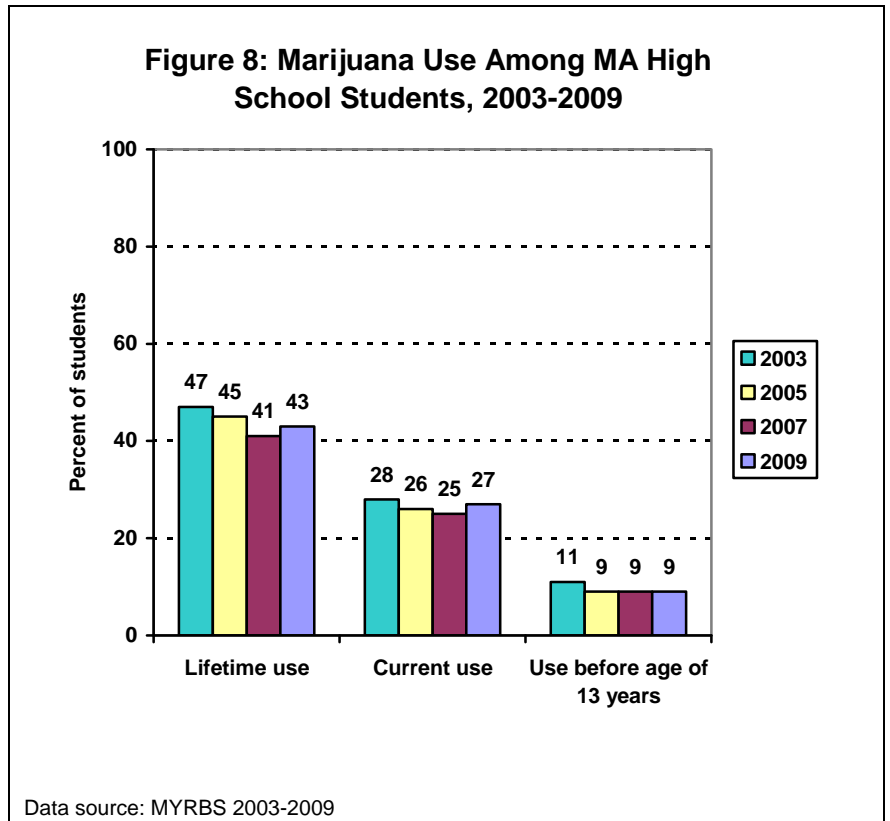
# MARIJUANA USE

## HIGH SCHOOL STUDENTS

In 2009, forty-three percent (43%) of all high school students reported having ever used marijuana in their lifetime. Around a quarter (27%) used in the past 30 days, and nine percent (9%) of students reported having used marijuana before the age of 13.

Male students were more likely than female students to report marijuana before age 13 (12% vs. 6%), lifetime use (46% vs. 38%), and current use (31% vs. 23%).

Less than half (46%) of high school students reported that they believe smoking marijuana occasionally would be a moderate or great risk to their health (MYHS 2009).

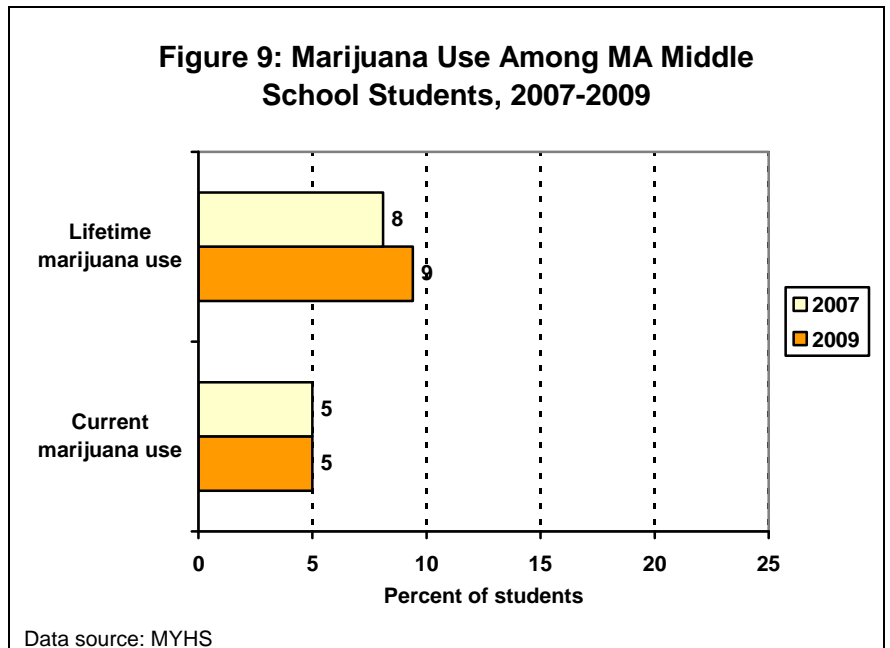


## MIDDLE SCHOOL STUDENTS

In 2009, 9% of middle school students reported having used marijuana at least once in their lives, where the mean age of first use was 12 years. Five percent (5%) of respondents reported current use of marijuana in 2009, the same percentage as 2007.

Reported lifetime marijuana use among middle school students increases by grade level (4% in 6<sup>th</sup> grade, 7% in 7<sup>th</sup> grade, and 16% in 8<sup>th</sup> grade). Current use of marijuana also increases by grade level (2% in 6<sup>th</sup> grade, 3% in 7<sup>th</sup> grade, and 8% in 8<sup>th</sup> grade).

Seventy-nine percent (79%) of middle school students thought smoking marijuana occasionally would be a moderate or great risk to their health.



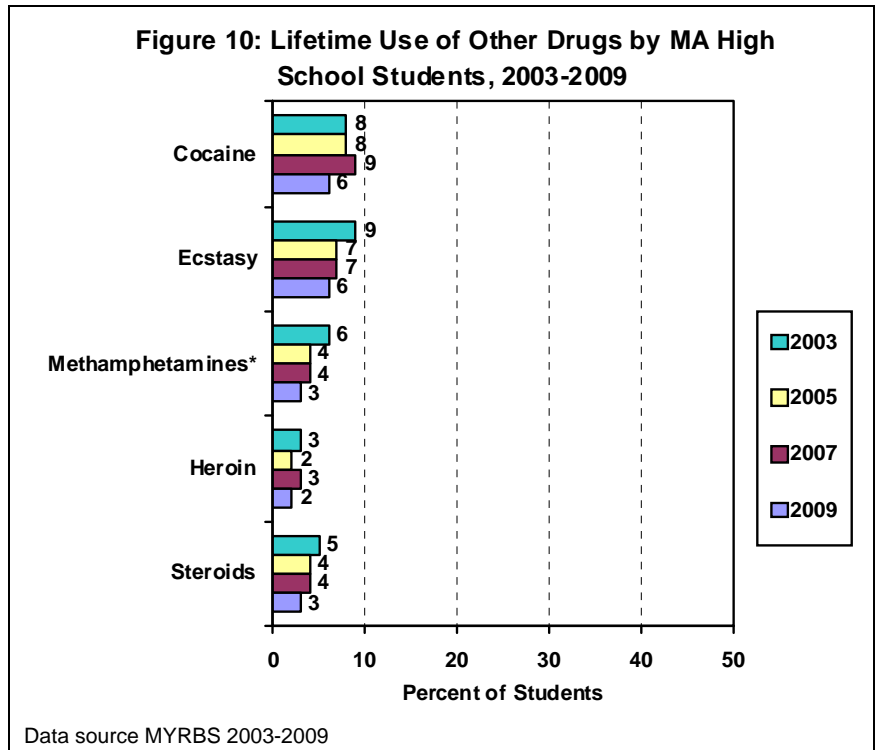
# OTHER ILLICIT DRUG USE

## HIGH SCHOOL STUDENTS

Since 2003, there has been a significant decrease in the percentage of students who reported lifetime methamphetamine use. Male students were more likely than female students to report lifetime methamphetamine use (4% vs. 2%) and lifetime steroid use (5% vs. 3%).

In 2009, 15% of high school students reported ever taking a prescription drug that was not their own. Six percent (6%) reported taking it during the previous 30 days. (MYHS 2009, data not shown)

Two percent (2%) of students have used a needle to inject illegal drugs.

