

Teens and Tobacco in Minnesota

*Results from the Minnesota Youth
Tobacco Survey*

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 - * About Target Market, the youth movement which describes itself as a vehicle for teens to take control of their lives and to reject the influence of tobacco marketing, contact:
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 - * About tobacco prevention in general, see the Tobacco Information and Prevention Source (TIPS) web site operated by the U.S. Centers for Disease Control and Prevention at <http://www.cdc.gov/tobacco/issue.htm>.
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Teens and Tobacco in Minnesota: Results from the Minnesota Youth Tobacco Survey

Summary of Findings and Conclusions

Findings

Design and Purpose of the Study

The Minnesota Youth Tobacco Survey provides data on the prevalence of tobacco use, sources of tobacco products, attitudes and beliefs about tobacco use, and other topics. Data from the survey will serve as a baseline against which the state will measure the success of its new campaign to reduce youth tobacco use over the next five years. The survey was administered in randomly selected schools in January, February and March, 2000. The findings are based on responses from 12,376 students and are representative of 6th-12th grade public school students in Minnesota. Results are presented for middle school students (6th-8th grades) and high school students (9th-12th grades).

Prevalence of Tobacco Use

- Well over one-third (38.7%) of high school students and 12.6 percent of middle school students are current tobacco users (used any tobacco product on one or more days in the past 30 days).
- Minnesota's overall rate of tobacco use is equal to or slightly higher than the national average.
- Cigarettes are by far the most commonly used product, with 32.4 percent of high school students and 9.1 percent of middle school students smoking cigarettes on one or more days in the past 30 days.
- One of every eight high school students (13.0%) smoked cigars and 10.2 percent used smokeless tobacco (chew, dip, snuff) in the 30-day period before the survey.

Levels of Smoking

The study identified four groups of young people based on their past or present involvement with cigarette smoking.

- "Never-smokers" have never smoked a cigarette, not even one or two puffs. Two-thirds (66.7%) of middle school students and 35.3 percent of high school students have never tried a cigarette.
 - "Past smokers" have smoked before, but not in the past 30 days. Most have only experimented briefly with tobacco. Just under one-fourth of middle school students and one-third of high school students are past smokers.
 - "Moderate smokers" are students who smoked on 1-19 days in the past 30 days. Most are occasional smokers who smoke relatively few cigarettes per month, though some are edging toward regular use.
 - "Frequent smokers" are students who smoked on twenty or more days in the past 30 days. Most smoke six or more cigarettes per day. One of 40 middle school students (2.5%) and one of six high school students (16.9%) are frequent smokers.
-

Demographics

- Use of tobacco increases steadily through middle school and high school before starting to level off toward the end of high school. Current use of any tobacco product rises from 6.4 percent in 6th grade to 44.9 percent in 12th grade.
- In high school, 42.7 percent of boys and 34.1 percent of girls are current tobacco users. Girls are just as likely as boys to smoke cigarettes, but boys are much more likely than girls to use cigars, smokeless tobacco, pipes and bidis.

Starting and Quitting

- Nearly half (47.2%) of current smokers in high school started smoking at the age of 12 or younger.
- About one-fourth of middle and high school students who have never smoked are “susceptible” to trying cigarettes.
- Close to two-thirds (61.0%) of current smokers in high school have tried to quit smoking at least once in the past 12 months.
- More than two-thirds (70.9%) of frequent smokers in high school cannot go an entire day without feeling like they “need a cigarette.”

Sources of Tobacco Products

- Most users under 18 obtain tobacco products through social sources, such as borrowing from friends or giving someone else money to buy products for them. For example, 60.3 percent of underage smokers in middle school and 71.0 percent of underage smokers in high school report that social sources are their primary means of obtaining cigarettes.
- Among high school students, 15.9 percent of cigarette smokers, 17.8 percent of cigar smokers and 21.2 percent of smokeless tobacco users under 18 usually bought their own tobacco in stores.

Knowledge, Attitudes and Beliefs

- Over 90 percent of students agree that tobacco use is harmful and addictive and that secondhand smoke is harmful. Current smokers are nearly as likely as non-smokers to hold these beliefs.
- Few students (14.8% in middle school and 21.4% in high school) agree that smokers have more friends, and even fewer agree that smoking makes young people look cool.
- Students, especially current smokers, tend to overestimate the true proportion of their fellow students who smoke.
- Nearly half (44.2%) of middle school students practiced refusal skills in class during the current school year, as did 15.9% of high school students.

Home Environment

- Two of every five students (40.5% in middle school and 39.9% in high school) live with someone who smokes cigarettes.
- One of nine (10.7%) middle school students and one of seven (13.7%) high school students live with someone who uses smokeless tobacco.

- High school students living with a parent, sibling or other person who smokes are more than twice as likely to be frequent smokers than are students living with no one who smokes (25.5% to 10.9%).

Influence of Friends

- Young smokers tend to associate with other smokers. As students become more deeply involved with cigarettes, their circle of closest friends is more likely to consist of other smokers.
- Among high school students, nearly all of the frequent smokers (89.4%), but only one of every eight never-smokers (12.9%), report that half or more of their four closest friends are smokers.
- The tendency of smokers to associate with other smokers becomes solidified at an early age. By 7th grade, current smokers have developed friendship groups that consist largely of other smokers.

Environmental Tobacco Smoke

- Most students are exposed to secondhand smoke at least weekly.
- One-third (34.4%) of middle school students and one-half (49.3%) of high school students are repeatedly exposed to secondhand smoke (being in the same room or car with someone who was smoking on three or more days in the past week).
- Living with someone who smokes greatly increases exposure to secondhand smoke: 67.1 percent of middle school students living with a parent or other person who smokes face repeated exposure to secondhand smoke, compared to 11.5 percent of students living with no one who smokes.

Media Exposure, Tobacco Promotion and Counter-marketing

- Close to 90 percent of students see actors in movies or on TV using tobacco “most or some of the time.”
- Nearly one-third of students who use the internet see tobacco ads on the internet “most or some of the time.”
- Roughly one-fourth of students bought or were given an item with a tobacco company name or picture on it in the past year.
- Three-fourths (75.0%) of current smokers in middle school and 88.4 percent of current smokers in high school usually smoke one of the top three advertised brands (Marlboro, Camel, Newport).

Conclusions and Suggestions

We offer the following conclusions and suggestions as a starting point for discussion of what the results of the youth tobacco survey might mean for Minnesota's efforts to reduce tobacco use among youth.

- 1. Tobacco use by young people in Minnesota continues to be high, at least equal to or slightly higher than the national average.** The danger to Minnesota is very real. The U.S. Centers for Disease Control and Prevention (CDC) has estimated that if current smoking rates continue approximately 97,000 Minnesota children under 18 who are alive today will eventually die prematurely because of tobacco use.¹
- 2. Large numbers of young people fall in the middle area between those who have never smoked at all and those who are frequent, nicotine-dependent smokers.** Many current smokers are smoking on an experimental or occasional basis. Another large group are past smokers who have not smoked recently but may or may not resume in the future. Programs to reduce overall tobacco use need to recognize and work with young people who have widely different levels of involvement and experience with tobacco products.
- 3. Basic knowledge about the harmfulness and addictiveness of tobacco is a necessary component of preventing tobacco use, but it is not enough to ensure success.** Young people appear to understand that tobacco is dangerous and addictive, and they dismiss the notion that smoking helps them look cool and have more friends. However, many students who accept the idea that tobacco is harmful still smoke. The U.S. Centers for Disease Control and Prevention has found that effective tobacco prevention programs work by helping young people turn knowledge into action. Specifically, they help youth to develop refusal skills and communication skills, to stand up for themselves, and to respond to the appeals and enticements of tobacco advertising and tobacco users.²
- 4. Smoking cigarettes and using other forms of tobacco are social acts that are tied into the social networks of young people.** Children and teens are often introduced to smoking by friends and peers. Once they become smokers, they quickly form or join friendship groups of fellow smokers. Current smokers rely on social networks to obtain cigarettes, by borrowing or by getting someone to buy for them. They share information about which stores and clerks will sell to them if they are underage.

To be effective, campaigns to reduce tobacco use must recognize this reality. Activities that are led by and inspired by young people, such as Minnesota's Target Market youth movement, have an obvious advantage — they come from within the social life and social networks of young people, rather than from outside. Florida's youth-led "Truth" campaign, for example, has shown that youth who talk back to the tobacco industry are seen as cool, smart, creative and fun by other youth. The "Truth" campaign has increased the allure of nonsmoking and decreased the allure of tobacco, resulting in sharp declines in the number of smokers.³

¹ "Projected Smoking Related Deaths among Youth - U.S.," *Morbidity and Mortality Weekly Report*, November 8, 1996, Vol. 45, No. 44, pp. 971-974.

² Centers for Disease Control and Prevention, "Guidelines for School Health Programs To Prevent Tobacco Use and Addiction," *Morbidity and Mortality Weekly Report, Recommendations and Reports*, February 25, 1994, Vol. 43, No. RR-2, pp. 1-18. CDC has identified two curricula that have been studied extensively and proven to be very effective in reducing tobacco use: Life Skills Training and Project Towards No Tobacco Use (Project TNT).

³ Ursula Bauer et al., "Changes in Youth Cigarette Use and Intentions Following Implementation of a Tobacco Control Program: Findings from the Florida Youth Tobacco Survey, 1998-2000," *Journal of the American Medical Association*, Vol. 284, No. 6, August 9, 2000: 723-728.

- 5. The youth movement against tobacco must be careful not to stigmatize smokers and drive a wedge between students who smoke and those who do not.** The youth tobacco survey shows that friendship patterns are somewhat segregated. Nonsmokers have few close friends who smoke, while smokers have relatively few close friends who are not smokers. To remain effective, the youth movement must be able to reach the circles of smokers and of others who may see themselves as potential smokers. It cannot afford to polarize youth and harden the social boundaries that already exist.
- 6. Efforts to enforce legal restrictions on selling tobacco to young people under 18 should devote more resources to identifying stores that are repeat offenders and convincing them not to sell to minors.** Compliance checks show that most stores ask for proof of age and do not sell to minors. However, the youth tobacco survey suggests that underage smokers learn from one another which stores and which clerks are likely to look the other way. As long as a few stores in any area are frequently violating the law, the supply routes for underage smokers remain open. Follow-up checks are needed to identify these consistent violators. Education and training, community pressure, license restrictions and other actions should be considered to bring these outlets into compliance with the law.
- 7. The home is an important arena in the campaign to reduce youth tobacco use and exposure.** Living with a parent, sibling or someone else who smokes makes it more likely that young people will take up smoking and gives them easy access to tobacco. The home environment is one of the leading sources of exposure to secondhand smoke for adolescents, especially middle school students. Most adults believe secondhand smoke is harmful to adults, and nearly all, including adult smokers, believe it is harmful for children. Adult smokers can be encouraged to quit and offered resources to do so, if for no other reason than to provide a better environment for their children. Adults, including smokers, can also adopt rules that make their homes and cars smoke-free. Most Minnesota adults report that they ban smoking in their homes, and even 40 percent of households with one or more smokers have rules banning smoking in the house.⁴
- 8. Most teen smokers report that they want to quit and have tried to quit, but have not been successful.** Quitting can be difficult. There are very few teens who were once regular smokers and now no longer smoke. Young people who want to quit should be encouraged to keep trying and should be offered help to acquire the skills and resources to overcome the social and/or addictive pressures that make it hard to quit for good.
- 9. Exposure to tobacco through the media, including the internet, and exposure to tobacco promotional items continues to be high.** The ban on direct advertising on radio, TV and billboards has not reduced the intensity of overall advertising and promotion. In 1998 (the last year for which figures are available), the tobacco industry spent \$6.7 billion dollars on advertising and promotion, the largest amount in its history.⁵ Children and teens are more sensitive to advertising: 88 percent of high school smokers usually smoke the top three advertised brands. The public should be aware of the resources arrayed against Minnesota's tobacco reduction efforts, and more research is needed to track the advertising and promotional activities of the tobacco industry in Minnesota.

⁴Minnesota Partnership for Action Against Tobacco, Blue Cross Blue Shield of Minnesota, Minnesota Department of Health, Minnesota Smoke-Free Coalition, Secondhand Smoke: Knowledge, Attitudes and Behaviors of Minnesotans, November, 2000.

⁵Federal Trade Commission, Report to Congress for 1998, Pursuant to the Federal Cigarette Labeling and Advertising Act, 2000. Available on the web at <http://www.ftc.gov/reports/cigarettes/cig98rpt.pdf>.

I. Introduction

The state law creating the Tobacco Use Prevention and Local Public Health Endowment in 1999 established an ambitious goal for reducing tobacco use. The law states:

The legislature finds that it is important to reduce the prevalence of tobacco use among the youth of this state. It is the goal of the state to reduce tobacco use among youth by 30 percent by the year 2005 . . . (M.S. 1999, section 144.396, subd. 1)

The Endowment was created by the legislature with a portion of the money paid by tobacco companies to settle the state's lawsuit against them. Interest from the Endowment funds is being used to support statewide and local efforts to reduce tobacco use.

The Minnesota Youth Tobacco Survey was conducted to provide baseline data on the prevalence of tobacco use among Minnesota's adolescents as the state begins its campaign to reduce youth tobacco use by 2005. It also provides information on sources of tobacco products, attitudes and beliefs about tobacco, and other topics of interest to tobacco prevention efforts.

No one needs to be reminded of the health effects of tobacco use. Tobacco is estimated to cause about 20 percent of all deaths in the U.S., primarily through cancer, cardiovascular disease and other illnesses in adults.¹ Tobacco use also has immediate health consequences for young people, including cough and phlegm production, more frequent and severe respiratory illnesses, and decreased physical fitness.² The great interest in youth smoking stems primarily from the fact that most adult smokers began smoking as adolescents (or even earlier) and that the health-destroying impact of tobacco use is directly related to how early in life one starts smoking and how many years one continues. Youth smoking is also of interest because the nicotine in tobacco is a powerful addictive drug that children and teenagers should not have to struggle with and fight off on their own.³ In addition, there is growing interest in the strong association between tobacco use and other high-risk behaviors. Young people who smoke are far more likely to drink alcohol, smoke marijuana, engage in violence and crime, engage in early sexual activity, and attempt suicide than those who do not smoke. (See Appendix A)

As documents uncovered during Minnesota's lawsuit against the tobacco industry show, tobacco companies have realized the importance of the youth market for decades, have marketed directly to young people, and have tried to manipulate the sense of rebelliousness and exploration that are a natural part of adolescence. The industry has also designed tobacco products to maintain and enhance the addictive properties of nicotine.⁴ Images that portray smokers as cool, rugged and/or

¹See, for example: "Cigarette Smoking-Attributable Mortality and Years of Potential Life Lost-United States, 1990," Morbidity and Mortality Weekly Report, 1993, Vol. 42, pp. 645-649; J. Michael McGinnis and William H. Foege, "Actual Causes of Death in the United States," Journal of the American Medical Association, Vol. 270, No. 18, November 10, 1993: 2207-2212; Michael J. Thun, Louis F. Apicella and S. Jane Henley, "Smoking vs Other Risk Factors as the Cause of Smoking-Attributable Deaths," Journal of the American Medical Association, Vol. 284, No. 6, August 9, 2000: 706-712.

² U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, Preventing Tobacco Use Among Young People: A Report of the Surgeon General, 1994, pp. 15-29.

³ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, Preventing Tobacco Use Among Young People: A Report of the Surgeon General, 1994, pp. 30-34.

⁴Richard D. Hurt et al, "Prying Open the Door to the Tobacco Industry's Secrets about Nicotine: The Minnesota Tobacco Trial," Journal of the American Medical Association 1998, Vol. 280, pp 1173-1181. John P. Pierce et al., "Tobacco Industry Promotion of Cigarettes and Adolescent Smoking," Journal of the American Medical Association, Vol. 279, No. 7, Feb. 18, 1998: 511-515.

sophisticated individuals are deeply ingrained in our culture. Efforts to prevent or reduce youth tobacco use must be strong enough to counter the momentum of the industry and must be based on an understanding of how tobacco use develops among young people.

Survey Methods

The Minnesota Youth Tobacco Survey (MYTS) uses a standard set of questions and procedures developed by the U.S. Centers for Disease Control and Prevention for surveys on adolescent tobacco use. The MYTS contains 71 questions covering prevalence, sources of tobacco products, attitudes and beliefs, environmental tobacco smoke, and media exposure, of which 63 are from CDC's standard set. In the past two years, 34 states have used CDC's questions and procedures for their own youth tobacco surveys. Results from the Minnesota Youth Tobacco Survey can therefore be compared with results from states using various kinds of tobacco prevention strategies and programming.

Young people were selected for the survey in two stages. First, lists were obtained of public schools that contained one or more grades between 6th and 8th grade and of public schools, including Area Learning Centers, with one or more grades between 9th and 12th grade. Private schools and alternative schools were not included. Fifty-eight schools from the middle school list and 77 schools from the high school list were randomly selected, with probability of selection based on enrollment size. Second, classrooms within each participating school were randomly selected, and all students in these classrooms were asked to participate. Parents were informed by letter about the survey and could notify the school if they did not want their children to participate. Students also were informed that the survey was completely voluntary and that they could decide not to participate or not to answer specific questions.

Careful measures were taken to make sure the survey was confidential. Students were reminded not to write their names or any other identifying information on the answer sheets, and students from each classroom placed their answer sheets in one large envelope instead of giving them to their teacher.

The response rate was generally good. Forty-six of the 58 schools in the middle school sample (79.3%) and 57 of the 77 schools in the high school sample (74.0%) agreed to participate. Within the selected classrooms, 87.9 percent of middle school students and 84.6 percent of high students completed the survey. The primary reason for not completing the survey was absence from school on the survey date. However, in a few cases, no students in the class completed the survey because the teacher chose not to participate. Other students missed the survey because of being pulled out of class for make-up tests or field trips or for other reasons.

Because it was meant to serve as a baseline, the survey was administered in January, February, and early March of 2000, just prior to the start of programs funded by the Endowment. The first activity to be funded was a counter-marketing ad campaign that began in April, 2000.

Survey responses were received from 12,376 students. After appropriate weighting, the final sample is representative of public school students in the state as a whole. The Centers for Disease Control edited the answer sheets for inconsistencies, calculated sample weights, and calculated frequencies and confidence intervals for each question using the SUDAAN software package. Final

analysis was done by the Center for Health Statistics at the Minnesota Department of Health and is the full responsibility of the Department of Health. Results are reported separately for middle school students (grades 6-8) and high school students (grades 9-12).

Study Limitations

The MYTS, like other school-based surveys, has limitations. The most obvious is that the sample does not represent all young people. Private schools, many alternative schools, juvenile correctional facilities and treatment centers were not included in the study. Young people who have dropped out are not represented, and students who frequently miss school for any reason are under-represented. Other limitations stem from the content of the survey. The MYTS focuses only on tobacco use and provides little information on family socioeconomic status and other social, cultural and behavioral factors that have been linked with tobacco use. Finally, the survey provides no opportunity for youth to write more detailed responses to the questions in their own words.

II. Prevalence of Tobacco Use

Well over one-third of high school students (38.7%) and one of every eight middle school students (12.6%) are “current” tobacco users, defined as any students who used tobacco products on one or more days in the past 30 days. Cigarettes are by far the most commonly used product, with 32.4 percent of high school students and 9.1 percent of middle school students smoking cigarettes in the previous 30 days. Among high school students, there is also substantial use of cigars (13.0%) and smokeless tobacco products such as chewing tobacco and snuff (10.2%). (Table 1)

More than one-third of students who are current tobacco users (35.6% in middle school, 40.7% in high school) report using two or more kinds of tobacco products in the past 30 days.

Table 1. Current Tobacco Users
(Used tobacco on one or more days in past 30 days)

	Middle School		High School	
	Percent	95% CI*	Percent	95% CI*
Any Tobacco Use	12.6%	(± 1.9)	38.7%	(± 2.4)
Cigarettes	9.1%	(± 1.3)	32.4%	(± 2.3)
Smokeless tobacco	2.2%	(± 0.5)	10.2%	(± 1.2)
Cigars, cigarillos, and little cigars	3.7%	(± 0.8)	13.0%	(± 1.3)
Pipe	2.7%	(± 0.8)	5.0%	(± 0.7)
Bidis**	2.8%	(± 0.9)	4.8%	(± 0.9)

* Confidence Intervals. If we were to do the survey again and randomly select another sample of schools and classrooms using the same methods as we used this time, the results would probably be slightly different from those reported above. The confidence interval is a measure of just how different the new results might be. In using a 95% confidence interval, we are saying that we are 95% sure that the new results would fall within the range indicated in Table 1. For example, the range for any tobacco use by middle schoolers would be 12.6% ± 1.9, or 10.7% to 14.5%. Confidence intervals account for possible differences due to random sampling, but they do not measure other kinds of errors that could be present in the study.

** Bidis are one of the new kinds of tobacco products that have emerged in recent years. They are small brown cigarettes from India consisting of tobacco wrapped in a leaf and tied with a thread.

Source: Minnesota Youth Tobacco Survey 2000.

Five-Year Goal

To meet the state's five-year goal for reducing tobacco use by 30 percent, current tobacco use would have to fall from 38.7 to 27.1 percent among high school students and from 12.6 to 8.8 percent among middle school students by 2005.

		Current Tobacco Use	
		Year 2000 (MYTS)	Year 2005 Goal
Middle School	12.6%	—————→	8.8%
High School	38.7%	—————→	27.1%

National Comparisons

Minnesota's high school students appear to be using tobacco products at slightly higher rates than high school students in the United States as a whole: 38.7 percent compared to 34.8 percent (Table 2). However, this difference is not statistically significant. In particular, Minnesota shows slightly higher prevalence rates for cigarette, smokeless tobacco, and pipe use among high school students.⁵ In middle schools, however, the percentages of Minnesota students currently using tobacco products are virtually identical to those of their counterparts around the country.