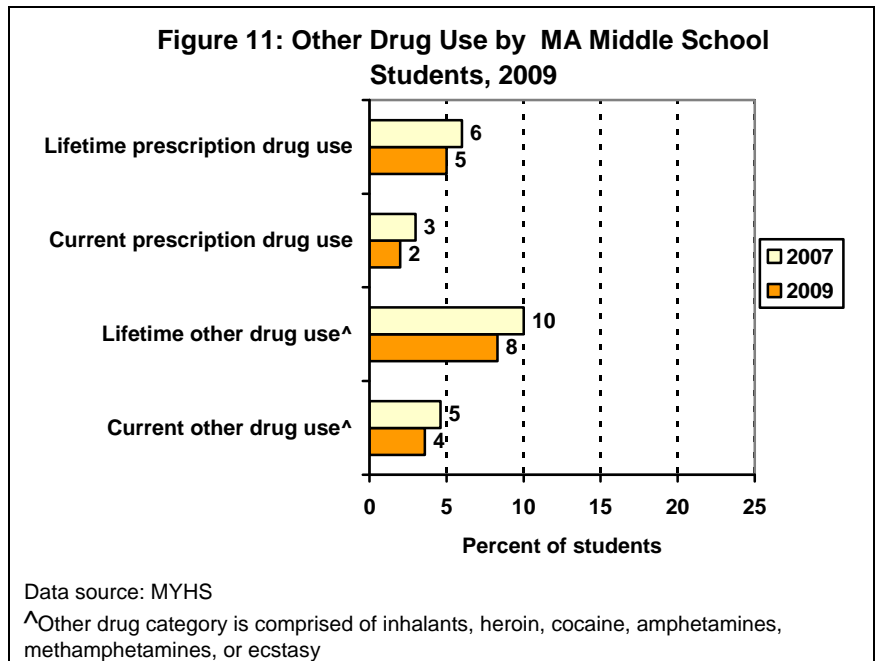


## MIDDLE SCHOOL STUDENTS

Five percent (5%) of middle school students reported lifetime use of prescription drugs that were not their own while two percent (2%) reported current use. A greater proportion of females than males reported ever taking prescription drugs that were not their own (7% vs. 3%).

In both 2007 and 2009, 3% of middle school students reported taking over-the-counter medicine to get high (during their lifetime).

The other drug category includes inhalants, heroin, cocaine, amphetamines, methamphetamines, and ecstasy. In 2009, 4% of students reported using these drugs in the past 30 days.



\*Statistically significant difference comparing 2003 and 2009 \*\* Some charts use an abbreviated scale of less than 100% to increase readability

# SUBSTANCE USE AT SCHOOL<sup>1</sup>

## HIGH SCHOOL STUDENTS

The 2009 Massachusetts Youth Risk Behavior Survey included several measures of substance use on school property. These included alcohol, cigarette and marijuana use in the previous 30 days and having been offered, sold or given drugs in the previous year.

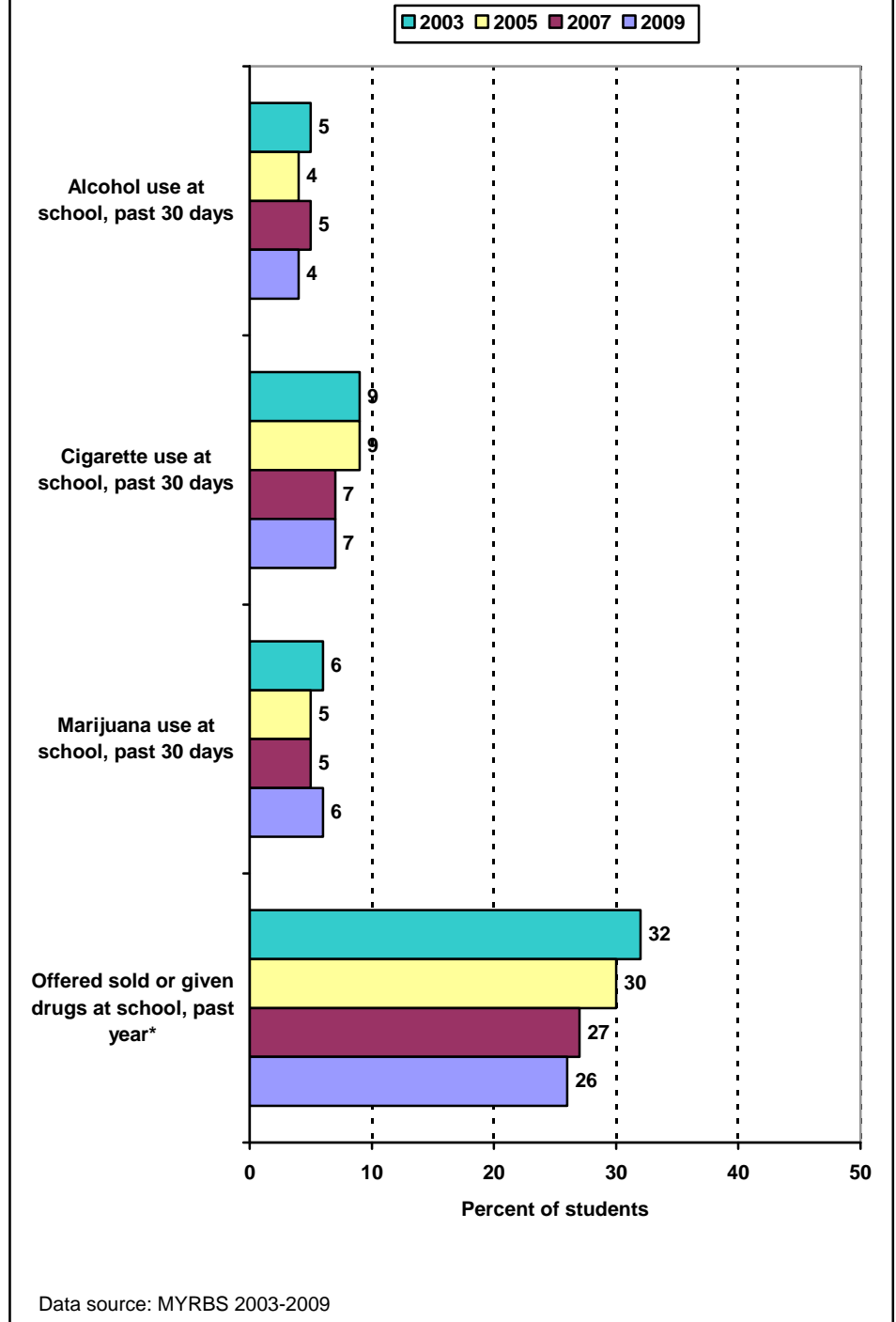
Overall, 4% of students reported having at least one drink of alcohol on school property on one or more of the past 30 days. A larger proportion of males than females reported this (5% and 3% respectively).

Seven percent (7%) of all students - 42% of all current smokers - reported smoking cigarettes on school property on one or more of the past 30 days.

Six percent (6%) of students reported using marijuana on school property in the past 30 days. Male students were more than twice as likely as female students to have used marijuana on school property in the previous 30 days (8% vs. 3%).

Twenty-six percent (26%) of high school students reported being offered, sold, or given an illegal drug by someone on school property during the previous 12 months, a significant decline since 2003. A significantly larger percentage of males reported this experience than females (31% and 22% respectively).

**Figure 12: Substance Use On School Property Among MA High School Students, 2003-2009**



9 <sup>1</sup> (Note: Questions regarding substance use at school only appear on the Massachusetts Youth Risk Behavior Survey and therefore are only asked of high school students.)

\* Statistically significant difference found comparing 2003 to 2009 \*\* Some charts use an abbreviated scale of less than 100% to increase readability

# DIETARY BEHAVIORS

## HIGH SCHOOL STUDENTS

Fourteen percent (14%) of high school students reported consuming the recommended five or more servings of fruit and vegetables per day.

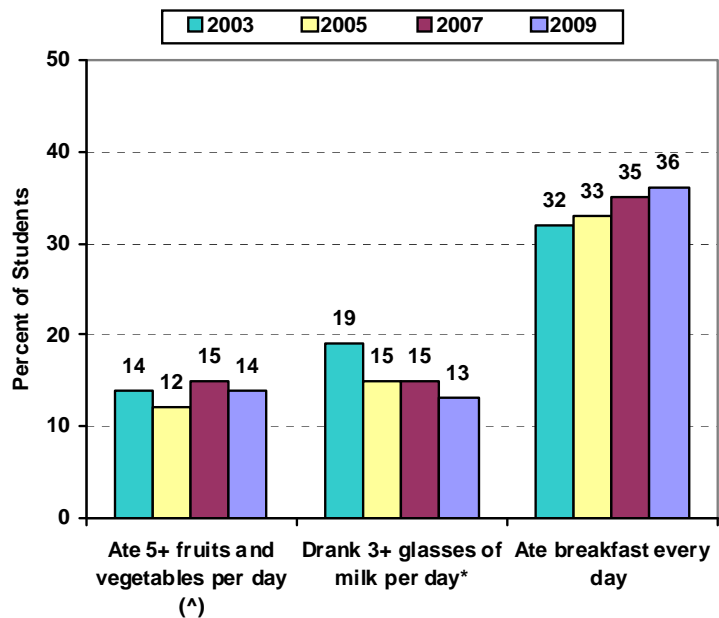
Only 13% of students drank the recommended three glasses of milk per day, a significant decrease since 2003. Males were twice as likely as females to drink three or more glasses of milk (18% vs. 9%, respectively).

Thirty-six percent (36%) of high school students reported eating breakfast every day in the week before the survey; 14% did not eat breakfast on any of the past seven days.

One fifth (21%) of students said that they drank non-diet soda one or more times per day during the past seven days. Male students (26%) were more likely than female students (16%) to drink soda every day.

Most high school students (78%) reported that they had been taught in school how to choose healthy foods and eat a balanced, nutritious diet.

**Figure 13: Food Consumption of High School Students, 2003- 2009**



Data source: MYRBS 2003-2009  
^Percentages reflect a change in variable calculation in 2007

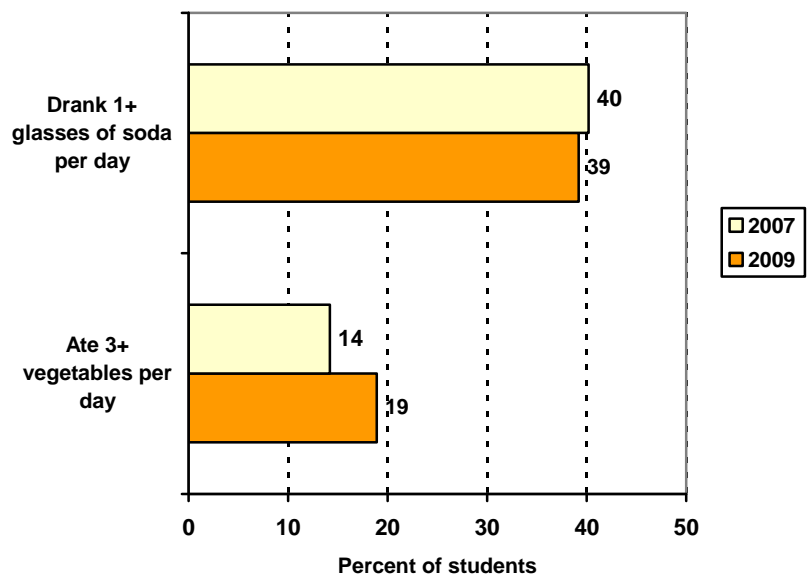
## MIDDLE SCHOOL STUDENTS

In 2009, thirty-nine percent (39%) of middle school students reported drinking one or more glasses of non-diet soda on the day preceding the survey (40% in 2007). Though consumption of non-diet soda was the same across grades, 42% of males reported this behavior compared with 36% of females.

In 2009, nineteen percent (19%) of middle school students reported consuming three or more servings of vegetables the day before the survey.

Approximately one in four middle school students (24%) reported eating no vegetables during the previous day. Males and females reported eating similar quantities of vegetables per day.

**Figure 14: Dietary Behaviors of Middle School Students, 2009**



Data source: MYHS

\*Statistically significant difference found comparing 2003 to 2009 \*\* Some charts use an abbreviated scale of less than 100% to increase readability

# PHYSICAL ACTIVITY

## HIGH SCHOOL STUDENTS

Fifty-eight percent (58%) of high school students reported attending physical education classes on one or more days in an average week. Approximately one in five (18%) attended 5 days per week and one in ten (10%) attended once a week.

Nearly six in ten students (59%) played on a sports team in the past year.

In 2009, 30% of students reported three or more hours per day of watching television and 30% reported 3 or more hours of non-school related video game and/or computer usage.

Thirty-four percent (34%) of students reported that they were physically active for a total of at least 60 minutes per day on five or more of the past seven days (recommended amount of physical activity).

Male students were more likely than female students to report the recommended amount of physical activity (41% vs. 26%).

Sixty-three percent (63%) of high school students reported aerobic activity of at least 20 minutes on three or more in the past seven days.

In 2009, 65% of students reported having been taught in school how to follow a personal fitness plan which included setting personal fitness goals for themselves and keeping track of their progress.

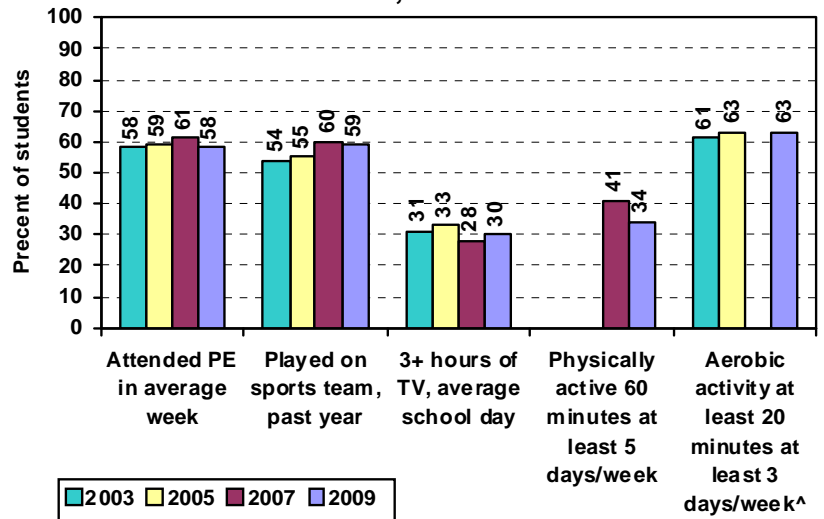
## MIDDLE SCHOOL STUDENTS

In 2009, thirty-three percent (33%) of middle school students reported that they were physically active for at least 60 minutes per day on five or more of the past seven days (recommended amount of physical activity).

Seventy-five percent (75%) of middle school students reported aerobic activity of at least 20 minutes three or more of the past seven days.

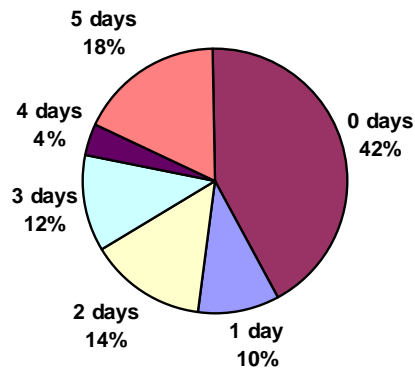
Forty-two percent (42%) of middle school students reported walking, biking, rollerblading, or skateboarding to school on at least one of the past 5 days. Twenty-five percent (25%) reported these transportation modes to school for all of the past 5 days.

**Figure 15: Physical Activity of High School Students, 2003-2009**



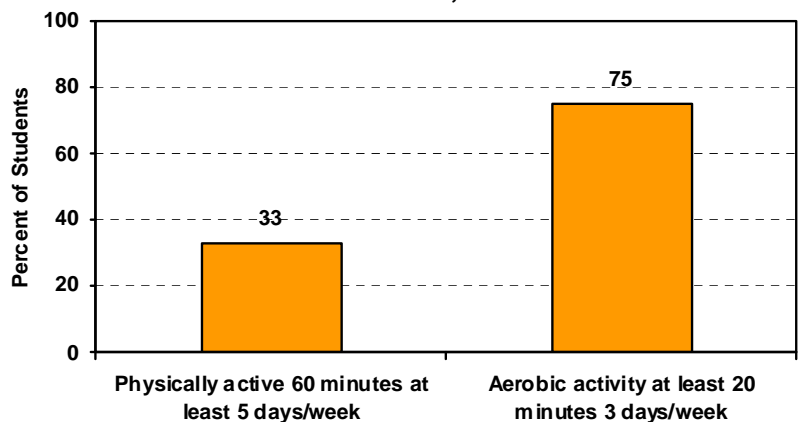
Data source: MYRBS 2003-2009 ^ Not asked in 2007

**Figure 16: Number of Days Per Week High School Students Attended PE Classes**



Data source: MYRBS 20

**Figure 17: Physical Activity of Middle School Students, 2009**



Data source: MYHS

# WEIGHT AND WEIGHT CONTROL

## HIGH SCHOOL STUDENTS

According to their Body Mass Index, calculated on the basis of self-reported height and weight, 14% of students were overweight (i.e., greater than or equal to 85th percentile but less than 95th percentile for body mass index, by age and sex, based on reference data) and 11% were obese (i.e., greater than or equal to 95th percentile for body mass index, by age and sex, based on reference data).

Male students were more likely than female students to be overweight or obese (28% vs. 22%, respectively); however, they were less likely to perceive themselves as overweight (25% vs. 33%) and less likely to report that they were trying to lose weight (31% vs. 60%).

Nearly one half of all students (45%) reported that they were trying to lose weight.

Fifty-nine percent (59%) of students reported exercising and 39% of students reported eating less, consuming fewer calories or eating lower fat foods to lose or to keep from gaining weight during the past 30 days.

Some students reported using unhealthy methods to control their weight. For example, 8% reported trying to control their weight by fasting or going without eating for 24 hours or more, a significant decrease since 2003 (12%), and 5% indicated that they used diet pills, powders, or liquids without a doctor's prescription to try to control their weight, also a significant decrease from 2003 (7%).