Table 2. United States and Minnesota Prevalence Rates for Current Use of Tobacco

(Used tobacco on one or more days in past 30 days)

	Middle School		High School	
	U.S.	Minnesota	U.S.	Minnesota
Any Tobacco Use	12.8%	12.6%	34.8%	38.7%
Cigarettes	9.2%	9.1%	28.4%	32.4%
Smokeless tobacco	2.7%	2.2%	6.6%	‡10.2%
Cigars, cigarillos, and little cigars	6.1%	‡3.7%	15.3%	13.0%
Pipe	2.4%	2.7%	2.8%	‡5.0%
Bidis	2.4%	2.8%	5.0%	4.8%

‡ Differences between U.S. and Minnesota rates are statistically significant at the $p < .05$ level.

Source: U.S. data from the Fall 1999 National Youth Tobacco Survey can be found in "Tobacco Use Among Middle and High School Students - United States, 1999," *Morbidity and Mortality Weekly Report*, January 28, 2000, Vol. 49, No. 3, pp. 49-53.

⁵ National figures were taken from the National Youth Tobacco Survey conducted in the Fall of 1999 by the American Legacy Foundation. Since the Minnesota Youth Tobacco Survey was given later in the school year, Minnesota students may have been about three months older on the average than those who participated in the national survey. It is not known whether part of the Minnesota-U.S. difference might be due to the slightly older age of Minnesota participants.

Frequent Tobacco Use

The Youth Tobacco Survey also provides information on students who are heavy or frequent users of tobacco. A “frequent” user is defined as someone who has used a tobacco product on 20 or more days in the previous 30 days. As Table 3 shows, 16.9 percent of all high school students and 2.5 percent of all middle school students smoked cigarettes on 20 or more days in the past month.⁶ The percentage of frequent users of most other tobacco products is very small, indicating that use of these products tends to be occasional and irregular. However, 3.0 percent of high school students are frequent users of smokeless tobacco products.

Table 3 — Frequent Tobacco Users
(Used tobacco on 20 or more days in past 30 days)

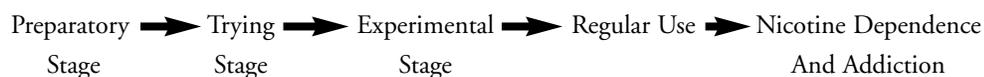
	Middle School		High School	
	Percent	95% CI	Percent	95% CI
Cigarettes	2.5%	(± 0.4)	16.9%	(± 1.8)
Smokeless tobacco	.5%	(± 0.3)	3.0%	(± 0.6)
Cigars, cigarillos, and little cigars	.2%	(± 0.1)	.7%	(± 0.3)
Pipe	.2%	(± 0.1)	1.0%	(± 0.2)
Bidis	.2%	(± 0.1)	.6%	(± 0.2)

Source: Minnesota Youth Tobacco Survey 2000.

⁶ For high school students, the proportion of frequent smokers is slightly higher in Minnesota than in the U.S. as a whole: 16.9 percent in Minnesota compared to 13.1 percent in the U.S. The difference just barely reaches statistical significance at the $p < .05$ level. In middle school, the proportion of frequent smokers is virtually identical: 2.5 percent in Minnesota and 2.2 percent in the U.S. See “Youth Tobacco Surveillance, United States, 1998-1999,” CDC Surveillance Summaries, *Morbidity and Mortality Weekly Report*, October 13, 2000, Vol. 49, No. SS-10, pp. 11, 12, 54.

III. Levels of Cigarette Smoking

Addiction to tobacco use usually does not happen overnight. Researchers have suggested that children and adolescents proceed through five stages on the way to developing an addiction:



Some studies have found that it takes an average of two or three years to go from trying a cigarette to becoming a regular user, but there is a large amount of variation from one person to another.⁷

Because the extent and intensity of smoking vary considerably among young people, we have categorized the student sample into four groups, ranging from those who have never smoked at all to those who are smoking every day or nearly every day. The groups were created based on current and past cigarette use because cigarettes are still by far the most important tobacco product and because the number of students in each group was large enough to permit analysis. The four groups described in this chapter illustrate different patterns of smoking. Understanding these patterns can be helpful in tobacco prevention efforts.

NOT SMOKING CURRENTLY (PAST MONTH)

1. Never-smokers

“Never-smokers” are those who have never smoked a cigarette, not even one or two puffs. They are about evenly divided between males and females and tend, not surprisingly, to be younger students at lower grade levels. In middle school, they are the majority. Two-thirds of middle school students (66.7%) and one-third of high school students (35.3%) have never smoked a cigarette.

2. Past Smokers

Substantial numbers of young people have smoked one or more cigarettes at some time in their lives, but did not smoke in the previous 30 days and therefore are not defined as current smokers. Just under one-fourth of middle school students and just under one-third of high school students are “past smokers.” The size of this group attests to the amount of experimentation that is occurring. Past smokers are not necessarily committed to staying away from cigarettes. Nearly one-fourth (22.7%) say they will definitely or probably smoke again in the next year.

Past smokers by and large have not moved beyond very brief experimentation with smoking. Altogether, 82.8 percent of past smokers in middle school and 61.6 percent of past smokers in high school indicate that they have smoked five or fewer cigarettes in their lifetime. Past smokers include very few students who were once established smokers. Only 2.2 percent of past smokers in middle school and 7.9 percent of past smokers in high school have smoked 100 or more cigarettes in their lifetime.

⁷ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, Preventing Tobacco Use Among Young People: A Report of the Surgeon General, 1994, pp. 124-126.

SMOKING CURRENTLY (PAST MONTH)

While current smoking (use of cigarettes on one or more days in the past 30 days) is the most widely accepted measure of youth smoking prevalence, it is helpful to categorize current smokers into two groups.

3. Moderate Smokers

A “moderate smoker” is one who has smoked cigarettes on one to nineteen days in the previous month. This group is a mixture of many young people who are still experimenting and some who are edging toward regular use. Nearly half (49.3%) of moderate smokers in middle school and over one-third (38.7%) in high school smoked on only one or two days in the past month. More than half of moderate smokers report that they usually smoke only one cigarette per day on the days they smoke.

4. Frequent Smokers

A substantial number of students have moved through the stages of smoking to become “frequent smokers,” defined as students who smoked cigarettes on 20 or more days in the previous 30 days. Most students in this group indicate they actually smoked on all 30 days, so it would be fair to describe this group as “daily or nearly daily” smokers. Seventeen percent (16.9%) of all high school students and 2.5 percent of all middle school students smoked cigarettes on twenty or more days in the past month.

Frequent smokers not only smoke on more days than moderate smokers, but they also smoke more cigarettes each day. The overall amount of tobacco smoked by frequent smokers is therefore far greater. More than half (55.8%) of frequent smokers in high school usually smoke six or more cigarettes per day on the days they smoke, compared to only 5.1 percent of moderate smokers. (Figure 3)

One implication of looking at different types of nonsmokers and smokers is that there are large numbers of adolescents who fall in the middle area between the pure non-smokers and the frequent, nicotine dependent smokers. Efforts to prevent or reduce tobacco use may have to consider whether different approaches are needed to connect with youth who differ from each other in their current and past experience with cigarettes.

Figure 1
Smoking Status of Middle School Students

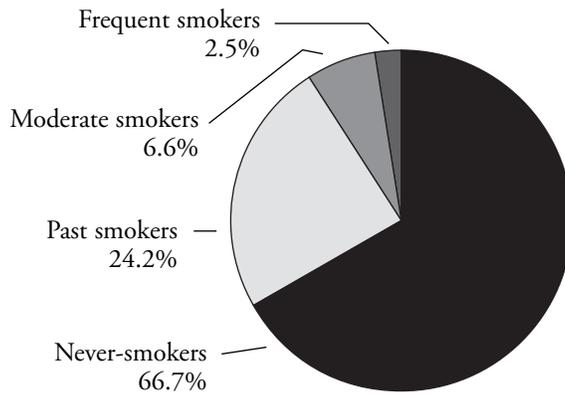
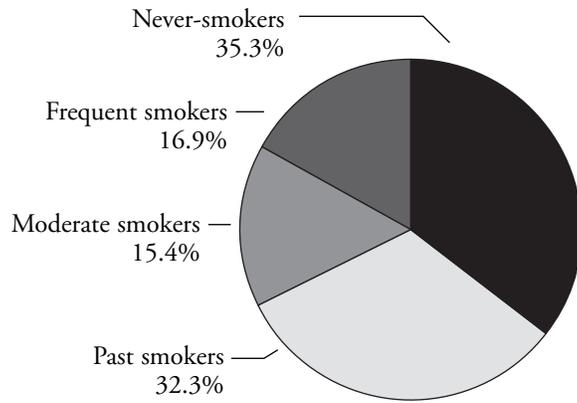


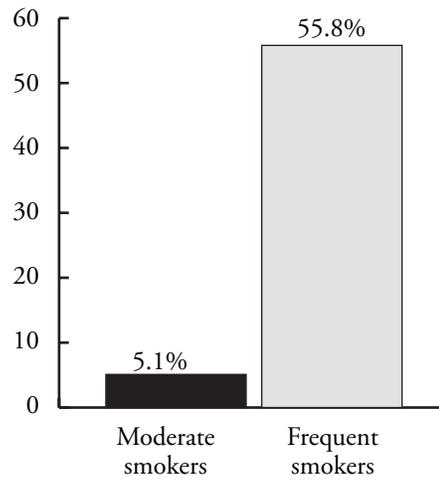
Figure 2
Smoking Status of High School Students



Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
Past smokers - have smoked before, but not in past 30 days.
Moderate smokers - have smoked on 1-19 of the past 30 days.
Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Figure 3
Percentage of High School Students Smoking Six or More Cigarettes per Day
on the Days They Smoked, by Smoking Status



Note: Moderate smokers - have smoked on 1-19 of the past 30 days.
Frequent smokers - have smoked on 20 or more of the past 30 days.