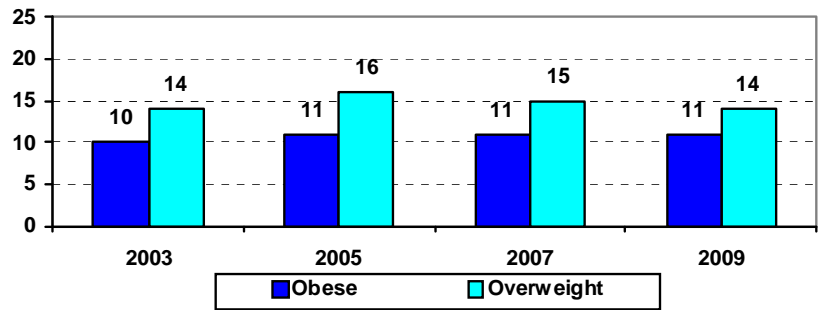
## MIDDLE SCHOOL STUDENTS

In 2009, seventeen percent (17%) of middle school students were overweight, based on self-reported height and weight, compared to 18% in 2007. Ten percent (10%) of middle school students were obese in 2009 compared to 11% in 2007.

One-quarter (24%) of middle school students perceived themselves to be slightly or very overweight.

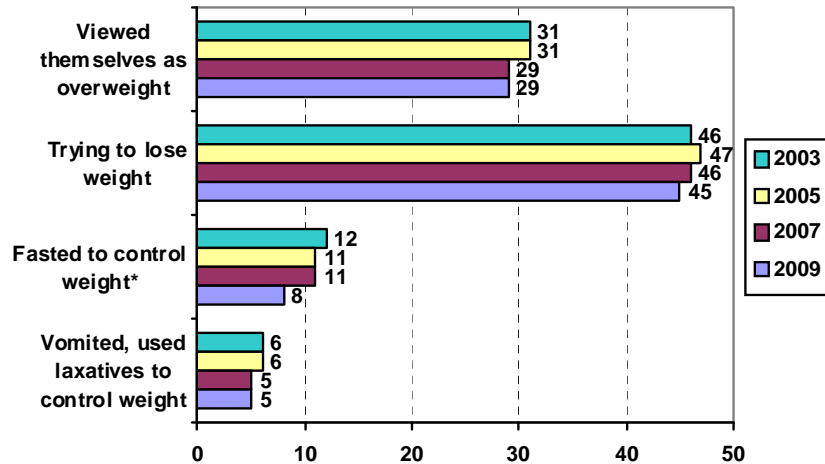
As with high school students, more middle school boys were overweight or obese than girls (30% vs. 25%). However, they were no more likely than girls to perceive themselves as slightly or very overweight (24% vs. 24%).

Figure 18: High School Students Who Are Overweight or Obese, 2003-2009



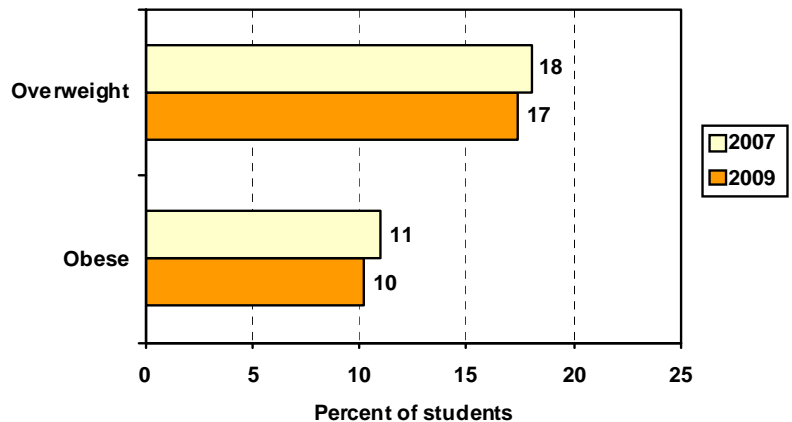
Data source: MYRBS 2003-2009

Figure 19: Weight Perception and Weight Control Among High School Students, 2003-2009



Data Source: MYRBS 2003-2009

Figure 20: Middle School Students Who Are Overweight or Obese, 2007 - 2009



Data source: MYHS

\* Statistically significant difference comparing 2003 and 2009 \*\* Some charts use an abbreviated scale of less than 100% to increase readability

# PERSONAL SAFETY

## HIGH SCHOOL STUDENTS

In 2009, 27% of students reported riding with a driver who had been drinking alcohol, 9% reported driving after drinking in the past 30 days themselves, and 14% reported never or rarely wearing a seat belt (minimal use) while a passenger in a car.

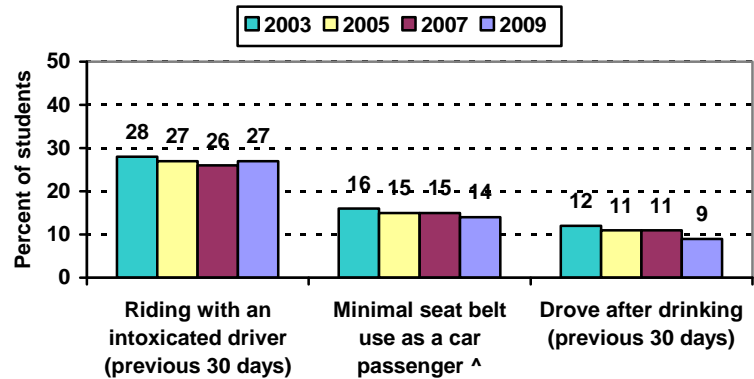
Male students were more likely than female students to report minimal seatbelt use, 17% vs. 11% respectively.

About half (49%) of high school students reported having a paying job in the previous 12 months. Among these students, 4% reported being injured at a paid job badly enough to seek care from a medical professional during the previous year. (MYHS 2009)

A significantly greater percentage of males reported being injured at a job than females (5% vs. 3%).

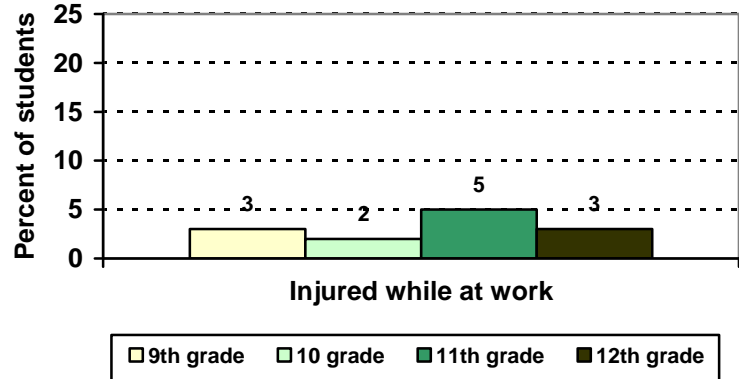
Of the high school students who reported having played on a sports team in the past year, 18% reported having suffered a blow or jolt to the head while playing (MYHS 2009).

**Figure 21: Motor Vehicle Safety Among MA High School Students, 2003-2009**



Data source: MYRBS 2003-2009  
^never or rarely using a seat belt

**Figure 22: On-the-Job Injuries Across MA High School Grades, 2009**



Data source: MYHS 2009

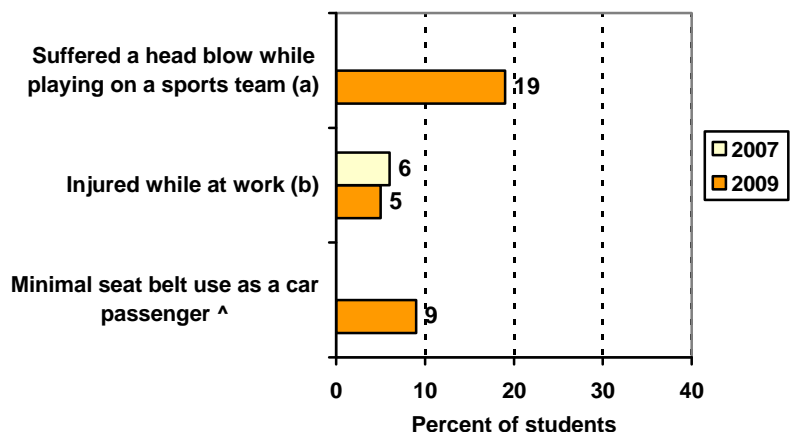
## MIDDLE SCHOOL STUDENTS

Of the middle school students who reported having played on a sports team in the past year, 19% reported having suffered a blow or jolt to the head while playing.

In 2009, 18% of middle school students reported having a paid job other than babysitting or yard work during the previous year. Of these students, approximately 5% reported being injured at a paid job badly enough to seek medical care.

Nine percent (9%) reported minimal seat belt use (reported never or rarely wearing a seatbelt) while a passenger in a car.

**Figure 23: Personal Safety Among MA Middle School Students, 2007-2009**



Data source: MYHS  
^never or rarely using a seat belt;  
(a) of students who played on sports teams, (b) of students who had a job

# VIOLENCE-RELATED BEHAVIORS AND EXPERIENCES

## HIGH SCHOOL STUDENTS

Twenty-nine percent (29%) of high school students reported having been in a fight in the past year, and 3% reported having been in a fight in the past year in which they were injured and needed to be treated by a doctor or nurse.

Significantly more male than female high school students reported carrying a weapon in the previous thirty days (20% vs. 5%), carrying a gun in the past 30 days (6% vs. 0.9%), being involved in a fight in the past year (37% vs. 21%) and being a member of a gang in the past year (9% vs. 4%).

Female students were more likely than male students to report experiencing sexual contact against their will (16% vs. 7%).

Overall, 11% of students reported being physically hurt by a date (e.g., being shoved, slapped, hit, or forced into sexual activity), with female students more likely than males to report this experience (15% vs. 8%).

Some forms of violence-related behavior decrease with grade level, as shown in Figure 25. Ninth grade students had higher rates of being bullied (30%) than students in other grades.

Combining all grades, 12% of high school students reported that they had initiated a fight in the previous 12 months and 15% reported bullying someone else in that period. The percent of boys who reported bullying others was twice that of girls (20% vs. 10%). (MYHS 2009)

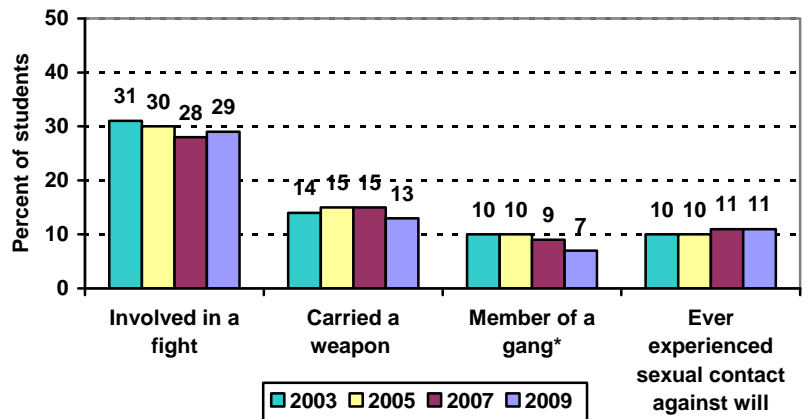
## MIDDLE SCHOOL STUDENTS

Overall, 10% of middle school students reported being physically hurt by a family member and 11% reported witnessing violence in their family in the previous 12 months. Sixty-four percent (64%) reported they had gone out on a date at some point. Of these, 8% reported they had been hurt physically by a date.

Approximately 17% of middle school students admitted to bullying or pushing someone around during the previous 12 months compared to 14% in 2007.

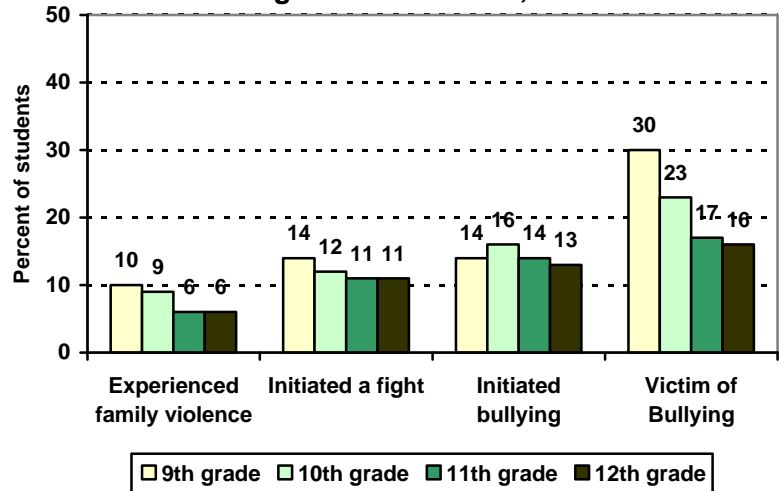
More male than female middle school students reported initiating a physical fight (16% vs. 9%). The percentage of boys and girls initiating bullying was not significantly different (19% vs. 15%).

**Figure 24: Physical Violence Indicators Among MA High School Students, 2003-2009**



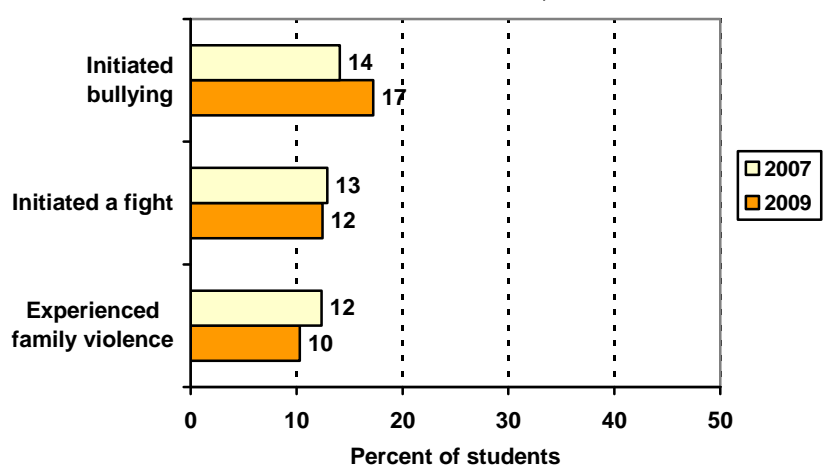
Data source: MYRBS 2003 - 2009

**Figure 25: Physical Violence Indicators Across MA High School Grades, 2009**



Data source: MYHS 2009

**Figure 26: Physical Violence Among MA Middle School Students, 2007-2009**



Data source: MYHS

\*Statistically significant difference found comparing 2003 and 2009 \*\* Some charts use an abbreviated scale of less than 100% to increase readability

# VIOLENCE-RELATED BEHAVIORS AND EXPERIENCES AT SCHOOL

## HIGH SCHOOL STUDENTS

In 2009, 4% of students skipped school at least once in the 30 days before the survey because they felt unsafe either at school or on their way to or from school.

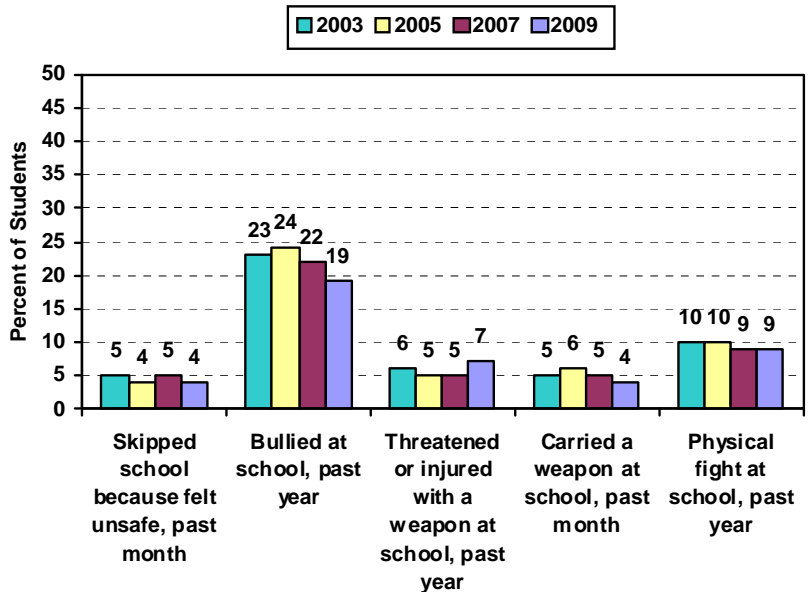
Nineteen percent (19%) of students reported being bullied at school in the past year. Being bullied included being repeatedly teased, threatened, hit, kicked, shunned, or excluded by another student or group of students.

Male students were more than two times more likely than female students (10% vs. 4%) to report having been threatened or injured with a weapon at school in the past year.

Four percent (4%) of all students carried a weapon on school property in the 30 days before the survey. Male students were over three times more likely than female students to report carrying a weapon on school property (7% vs. 2%).

Fighting on school property was significantly more common among male students (12%, compared to 6% of females). Overall, 9% of students were in a fight on school property in the 12 months before the survey.

**Figure 27: Violence-Related Experiences and Behaviors at School Among High School Students, 2003-2009**



Data source: MYRBS

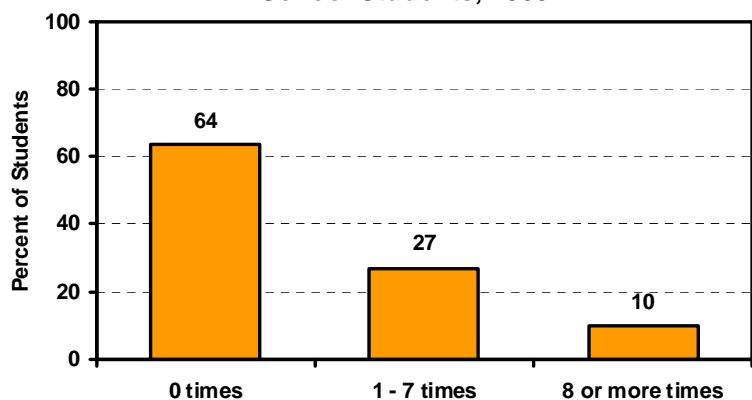
## MIDDLE SCHOOL STUDENTS

Thirty-seven (37%) of middle school students reported being bullied at school within the past year.