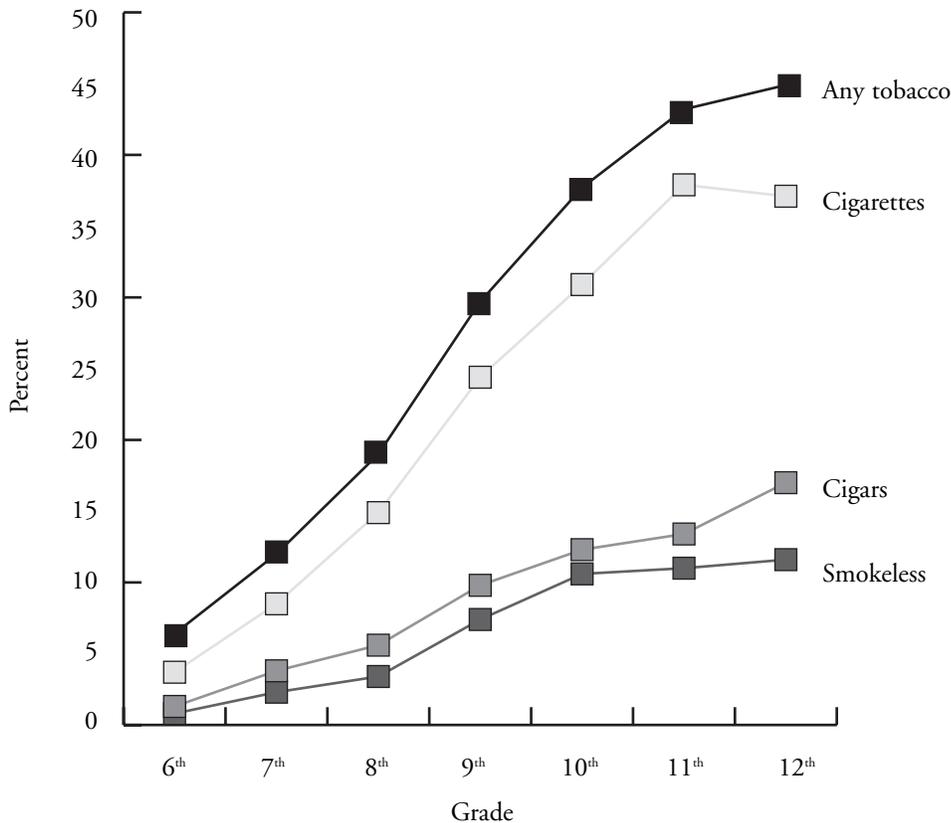
Source: Minnesota Youth Tobacco Survey 2000

IV. Demographics and Tobacco Use

Grade Level and Tobacco Use

For most tobacco products, the percentage of students using the product in the past 30 days increases steadily throughout middle school and high school before starting to level off towards the end of high school.⁸ Current use of any tobacco product increases from 6.4 percent among sixth graders to 44.9 percent among 12th graders. For cigarettes only, the percentage of current smokers increases from 3.7 percent among sixth graders to 37.1 percent among 12th graders. The largest increase occurs between 8th and 9th grades. (Figure 4)

Figure 4
Current Use of Tobacco Products, by Grade
(on one or more days in past 30 days)



Source: Minnesota Youth Tobacco Survey 2000

⁸ This leveling off may be deceptive, since current smokers are more likely to skip or drop out of school by 11th or 12th grade than are non-smokers. Several studies have shown that school dropouts are much more likely to smoke than those who stay in school. These are summarized in U.S. Department of Health and Human Services, *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*, 1994, pp. 62, 65. It has also been shown that young people in alternative schools, juvenile institutions and residential treatment facilities are more likely to smoke than students in regular schools. See for example Fulkerson JA, Harrison PA and Hedger SA, *1998 Minnesota Student Survey: Alternative Schools and Area Learning Centers*, St. Paul: Minnesota Department of Human Services, 1999.

Table 4. Cigarette Smoking Status, by Grade

	6th	7th	8th	9th	10th	11th	12th
Never smokers	80.5%	67.7%	57.6%	44.2%	36.6%	32.5%	30.3%
Past smokers	15.7%	23.4%	27.0%	30.7%	31.7%	28.9%	31.9%
Moderate smokers	3.6%	6.4%	10.7%	13.9%	16.5%	17.0%	15.9%
Frequent smokers	0.3%	2.5%	4.8%	11.3%	15.2%	21.6%	21.9%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.

Past smokers - have smoked before, but not in past 30 days.

Moderate smokers - have smoked on 1-19 of the past 30 days.

Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Table 4 shows cigarette smoking patterns at each school grade level. The proportion of students who have never smoked declines steadily, from 80.5 percent in 6th grade to 30.3 percent in 12th grade. The proportion of past smokers rises steadily until 9th grade, as substantial numbers of adolescents try smoking and then drop it. After 9th grade, the number of past smokers levels off. Both moderate and frequent smokers increase sharply until starting to level off toward the end of high school. The number of frequent smokers starts off very low, but by 11th and 12th grades frequent smokers clearly outnumber moderate smokers. This fact would suggest that many students who were once experimental and occasional users have been converted to frequent, dependent users during their high school years.

Gender

Boys and girls are equally likely to be current cigarette smokers in both middle school and high school. However, boys are much more likely than girls to use other tobacco products such as smokeless tobacco, cigars, pipes, and bidis. The differences are particularly noticeable at the high school level. For example, 20.0 percent of high school boys report smoking cigars in the past month, compared to 5.7 percent of high school girls. (Table 5)

Table 5. Current Tobacco Use by Gender

	Middle School		High School	
	Boys	Girls	Boys	Girls
Any Tobacco Use	12.9%	12.3%	42.7%	34.1%
Cigarettes	8.7%	9.5%	32.0%	32.6%
Smokeless tobacco	3.3%	1.1%	17.6%	2.2%
Cigars	4.8%	2.4%	20.0%	5.7%
Pipe	3.5%	1.9%	7.0%	2.5%
Bidis	2.8%	2.8%	6.1%	2.9%

Source: Minnesota Youth Tobacco Survey 2000

Racial/Ethnic Group

Analysis of tobacco use patterns for different racial/ethnic groups was not possible because too few students from each non-white group were surveyed. The Minnesota Student Survey, last conducted in 1998, remains the primary source for statewide estimates of tobacco use among African American, American Indian, Asian and Hispanic/Latino students. Data from the Student Survey has shown that smoking rates for 9th graders have been highest among American Indian and Hispanic/Latino students, and lowest among African American and Asian students.⁹

⁹ Urban Coalition, *Getting It All Together: The Health and Well-Being of Minnesota's Youth*, Saint Paul, Minnesota, August 1998, pp. 21-25. The Urban Coalition's report is based on the 1995 student survey. The Department of Health, Center for Health Statistics has comparable data from the 1998 survey.

V. Starting and Quitting

Age at Start of Tobacco Use

Many current smokers first tried cigarettes in their pre-teen years. Among high school students who are current smokers, nearly half (47.2 %) say they had their first whole cigarette at age 12 or younger, and 20.1 percent had their first whole cigarette by age 10. Many users of smokeless tobacco and cigars also had their first experience with these forms of tobacco at an early age. (Table 6)

Frequent smokers are more likely than moderate smokers to have started at an early age. Fifty-nine percent (59.2%) of high school students who are frequent smokers report that they were 12 years old or younger when they had their first whole cigarette. (Figure 5) Young people who start to smoke at an early age are more likely to become regular users and thus face higher risks for all the serious health consequences of steady, prolonged tobacco use.¹⁰

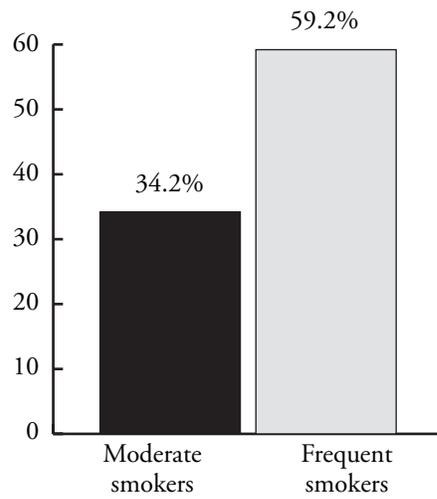
Table 6. Age at Start of Tobacco Use: High School Students

Percentage of current cigarette smokers who started smoking cigarettes at:	
10 years old or younger	20.1%
12 years old or younger	47.2%
Percentage of current smokeless tobacco users who started using at:	
10 years old or younger	22.4%
12 years old or younger	42.0%
Percentage of current cigar smokers who started smoking cigars at:	
10 years old or younger	15.7%
12 years old or younger	31.0%

Source: Minnesota Youth Tobacco Survey 2000

¹⁰ U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, Preventing Tobacco Use Among Young People: A Report of the Surgeon General, 1994, p. 65.

Figure 5
Percentage of High School Students Who Smoked
First Whole Cigarette at Age 12 or Younger, by Smoking Status



Note: Moderate smokers - have smoked on 1-19 of the past 30 days.
Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Susceptibility to Smoking

Since trying or experimenting with cigarettes is such an important step on the path to addiction and dependence, there has been an interest in identifying young people who have never smoked but are leaning toward trying it out. Some non-smokers have entered what is called the “preparation” stage - they have begun to form ideas and images about the possible benefits of smoking and may see themselves as trying it in the near future. Their commitment to avoiding cigarettes is not firm.

Several questions have been developed and tested to identify those young people who are leaning toward trying cigarettes. The most frequently used index includes three questions and is called the susceptibility index. Research has confirmed that never-smokers who are “susceptible” are more likely to try cigarettes than those who are committed non-smokers.¹¹

In Minnesota, just under three-fourths of those who have never smoked are “committed” non-smokers, but just over one-fourth are “susceptible” non-smokers. This means that 18.1 percent of *all* middle school students and 9.4 percent of *all* high school students have never smoked but are susceptible to starting. Prevention efforts should pay attention to this group of potential smokers.

Altogether, half of all middle school students (49.5%) and three-fourths of high school students (73.0%) have already tried smoking or are susceptible to starting. (Table 7)

Table 7. Susceptibility to Smoking Cigarettes

	Middle School	High School
Never Smoked/Non-Susceptible	50.5%	27.0%
<i>Never Smoked/Susceptible - never smoked but cannot “definitely” say they won’t in future</i>	18.1%	9.4%
Has smoked, but less than 100 cigarettes in lifetime	27.2%	37.2%
Has smoked 100 or more cigarettes in lifetime	4.1%	26.3%
TOTAL	100.0%	100.0%

Source: Minnesota Youth Tobacco Survey 2000

¹¹ J. P. Pierce et al, “Validation of Susceptibility as a Predictor of Which Adolescents Take Up Smoking in the United States,” *Health Psychology* 1996, Vol. 15, No. 5, pp. 355-361. The three questions used in the index are: (1) Do you think that you will try a cigarette soon? (2) Do you think you will smoke a cigarette at any time during the next year? (3) If one of your best friends offered you a cigarette, would you smoke it? Students must answer “no” to Question 1 and “definitely not” to Questions 2 and 3 in order to be considered “not susceptible.” If even one question is not answered as above, the individual is said to be “susceptible” to smoking .

Addiction and Quitting

The great difficulty which adult smokers encounter when they try to quit smoking has spawned an industry of therapies, patches, drugs and other methods for dealing with the intense craving for nicotine that so many regular smokers feel. However, much less attention has been devoted to helping adolescent smokers quit. The desire to quit appears to be there. Most young cigarette smokers say they would like to quit smoking, and many have tried unsuccessfully. Among high school students, the majority of current smokers (61.0%) report that they have tried to quit smoking at least once in the past 12 months. However, over two-thirds of the current smokers who tried to quit (69.7%) were only able to stay off cigarettes for less than 30 days in their last quit attempt.

As with adults, difficulty in quitting is linked to the addictive nature of tobacco products, especially among the most frequent smokers. At the high school level, 70.9 percent of frequent smokers report that they cannot go an entire day without smoking before feeling as if they “need a cigarette.” This compares to only 8.7 percent of moderate smokers, many of whom are still experimental or occasional users. Frequent smokers are also more likely than moderate smokers to report that they have tried to quit in the past year and are much more likely to have started smoking again in less than 30 days. (Table 8)

An indication of the difficulty of quitting is that very few adolescents who were once regular or heavy smokers can now count themselves as “past smokers”. As indicated in Chapter 3, most past smokers among adolescents are experimental and infrequent smokers. Only 7.9 percent of past smokers among high school students had smoked as many as 100 or more cigarettes in their entire lives. Once an individual reaches a high level of regular nicotine intake, it becomes much more difficult to go back to an earlier stage of occasional smoking or no smoking at all.

Table 8. Addiction and Quit Attempts Among High School Current Smokers

	Current Smokers		
	Moderate Smokers	Frequent Smokers	All Current Smokers
Cannot go an entire day without feeling “like you need a cigarette”	8.7%	70.9%	41.4%
Tried to quit smoking at least once in the past 12 months	53.9%	66.8%	61.0%
Stayed off cigarettes less than 30 days when they last tried to quit smoking	47.7%	83.9%	69.7%

Note: Moderate smokers - have smoked on 1-19 of the past 30 days.
 Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

VI. Sources of Tobacco Products for Persons Under 18

Obtaining Cigarettes

Most smokers under the age of 18 rely on their social network of friends, relatives and acquaintances as their primary source for obtaining cigarettes. They get someone else to buy cigarettes for them, they borrow from friends, or an older person gives them cigarettes. Sixty percent (60.3%) of current smokers in middle school and 71.0 percent of current smokers in high school report that these social sources are their primary means of obtaining cigarettes (Table 9).

Although people under 18 cannot legally purchase tobacco products, many are able to do so. Among high school students, one of every six current smokers under the age of 18 (15.9%) buys cigarettes at a store as their primary means of obtaining cigarettes. There are undoubtedly other smokers who buy cigarettes from stores on an occasional basis, but not as their primary source.

Many middle school students (19.0%) usually obtain their cigarettes by taking them from another family member at home or taking them from a store. Students who live with someone who smokes not only have a role model to imitate, but also have a ready source of cigarettes. Especially for younger students, having cigarettes available at home makes it easier to experiment with smoking and to obtain cigarettes that they can distribute to friends.

Table 9. Primary Source of Cigarettes for Current Smokers Under 18:

	Middle School	High School
Social Sources:		
Gave someone else money to buy them for me	23.8%	41.7%
Borrowed (or bummed) them from someone else	29.0%	23.6%
Person 18 years or older gave them to me	7.5%	5.7%
Direct Purchase:		
Bought them in a store such as a convenience store, supermarket, discount store, or gas station	1.3%	15.9%
Bought them from a vending machine	2.3%	1.7%
Other Sources:		
Took them from a store or family member	19.0%	2.7%
Got them some other way	17.1%	8.7%
TOTAL	100.0%	100.0%

Source: Minnesota Youth Tobacco Survey 2000

Obtaining Smokeless Tobacco and Cigars

Social sources are also the primary means of obtaining other kinds of tobacco products for students under 18. In high school, for example, nearly two-thirds of current smokeless tobacco users and of current cigar smokers under 18 usually obtain their products through social sources. Direct purchase at stores is the primary method of obtaining products for one of every five current users of smokeless tobacco (21.2%) and one of every six current cigar smokers (17.8%) who are under 18. (Table 10)

Table 10. Primary Source of Smokeless Tobacco and Cigars for Current Users Under 18: High School Students

	Smokeless Tobacco	Cigars
Social Sources:		
Gave someone else money to buy them for me	23.3%	17.4%
Borrowed (or bummed) them from someone else	33.8%	33.6%
Person 18 years or older gave them to me	8.6%	14.3%
Direct Purchase:		
Bought them in a store such as a convenience store, supermarket, discount store, or gas station	21.2%	17.8%
Other Sources:		
Took them from a store or family member	2.9%	4.9%
Got them some other way	10.1%	12.0%
TOTAL	100.0%	100.0%

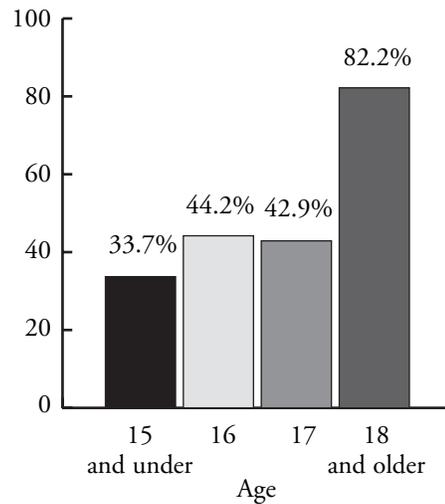
Source: Minnesota Youth Tobacco Survey 2000

Failure to Require Proof of Age

It appears that some stores are not enforcing laws against tobacco sales by asking customers to show proof of age. Of the high school students under 18 who say they have bought or tried to buy cigarettes in a store in the past 30 days, only 41.1 percent report that they were ever asked to show proof of age.

While only 41.1 percent of high school buyers under 18 are asked to show proof of age, 82.2 percent of buyers 18 and over report being asked to show proof of age. (Figure 6) It seems odd that younger students are more likely than older students to slip through without being asked to show proof of age. The most plausible explanation is that underage buyers know which stores will sell to them and may limit their buy attempts to those stores that will not ask for an ID. Information about which stores and which clerks will sell to minors is most likely passed along through the social networks of smokers. Once they reach 18 and can legally buy cigarettes anywhere, smokers probably expand their purchases to stores that do routinely ask for proof of age.

Figure 6
Percentage of Current Smokers Who Tried to Buy Cigarettes
in Past 30 Days and Were Asked to Show Proof of Age

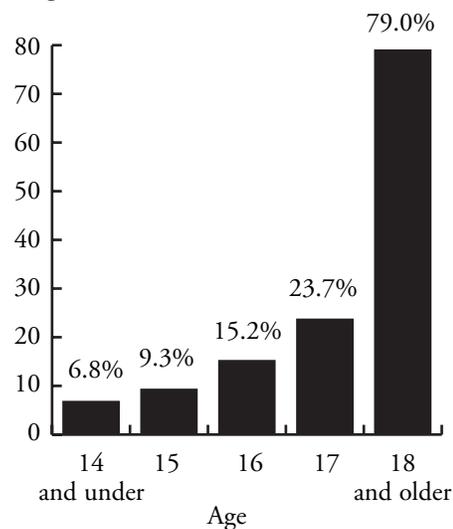


Source: Minnesota Youth Tobacco Survey 2000

Methods of Obtaining Cigarettes by Age, Gender and Smoking Status

Older students increasingly buy their own cigarettes directly from stores. At age 17, nearly one-fourth of current smokers (23.7%) report that their primary source of obtaining cigarettes is direct purchase at a store. At age 18, nearly all smokers are buying their own cigarettes at stores. (Figure 7) The sharpness of the increase in sales to 18 year-olds is evidence that laws against selling tobacco to minors do have an impact. At the minimum, they force smokers to find other, sometimes less reliable, sources of cigarettes. They may also make it more difficult for experimenting and irregular smokers to proceed quickly to becoming frequent, addicted smokers.

Figure 7
Percentage of Current Smokers Whose Primary Source
of Cigarettes is Direct Purchase at Stores



Source: Minnesota Youth Tobacco Survey 2000

Boys under 18 are almost twice as likely as girls to obtain their cigarettes through direct purchase at a store (20% vs. 12%). Girls, on the other hand, are slightly more likely to rely on borrowing from friends or getting someone else to buy for them.

Frequent smokers and moderate smokers rely on very different methods of obtaining cigarettes. Above all, frequent smokers need volume, and borrowing from friends is usually not a reliable way to obtain large numbers of cigarettes. Borrowing from friends is the primary source of cigarettes for 43.0 percent of moderate smokers but only 5.4 percent of frequent smokers. On the other hand, frequent smokers are more than twice as likely as moderate smokers to get most of their cigarettes by purchasing them directly at a store. (Table 11)

Table 11. Primary Source of Cigarettes for Moderate and Frequent Smokers Under 18: High School Students

	Moderate Smokers	Frequent Smokers
Social Sources:		
Gave someone else money to buy them for me	27.6%	54.9%
Borrowed (or bummed) them from someone else	43.0%	5.4%
Person 18 years or older gave them to me	6.4%	5.0%
Direct Purchase:		
Bought them in a store such as a convenience store, supermarket, discount store, or gas station	9.1%	22.4%
Bought them from a vending machine	1.8%	1.6%
Other Sources:		
Took them from a store or family member	3.9%	1.5%
Got them some other way	8.2%	9.3%
TOTAL	100.0%	100.0%

Note: Moderate smokers - have smoked on 1-19 of the past 30 days.
 Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

VII. Knowledge, Attitudes and Beliefs

Addictiveness and Harmfulness of Tobacco

Young people seem to have sound basic knowledge about the dangers of tobacco use. Over 90 percent of both middle school and high school students agree with statements about the addictiveness and harmfulness of tobacco. Moreover, the great majority of students seem very definite in their perceptions and beliefs about tobacco. Between two-thirds and three-fourths say they “definitely” agree that using tobacco and smoking cigarettes is addictive and harmful. They also soundly reject the argument that it is safe to smoke for only a year or two. (Table 12). There are no differences between middle school and high school students on any of these questions, and no significant differences by grade in school. Overall, it appears that schools, health education programs and other community efforts have been successful in conveying basic information to Minnesota students.

Table 12. Perceptions and Beliefs about Tobacco
Percent Answering “Definitely Yes” or “Probably Yes” to the Following Statements

	Middle School	High School
People can get addicted to using tobacco just like they can get addicted to using cocaine or heroin.		
* “Definitely yes” or “Probably yes”	93.3%	93.2%
* “Definitely yes” only	72.4%	74.4%
Young people risk harming themselves if they smoke 1-5 cigarettes per day.		
* “Definitely yes” or “Probably yes”	90.0%	91.1%
* “Definitely yes” only	68.4%	67.8%
Smoke from other people’s cigarettes is harmful to you.		
* “Definitely yes” or “Probably yes”	91.7%	93.3%
* “Definitely yes” only	73.2%	72.7%
It is safe to smoke for only a year or two, as long as you quit after that.		
* “Definitely yes” or “Probably yes”	12.1%	16.8%
* “Definitely yes” only	4.3%	4.7%

Source: Minnesota Youth Tobacco Survey 2000

At first glance, it appears that smokers also recognize the addictiveness and dangers of tobacco use, although not quite to the same extent as do nonsmokers. The differences between smokers and nonsmokers are usually not very large. The one question on which they do diverge quite a bit is the statement that it is safe to smoke as long as it is only for a year or two. Nearly one-third (31.2%) of frequent smokers agree with that statement, compared to only 7.0 percent of those who have never smoked. (Table 13)

It should also be noted that smokers are more lukewarm than nonsmokers in their acceptance of the statements listed in Table 13. Compared to nonsmokers, smokers are much less likely to say they “definitely” agree with such statements and more likely to say they “probably” agree. This difference is most apparent in regard to the statement about the harmfulness of smoking 1-5 cigarettes per day. Only 42.5 percent of frequent smokers responded “definitely yes” to that statement, compared to 81.5 percent of those who have never smoked. Perhaps the less definite response generates less conflict between smokers’ perceptions and their actual practice.