Ten percent (10%) reported they were bullied frequently (8 or more times in the past year), and 64% reported that they were not bullied at all.

Forty percent (40%) of female students and thirty-three percent (33%) of males reported being bullied within the past year. By grade level, the percentage of students being bullied was not significantly different (38% of 6<sup>th</sup> graders, 38% of 7<sup>th</sup> graders, and 34% of 8<sup>th</sup> graders).

**Figure 28: Bullied at School Among Middle School Students, 2009**



Data source: MYHS

Note: Figures don't add up to 100 percent due to rounding.

# MENTAL HEALTH

## HIGH SCHOOL STUDENTS

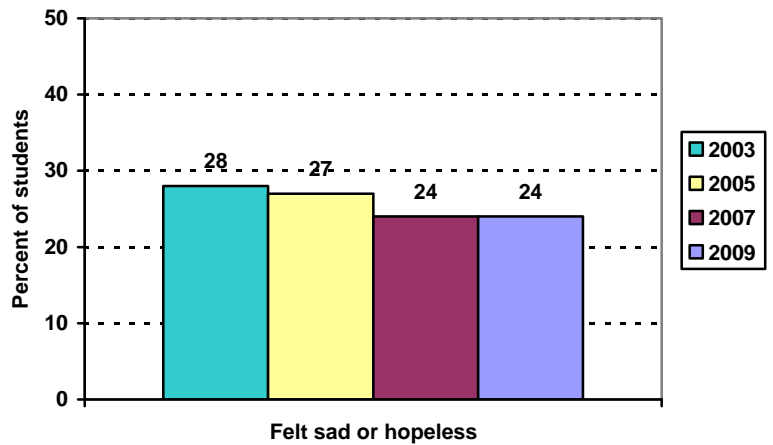
Overall, 24% of high school students reported feeling so sad or hopeless daily for at least two weeks during the previous year that they discontinued their usual activities. In 2009, a significantly larger percentage of females than males reported feeling this way (29% vs. 19%).

In 2009, 50% of high school students reported that in the previous 12 months they had felt the need to talk to someone other than a family member regarding their feelings and/or current issues in their lives. Significantly more females than males reported feeling this way (62% vs. 39%) (MYHS 2009).

Students reported seeking counsel within the past 12 months from a school psychologist or counselor (10%), school nurse (3%), therapist not in school (8%), case worker (1%), youth worker (3%), or religious leader (3%) (MYHS 2009).

Fifteen percent (15%) of students reported having a long-term emotional problem or learning disability. (Long-term was defined as 6 or more months, MYHS 2009).

**Figure 29: Percent of MA High School Students Who Stopped Usual Activities Because of Feeling Sad or Hopeless for 2+ Weeks, 2003-2009**



Data source: MYRBS 2003-2009

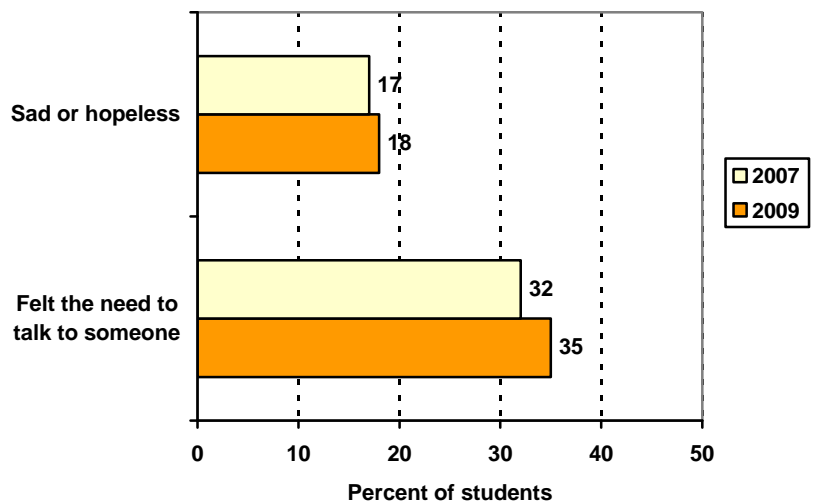
## MIDDLE SCHOOL STUDENTS

Overall, 18% of middle school students in 2009 reported feeling so sad or hopeless daily for at least two weeks that they discontinued their usual activities. In 2009, 35% reported that during the past year they felt a need to talk to someone other than a family member.

A significantly greater proportion of girls compared with boys reported feeling hopeless (22% vs. 14%) and of feeling the need to talk to an adult outside their family (45% vs. 25%).

Middle school students reported seeking counsel within the past 12 months from a school psychologist or counselor (8%), school nurse (3%), therapist not in school (5%), case worker (1%), youth worker (3%), and religious leader (3%).

**Figure 30: Mental Health Indicators Among MA Middle School Students, 2007-2009**



Data source: MYHS 2009

Ten percent (10%) of middle school students reported having a long-term emotional problem or learning disability.

\*\* Some charts use an abbreviated scale of less than 100% to increase readability

# SUICIDALITY AND NON-SUICIDAL SELF-INFLICTED INJURY

## HIGH SCHOOL STUDENTS

The prevalence of suicidality, (i.e., suicidal thoughts and behaviors) among youth, as well as non-suicidal self-injury (e.g., cutting, burning or otherwise hurting oneself on purpose without the intent to die), are indicators of the mental health of this population.

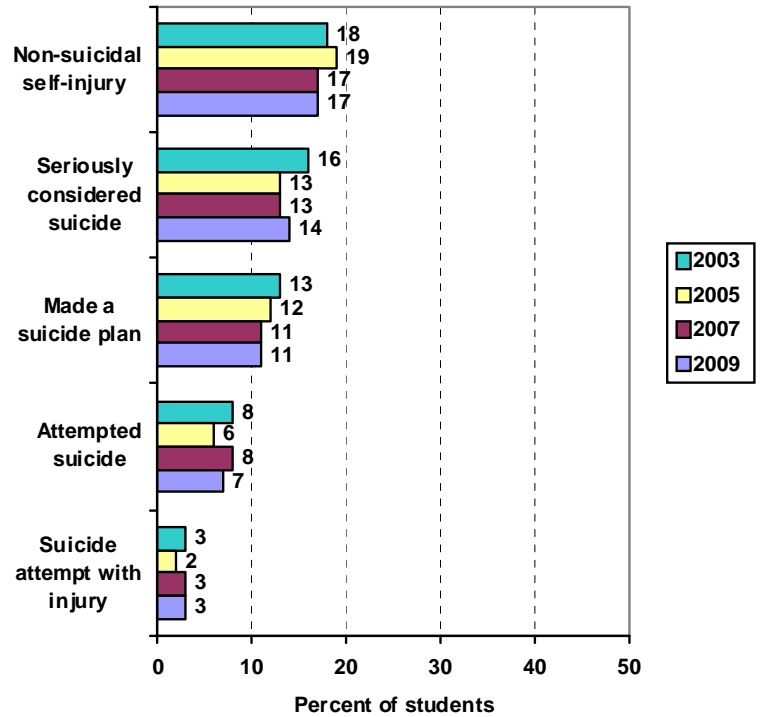
Seventeen percent (17%) of students reported hurting themselves on purpose in the past year without intending to die.

Overall, 14% of students in 2009 reported they seriously considered suicide and 11% made a suicide plan within the past year.

In 2009, 7% of high school students reported one or more suicide attempts in the past year.

Suicidal thoughts as well as non-suicidal self harm were more prevalent among females than males. Twenty-one percent (21%) of female students reported non-suicidal self harm (vs. 13% among males), and 16% seriously considered suicide (vs. 11% among males). However, the percentage of females (7%) who reported attempting suicide in the previous year was not significantly greater than that of males (7%).

**Figure 31: Suicidality and Non-Suicidal Self-Injury Among MA High School Students, 2003-2009**



Data source: MYRBS 2001-2007

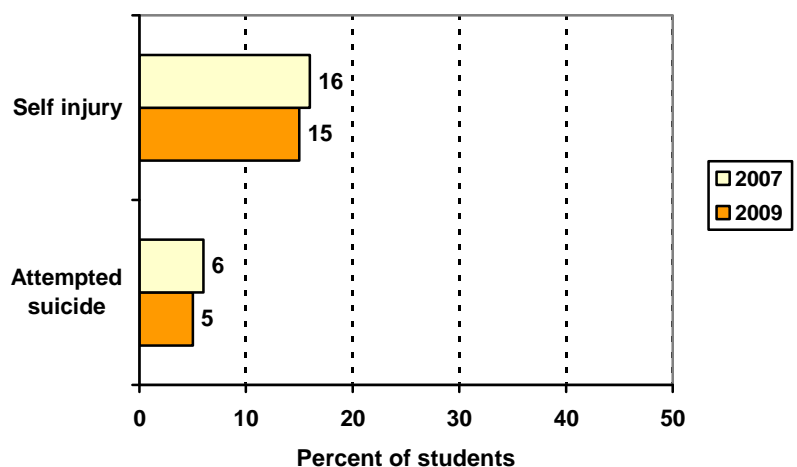
## MIDDLE SCHOOL STUDENTS

Sixteen percent (15%) of middle school students in 2009 reported a non-suicidal self-injury (e.g. cutting, burning or otherwise hurting oneself on purpose without the intent to die) during the previous year, the same rate as in 2007.