Table 13. Perceptions and Beliefs about Tobacco among High School Students, by Smoking Status
Percent Answering “Definitely Yes” or “Probably Yes” to the Following Statements

	Never Smokers	Past Smokers	Moderate Smokers	Frequent Smokers
People can get addicted to using tobacco just like they can get addicted to using cocaine or heroin.				
* “Definitely yes” or “Probably yes”	96.7%	93.9%	90.6%	90.2%
* “Definitely yes” only	81.5%	74.0%	68.4%	70.3%
Young people risk harming themselves if they smoke 1-5 cigarettes per day.				
* “Definitely yes” or “Probably yes”	95.6%	93.3%	90.2%	81.7%
* “Definitely yes” only	81.5%	74.3%	56.2%	42.5%
Smoke from other people’s cigarettes is harmful to you.				
* “Definitely yes” or “Probably yes”	95.9%	94.0%	93.5%	89.4%
* “Definitely yes” only	80.8%	76.1%	63.9%	61.5%
It is safe to smoke for only a year or two, as long as you quit after that.				
* “Definitely yes” or “Probably yes”	7.0%	13.3%	26.3%	31.2%
* “Definitely yes” only	2.2%	4.1%	4.9%	8.5%

Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
Past smokers - have smoked before, but not in past 30 days.
Moderate smokers - have smoked on 1-19 of the past 30 days.
Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Girls are somewhat more likely than boys to agree with statements about the addictiveness and harmfulness of tobacco. Differences between boys and girls are very small among nonsmokers but are a little stronger among current smokers. For example, 36.5 percent of male current smokers agree that it's safe to smoke for only a year or two as long as you quit after that, while only 21.2 percent of female current smokers agree.

Social Desirability of Smoking

Few Minnesota students accept the idea that smoking cigarettes is desirable for social reasons. Less than one-fourth of middle school and high school students agree with the idea that people who smoke cigarettes have more friends. They are even less inclined to accept the idea that smoking cigarettes makes people look cool. Only 10.0 percent of middle school students and 14.0 percent of high school students agree with that statement. (Table 14)

As worded, these questions ask whether smoking provides positive social benefits. Students clearly disagree with these statements, but we do not know whether they are saying that smoking is neutral in terms of social impact or that smoking has negative social impact. We do not know, for example, what the response would be if students were asked whether smoking cigarettes makes young people look boring or foolish.

Table 14. Social Desirability of Smoking Cigarettes
Percent Answering “Definitely Yes” or “Probably Yes” to the Following Statements

	Middle School	High School
Young people who smoke cigarettes have more friends.		
* “Definitely yes” or “Probably yes”	14.8%	21.4%
* “Definitely yes” only	3.7%	5.2%
Smoking cigarettes makes young people look cool or fit in.		
* “Definitely yes” or “Probably yes”	10.0%	14.0%
* “Definitely yes” only	3.7%	4.2%

Source: Minnesota Youth Tobacco Survey 2000

Current smokers are more likely to hang onto the notion that smoking does provide positive social benefits. Frequent smokers are nearly three times more likely than never-smokers to agree that smokers have more friends and that smoking makes young people look cool. Even so, the great majority of smokers do not agree with these beliefs. (Table 15)

Table 15. Social Desirability of Smoking, by Smoking Status: High School Students
Percent Answering “Definitely Yes” or “Probably Yes” to the Following Statements

	Never Smokers	Past Smokers	Moderate Smokers	Frequent Smokers
Young people who smoke cigarettes have more friends.				
* “Definitely yes” or “Probably yes”	13.2%	18.1%	26.5%	35.4%
* “Definitely yes” only	2.4%	4.4%	6.0%	10.0%
Smoking cigarettes makes young people look cool or fit in.				
* “Definitely yes” or “Probably yes”	5.9%	12.6%	22.8%	22.4%
* “Definitely yes” only	1.4%	3.9%	5.1%	7.8%

Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
Past smokers - have smoked before, but not in past 30 days.
Moderate smokers - have smoked on 1-19 of the past 30 days.
Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Boys are more likely than girls to believe that there are social benefits to smoking. For example, 26.2 percent of high school boys agree that smokers have more friends, while only 16.3 percent of high school girls agree.

Perceptions of Smoking Prevalence

It has long been thought that young people overestimate the number of their peers who actually smoke cigarettes. The ever-present images of tobacco use in movies and on TV, widespread advertising, and the high visibility of smokers lead many young people to assume that more people smoke than is actually the case. This assumption is not a harmless one. It is thought that young people who see smoking as normal, as something that just about everybody does, are more likely to take up smoking themselves.¹² They reason that if so many people are doing it, it can't be that bad.

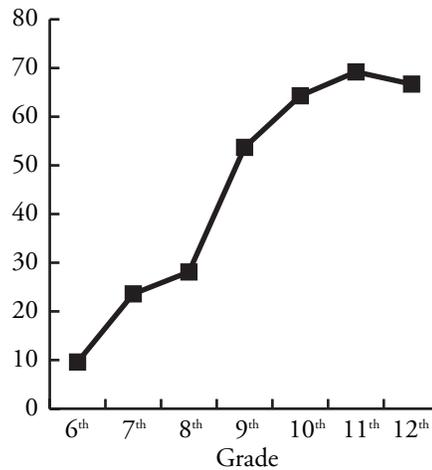
Students were asked for their best guess about the percentage of students in their grade at school who smoke. It is not possible to make precise comparisons between these guesses and actual smoking rates. For one thing, the question does not define “smoking”. For another, we don't know actual smoking rates in each grade in each school. The Youth Tobacco Survey did find that the percentage of current smokers statewide is 9.1 percent for middle school and 32.4 percent for high school. To make matters simple, we decided that we would be interested in any guesses that put the smoking rate at more than 40 percent.

¹² U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*, 1994, p. 132.

It does appear that students overestimate the extent of cigarette smoking among their fellow students. About one in five middle school students (20.6%) and nearly two-thirds of high school students (63.3%) estimate that the smoking rate among their fellow students is greater than 40 percent.

Perceptions of smoking prevalence appear to change dramatically when students enter high school. The percentage of students who think the smoking rate is over 40 percent jumps from 28.1 percent among 8th graders to 53.7 percent among 9th graders. (Figure 8)

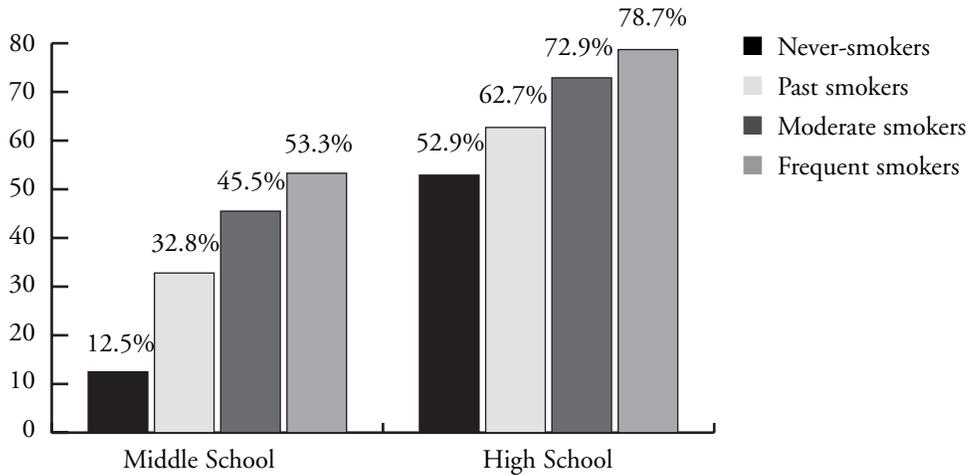
Figure 8
Percentage of Students Guessing That More Than 40 Percent of Their Fellow Students Smoke Cigarettes



Source: Minnesota Youth Tobacco Survey 2000

As might be expected, students who have had experience with smoking are more likely to perceive that large numbers of their fellow students also smoke. As we shall see later, current smokers tend to have friends who smoke and are more likely to live with other smokers at home. In high school, more than three-fourths of the frequent smokers (78.7%) believe that over 40 percent of students smoke. It is noteworthy that even high school students who have never tried smoking also have high estimates, with just over half (52.9%) guessing that at least 40 percent of students smoke. (Figure 9)

Figure 9
Percentage of Students Guessing That More Than 40 Percent of
Fellow Students Are Smokers, by Smoking Status



Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
 Past smokers - have smoked before, but not in past 30 days.
 Moderate smokers - have smoked on 1-19 of the past 30 days.
 Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Refusal Skills

Having good basic knowledge about the harmfulness of tobacco use and having negative attitudes about the social desirability of smoking are important steps in helping young people make good decisions about these products. Many educators have been urging a stronger role for programs that increase the social skills of young people as they try to deal with pressures and enticements to try smoking. It appears that this approach is finding its way into some school curricula, especially in middle schools. Nearly half of middle school students (44.2%) report that they practiced refusal skills in class during the current school year, as did 15.9 percent of high school students. Current smokers were somewhat less likely than nonsmokers to say that they had practiced refusal skills.

VIII. Influence of the Home Environment

Exposure to Tobacco at Home

Large numbers of young people are exposed to tobacco at home. Two of every five students (40.5% in middle school; 39.9% in high school) report that they live with someone who smokes cigarettes, possibly a parent, brother or sister, other relative or someone else who lives at home. Moreover, 10.7 percent of middle school students and 13.7 percent of high school students live with someone who uses smokeless tobacco.

Exposure to cigarettes at home increases the likelihood that young people will take up smoking. In middle school, students who live with smokers are three times more likely to be moderate smokers or frequent smokers than are students who do not live with anyone who smokes. Large numbers of high school students who live with someone who smokes have become frequent smokers. One-fourth of all students living with a parent or other person who smokes (25.5%) are frequent smokers, compared to 10.9 percent of students who do not live with anyone who smokes. (Table 16)

**Table 16. Smoking Status of Students,
by Whether They Live with Someone Who Smokes**

Smoking Status	Lives with someone who smokes	Does not live with anyone who smokes
Middle School:		
Never-Smokers	53.8%	78.9%
Past Smokers	30.3%	16.4%
Moderate Smokers	11.3%	3.7%
Frequent Smokers	4.7%	1.0%
TOTAL	100.0%	100.0%
High School		
Never-Smokers	25.1%	44.6%
Past Smokers	32.4%	30.3%
Moderate Smokers	17.0%	14.2%
Frequent Smokers	25.5%	10.9%
TOTAL	100.0%	100.0%

Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
 Past smokers - have smoked before, but not in past 30 days.
 Moderate smokers - have smoked on 1-19 of the past 30 days.
 Frequent smokers - have smoked on 20 or more of the past 30 days.