In 2009, 5% of middle school students reported having attempted suicide one or more times in the past year compared to 6% in 2007.

During the past year, there were no differences between grades in the percentage of students who reported attempted suicide or non-suicidal self-injury.

**Figure 32: Suicidality and Self-Injury Among MA Middle School Students, 2007-2009**



Data source: MYHS 2009

# SEXUAL BEHAVIORS & SEXUALITY EDUCATION <sup>1</sup>

## HIGH SCHOOL STUDENTS

There have been small fluctuations in sexual behaviors between 2003 and 2009. In 2009, fewer than half of all high school students (46%) reported having ever had sexual intercourse; just over one-third (35%) had intercourse in the previous three months (recent sexual intercourse); and thirteen percent (13%) of students reported having four or more partners in their lives.

Male students were more likely than female students to report sexual intercourse before age 13 (8% vs. 3%) and condom use at last intercourse (66% vs. 51%).

In 2009, 6% of students reported having been or gotten someone pregnant. Among students who had intercourse in the past 3 months, 26% reported using hormonal birth control (pills, patch, ring or shot) at last intercourse.

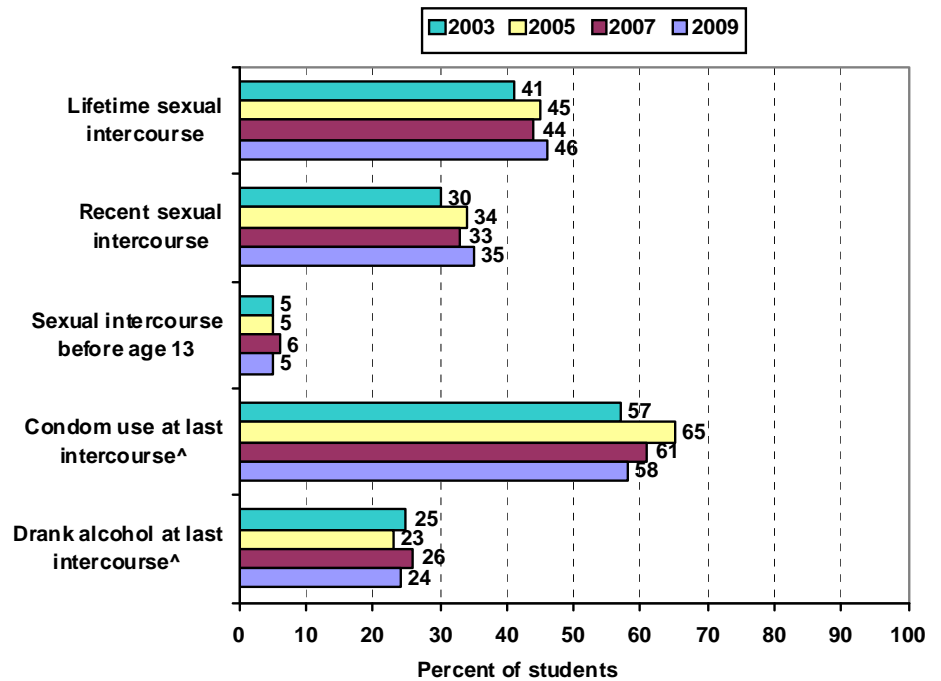
The percentage of students reporting being tested for HIV and being tested for STDs were both 12%. Female students were more likely than male students to report having been tested for an STD (15% vs. 9%).

Two percent (2%) reported having been diagnosed with HIV infection or any other STD during their lifetime, a significant drop since 2003 (6%).

In 2009, 87% of high school students reported receiving HIV/AIDS education in school, and half (52%) reported being taught at school how to use a condom.

Approximately half (49%) of high school students reported speaking with their parents or another adult in the family about sexuality or ways to prevent HIV infection, other sexually transmitted diseases (STDs), or pregnancy during the past year.

Figure 33: Lifetime and Recent Sexual Behaviors Reported by High School Students, 2003-2009

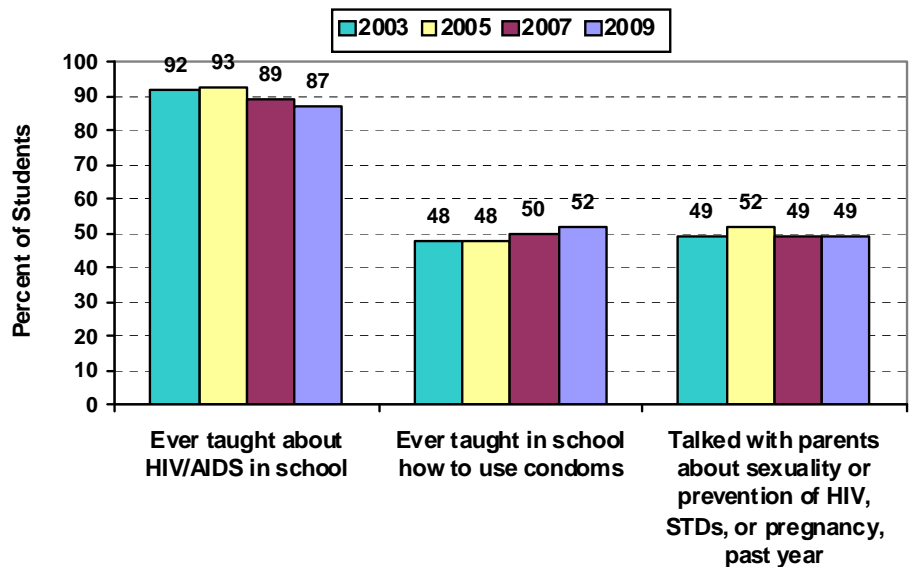


Data source: MYRBS 2003-2009

Note: Recent is defined as within the past three months.

<sup>^</sup> Among students reporting intercourse in the previous three months

Figure 34: Sexuality Education Among High School Students, 2003-2009



Data source: MYRBS 2003-2009

<sup>1</sup> (Note: Questions regarding sexual behavior only appear on the Massachusetts Youth Risk Behavior Survey and therefore are only asked of high school students.) \*\* Some charts use an abbreviated scale of less than 100% to increase readability

# ORAL HEALTH

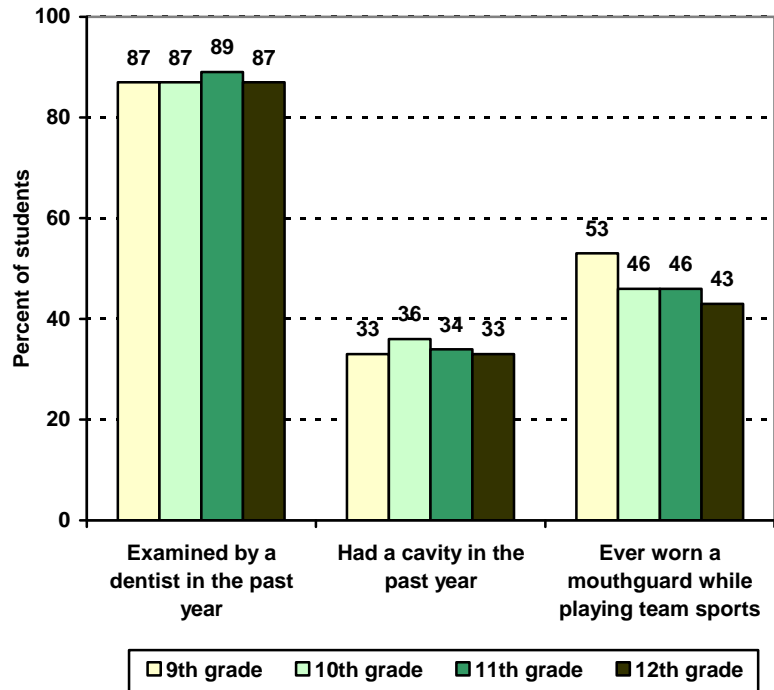
## HIGH SCHOOL STUDENTS

Oral health indicators remain approximately constant across high school grade levels (shown in Figure 35). Nearly nine out of ten high school students (88%) had been seen by a dentist in the past year.

Overall, approximately one in three (34%) high school students reported having a cavity in the previous year.