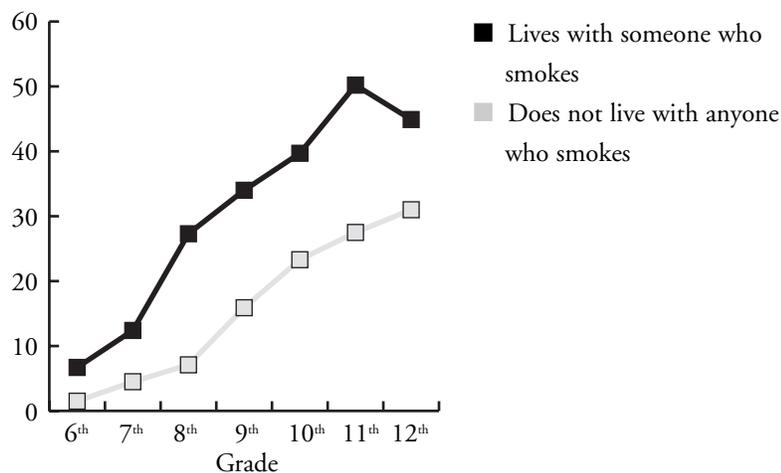
Source: Minnesota Youth Tobacco Survey 2000

Living with someone who smokes can boost the chances of becoming a smoker in several ways. The parent, sibling or other person who smokes is a role model whose behavior sends an implicit message that perhaps smoking is not so dangerous or disgusting after all and that it is a normal part of life. Children in a smoking household may gradually become acclimated to tobacco smoke so that it is not so irritating. And having a smoker around means there is a ready and tempting source of cigarettes for young experimenters.

One of the effects of living in a smoking household seems to be that young people start smoking at an earlier age. As Figure 10 shows, the percentage of current smokers escalates very rapidly during the middle school years for students growing up with other smokers at home. The sharpest increase is between 7th and 8th grades. Already by 8th grade, 27 percent of students who live with smokers have become current smokers, compared to 7 percent of students from households where no one else smokes.

The growth in the percentage of frequent smokers (those who have smoked on at least 20 of the past 30 days) is also very rapid through out middle school and most of high school for students growing up with other smokers at home. For students who do not live with anyone who smokes, the percentage of frequent smokers grows more gradually. At 11th grade, one-third (32.7%) of adolescents living with someone who smokes have become frequent smokers, compared to 12.7 percent of students who do not live with anyone who smokes. (Figure 11)

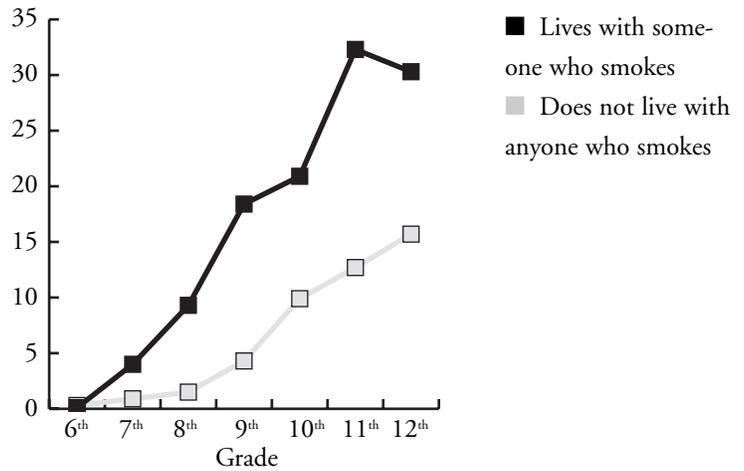
Figure 10
Percentage of Students Who are Current Smokers,
by Grade and Whether Living with Someone Who Smokes



Note: Current smokers - have smoked on one or more days in past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Figure 11
Percentage of Students Who are Frequent Smokers,
by Grade and Whether Living with Someone Who Smokes



Note: Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Parents' Warnings

Parents have not been silent about the dangers of tobacco. Nearly three-fourths of students report that one or both of their parents (usually both) have discussed the dangers of tobacco use with them, and an even greater percentage have been told by one or both parents not to smoke cigarettes. (Table 17) The survey does not, however, explore how often and persistently parents have conveyed that message.

Table 17. Parents' Warnings about Tobacco Use

	Middle School	High School
At least one parent has discussed the dangers of tobacco use with student.	72.9%	70.9%
At least one parent has told student not to smoke cigarettes.	86.9%	83.7%

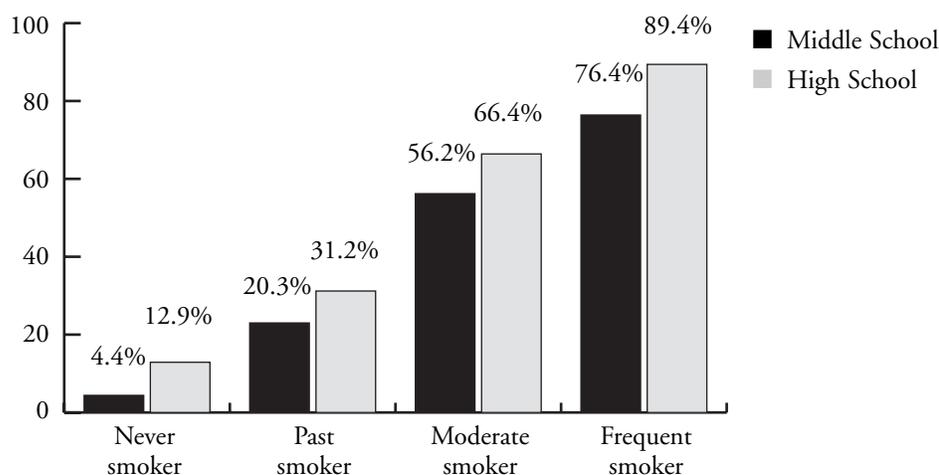
It also appears, however, that many parents - at least as reported by their children - do not know that their children are smoking. Nearly three-fourths of moderate smokers, many of whom are experimenting with cigarettes, believe that their parents are unaware that they smoke. Frequent smokers would have much more difficulty hiding the fact that they smoked. But even among frequent smokers, one-third of middle schoolers (35.6%) and one-fourth of high schoolers (25.5%) report that their parents do not know that they smoke.

IX. The Influence of Friends

Having friends who smoke is strongly related to one's own tobacco use, although it is difficult to say what is cause and what is effect. Groups of friends may already share some of the social factors that are associated with smoking, such as low income, lack of success in school, emotional distress, and involvement in petty delinquency. Young people may be influenced to try smoking by friends and may be encouraged by friends to stick with it in spite of the coughing, irritation and discomfort they may initially experience. Friends may provide cigarettes. As they continue to smoke, young people may choose other smokers as new friends. The group of friends reinforces the value of smoking and serves as a source of cigarettes or as a source of information about how to get cigarettes.

Smoking seems to be one of the key factors that shapes peer groups and social networks among young people. As students become more deeply involved with cigarettes, their circle of closest friends includes more and more smokers. The pattern is evident in middle school as well as high school. Among high school students, nearly all of the frequent smokers (89.4%) but only one of every eight never-smokers (12.9%) report that half or more of their four closest friends are smokers. (Figure 12)

Figure 12
Percentage of Students Who Report That At Least Two of Their Four Closest Friends Are Smokers, by Smoking Status

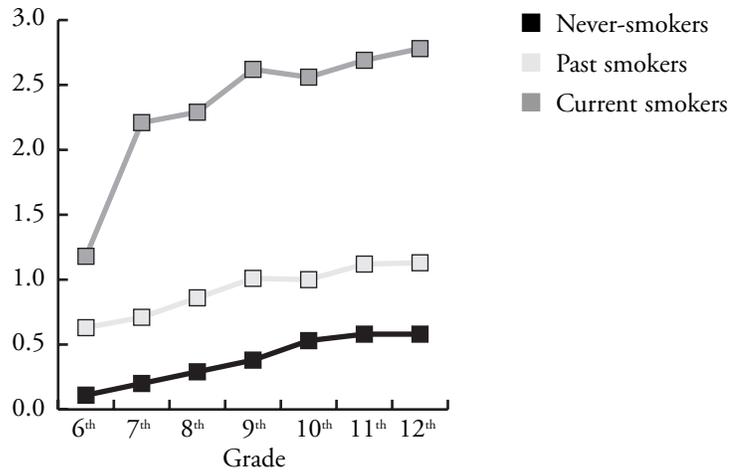


Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
Past smokers - have smoked before, but not in past 30 days.
Moderate smokers - have smoked on 1-19 of the past 30 days.
Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

The pattern of smokers associating with other smokers appears to become solidified as early as 7th grade. Figure 13 shows that the average number of friends who smoke increases sharply for current smokers in the 7th grade. Even though there are not yet many smokers to choose from in their age group, smokers at this grade level are able to develop friendship groups that consist largely of other smokers.