Of the high school students who reported playing on a sports team in the previous year in 2009, forty-seven percent (47%) reported wearing a mouthguard at least once in their lifetime while playing compared to 57% in 2007, a significant decrease.

**Figure 35: Oral Health Indicators Across MA High School Grades, 2009**



Data source: MYHS 2009

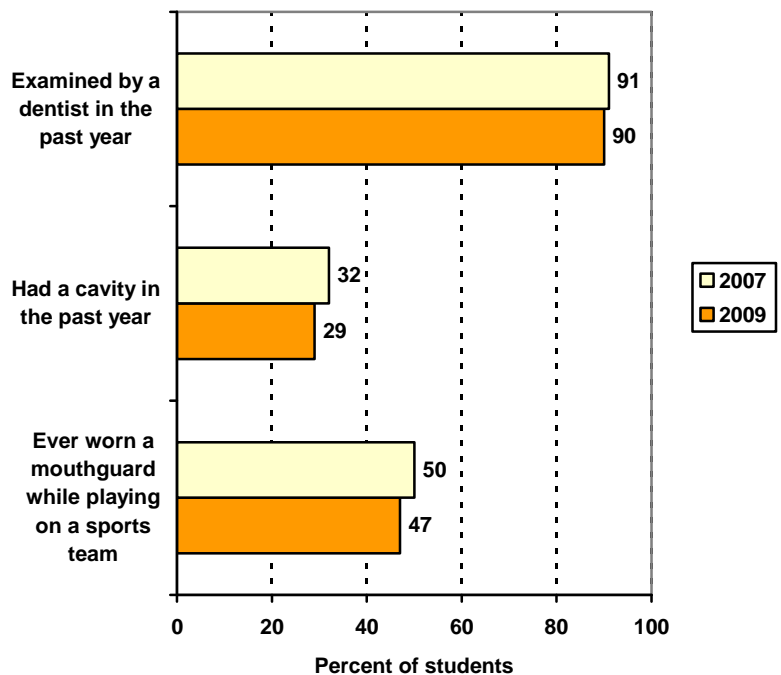
## MIDDLE SCHOOL STUDENTS

In 2009, 90% of middle school students reported having been examined by a dentist in the previous year.

Twenty-nine percent (29%) of middle school students reported having a cavity in a tooth during the previous year, compared to 32% in 2007.

In 2009, less than half (47%) of middle school students who played on a sports team reported wearing a mouthguard while playing at least once in their lifetime.

**Figure 36: Oral Health Indicators Among MA Middle School Students, 2007-2009**



Data source: MYHS 2009

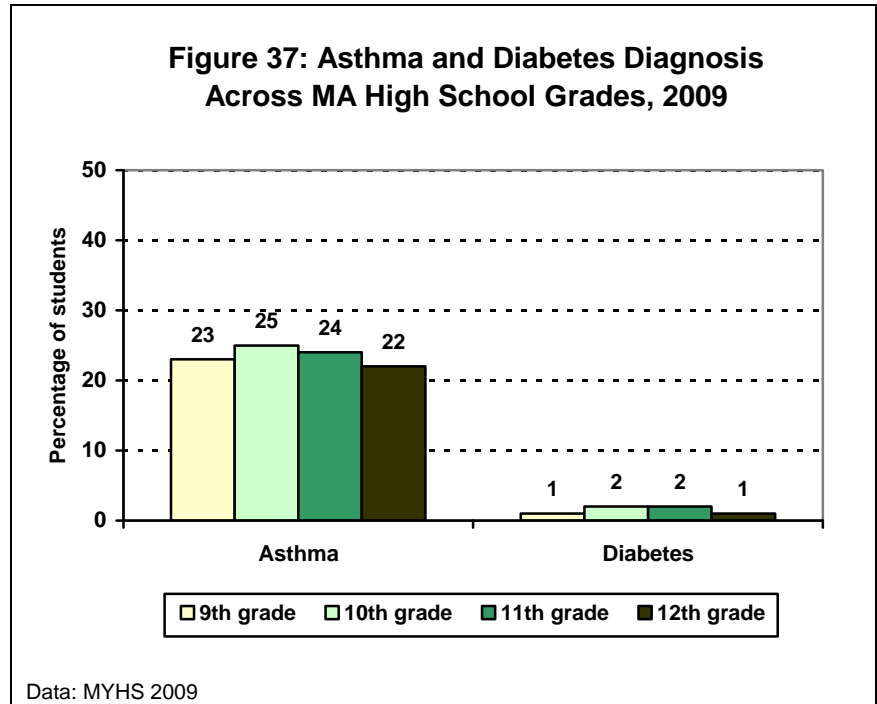
# PHYSICAL DISABILITIES AND CHRONIC CONDITIONS

## HIGH SCHOOL STUDENTS

The 2009 Massachusetts Youth Risk Behavior Survey asked students about the presence of any physical disability or long-term health problems (long-term was defined as 6 or more months). Eight percent (8%) of students reported having a physical disability or long-term health problem.

Combining all grade levels, 23% of high school students reported ever being told by a health care professional that they had asthma (MYHS 2009).

One percent (1%) of high school students reported ever being told by a health care professional that they had diabetes. (MYHS 2009).

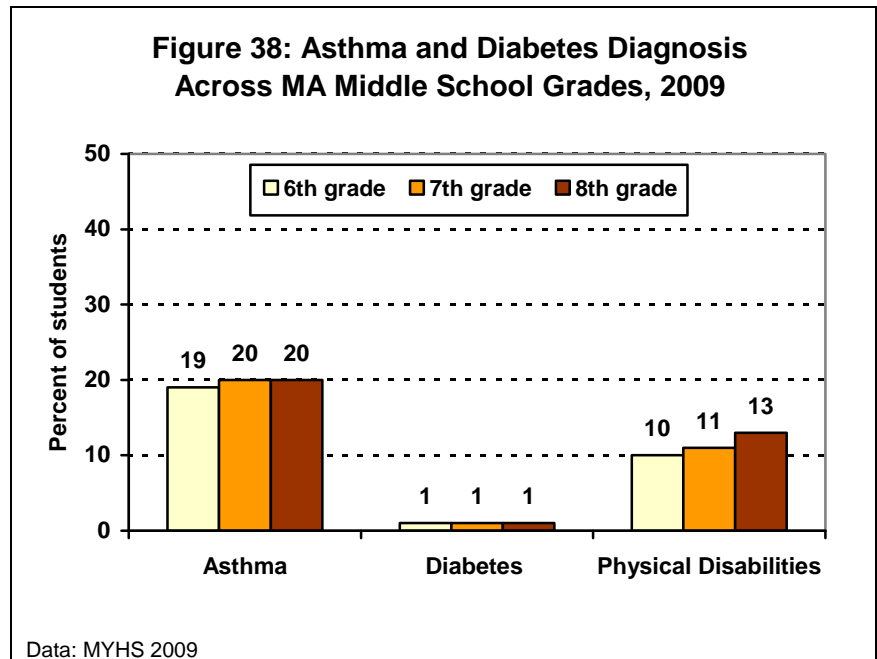


## MIDDLE SCHOOL STUDENTS

Twenty percent (20%) of middle school students reported being told by a health care professional they had asthma.

Overall, one percent (1%) of middle school students reported being told by a health care professional they had diabetes.

Twelve percent (12%) of middle school students reported having a physical disability or long-term health problem.



\*\* Some charts use an abbreviated scale of less than 100% to increase readability



This document was prepared by the  
Massachusetts Department of Elementary and Secondary Education  
And the  
Massachusetts Department of Public Health

Deval L. Patrick, Governor  
Timothy P. Murray, Lieutenant Governor  
JudyAnn Bigby, MD, Secretary of Health and Human Services  
John Auerbach, Commissioner, Department of Public Health  
Paul Reville, Secretary of Education  
Mitchell D. Chester, Commissioner, Department of Elementary and Secondary Education

The Massachusetts Department of Elementary and Secondary Education, an affirmative action employer, is committed to ensuring that all of its programs and facilities are accessible to all members of the public.

We do not discriminate on the basis of age, color, disability, national origin, race, religion, sex or sexual orientation.

Inquiries regarding the Department's compliance with Title IX and other civil rights laws may be directed to the Human Resources Director, 75 Pleasant St., Malden, MA 02148 781-338-6105.

© 2011 Massachusetts Department of Elementary and Secondary Education

*Permission is hereby granted to copy any or all parts of this document for non-commercial educational purposes. Please credit the "Massachusetts Department of Elementary and Secondary Education."*

Massachusetts Department of  
Elementary and Secondary Education  
75 Pleasant Street, Malden, MA 02148-5023  
Phone: 781-338-3000  
TTY: N.E.T. Relay 800-439-2370  
[www.doe.mass.edu](http://www.doe.mass.edu)

Massachusetts Department of Public Health  
250 Washington Street  
Boston, MA 02108-4619  
Phone: (617) 624-6000  
TTY (617) 624-6001  
[www.mass.gov/dph/](http://www.mass.gov/dph/)