Figure 13
Average Number of Friends Who Smoke (Among Four Closest Friends),
by Smoking Status



Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
 Past smokers - have smoked before, but not in past 30 days.
 Current smokers - have smoked on one or more days in past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

X. Environmental Tobacco Smoke

At home, at work, in cars and elsewhere, many young people find they have little choice but to breathe in other people's smoke. Environmental tobacco smoke is not only annoying to many people but is also a significant risk factor contributing to lung cancer, heart disease, asthma, respiratory infections, and poor reproductive outcomes.¹³

The majority of students report that they have been exposed to secondhand smoke during the week prior to the survey, by being in the same room with or riding in a car with someone who was smoking. Many were exposed on repeated occasions. One-third of middle school students (34.4%) and one-half of high school students (49.3%) had been exposed to secondhand smoke on three or more days in the past week. (Table 18)

Table 18. Exposure to Someone Else's Cigarette Smoke

	Middle School	High School
Any exposure during past week:		
(percent who were in same room or car as someone who was smoking on at least one day)	58.0%	75.8%
Repeated exposure during past week		
(percent who were in same room or car as someone who was smoking on three or more days)	34.4%	49.3%

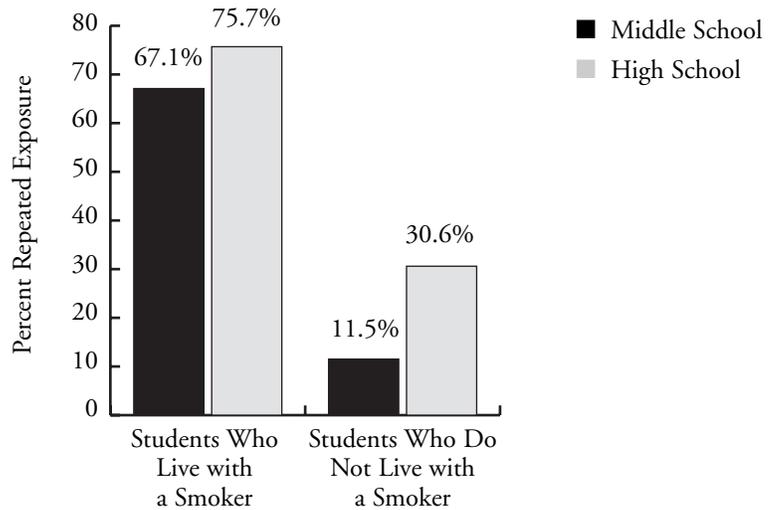
Source: Minnesota Youth Tobacco Survey 2000

Living with Someone Who Smokes

Living with a parent, sibling or other person who smokes is one of the most important causes of repeated youth exposure to second-hand smoke. In middle school, for example, 67.1 percent of students who live with a smoker report exposure to second-hand smoke on three or more days in the past week, compared to only 11.5 percent of students who do not live with a smoker. (Figure 14)

¹³ U.S. Department of Health and Human Services, The Health Consequences of Involuntary Smoking: Report of the Surgeon General, Washington, D.C., 1986; U.S. Environmental Protection Agency, Office of Research and Development, Regulatory Health Effects of Passive Smoking: Lung Cancer and Other Disorders, Washington, D.C., 1993; California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Health Effects of Exposure to Environmental Tobacco Smoke, Sacramento, CA, 1997.

Figure 14
Repeated Exposure* to Secondhand Smoke,
by Whether Student Lives with a Smoker



Note: (*) In room or car with someone who was smoking on three or more days in past week.

Source: Minnesota Youth Tobacco Survey 2000

Exposure of Non-smokers to Secondhand Smoke

Young smokers face high exposure to secondhand smoke. Since teen smokers usually have other smokers as close friends and tend to live with other smokers, they are very often in situations in which they are breathing in other people’s smoke as well as their own. Nonsmokers usually do not have smokers as close friends. Nevertheless, about one-third of middle school and high school students who are non-smokers (30.1% and 33.6% respectively) report repeated exposure to secondhand smoke. (Table 19)

Table 19. Repeated Exposure to Secondhand Smoke in Past Week, by Current Smoking Status

	Current Smoker	Not Current Smoker
Middle School:		
Percent in room or car with someone who was smoking on three or more days	73.5%	30.1%
High School:		
Percent in room or car with someone who was smoking on three or more days	81.1%	33.6%

Source: Minnesota Youth Tobacco Survey 2000

XI. Media Exposure and Tobacco Promotions

While direct tobacco advertising is banned on radio and TV and now on billboards, widespread exposure to tobacco and modeling of tobacco use still take place in the media. Over 80 percent of students report that they see actors in movies or on TV using tobacco, and just under one-fourth report that they see athletes on TV using tobacco. One of the new promotional tools available to the industry is the internet. Close to one-third of students who use the internet say that they see tobacco advertising on the internet. (Table 20) There are no appreciable differences in media exposure by gender, grade or smoking status.

Table 20. Exposure to Tobacco Use in the Media

	Middle School	High School
Percent of movie/TV viewers who say they see actors using tobacco “most of the time” or “some of the time”	84.0%	89.7%
Percent of TV viewers who say they see athletes on TV using tobacco “most of the time” or “some of the time”	22.2%	24.2%
Percent of internet users who say they see tobacco ads on the internet “most of the time” or “some of the time”	32.2%	28.2%

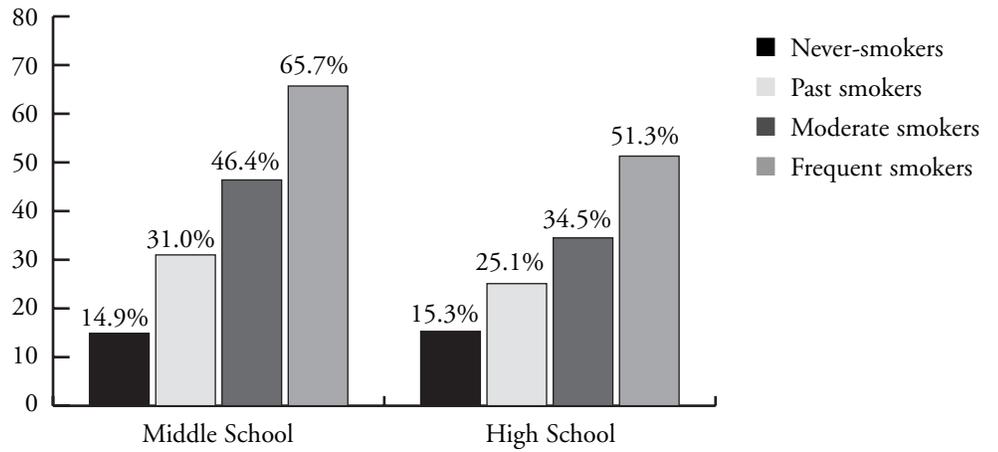
Source: Minnesota Youth Tobacco Survey 2000

Tobacco Promotional Items

During the past decade, tobacco companies have invested heavily in selling or giving away items like sports gear, lighters, jackets and hats that carry tobacco company names or pictures. Though this practice has been curtailed somewhat by the terms of Minnesota’s tobacco lawsuit settlement, many young people still report that they have obtained such items. Just under one-fourth of middle school students (22.2%) and just over one-fourth of high school students (27.5%) say that they have bought or received something with a tobacco company name or picture on it in the past year. Moreover, about 20 percent of middle school students and nearly 40 percent of high school students say they would use or wear something with a tobacco company name or picture on it.

Tobacco company promotional items, not surprisingly, carry far more appeal for smokers than for non-smokers. Among high school students, more than half of frequent smokers (51.3%) report that they have bought or received such items, compared to only 15.3 percent of those who have never smoked. (Figure 15) Similarly, more than half of moderate smokers and three-fourths of frequent smokers say they would wear or use promotional items. (Figure 16)

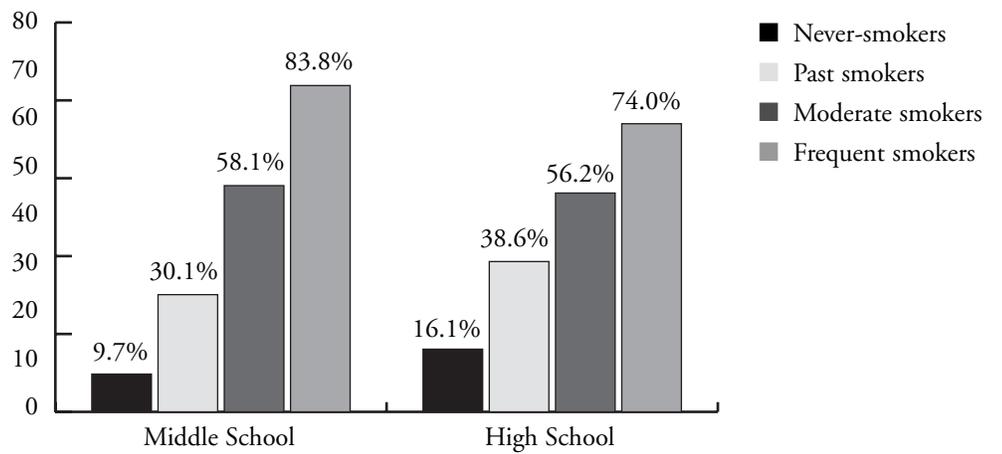
Figure 15
Percentage of Students Who Bought or Received Tobacco Promotional Items
in Past Year, by Smoking Status



Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
 Past smokers - have smoked before, but not in past 30 days.
 Moderate smokers - have smoked on 1-19 of the past 30 days.
 Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

Figure 16
Percentage of Students Who Would Use or Wear Tobacco Promotional Items,
by Smoking Status



Note: Never-smokers - have never smoked cigarettes, not even one or two puffs.
 Past smokers - have smoked before, but not in past 30 days.
 Moderate smokers - have smoked on 1-19 of the past 30 days.
 Frequent smokers - have smoked on 20 or more of the past 30 days.

Source: Minnesota Youth Tobacco Survey 2000

The relatively few never-smokers who would use promotional items are in many cases the same students who are susceptible to starting smoking. In other words, interest in promotional items is another indicator that young people may be entering the preparation stage in which they begin to see themselves as potential smokers.

Tobacco company promotional items seem to be more appealing to boys than to girls. Among high school students, for example, boys are more likely than girls to have bought or received promotional items (30.5% to 24.7%) and are more likely to say that they would wear or use such items (46.3% to 32.4%).

Brand Preferences

The impact of tobacco advertising, promotion and media exposure can be assessed by looking at the brands adolescents typically smoke. Teens appear to be more affected by tobacco advertising than are adults.¹⁴ In addition, the level of advertising has continued to increase over the years. In 1998, the last year for which figures are available, the industry spent \$6.7 billion dollars on advertising and promotion, the largest amount in history.¹⁵ Adolescents in Minnesota, as in the rest of the nation, overwhelmingly choose to smoke the three most advertised brands - Marlboro, Camel and Newport. Overall, 88.4 percent of current smokers in high school usually smoke one of the top three advertised brands, with more than half choosing Marlboro. In middle school, 75.0 percent of the current smokers usually smoke one of the top three brands. (Table 21)

Table 21. Usual Brand Smoked by Current Smokers in Past 30 Days

	Middle School	High School
Marlboro	58.1%	57.1%
Camel	7.4%	24.0%
Newport	9.5%	7.3%
Other brands	12.8%	5.2%
Does not have a usual brand	12.2%	6.4%
TOTAL	100.0%	100.0%

Source: Minnesota Youth Tobacco Survey 2000

¹⁴ R.W. Pollay et al., "The Last Straw? Cigarette Advertising and Realized Market Shares Among Youth and Adults, 1979-1993," *Journal of Marketing*, 1996, Vol. 60: 1-16.

¹⁵ Federal Trade Commission, *Report to Congress for 1998, Pursuant to the Federal Cigarette Labeling and Advertising Act*, 2000. Available on the web at <http://www.ftc.gov/reports/cigarettes/cig98rpt.pdf>.

Appendix A

Risk Behavior and Social Factors Associated with Smoking Cigarettes

1998 Minnesota Student Survey 9th Grade Students

Definitions:

- “Non-smokers” have not smoked any cigarettes in the past 30 days
- “Occasional smokers” have smoked in the past 30 days, but “less than one cigarette per day.”
- “Daily smokers” indicated that in the past 30 days they smoked anywhere from “1-5 cigarettes per day” to “two packs or more per day.”

	During the last 30 days, how frequently have you smoked cigarettes?		
	No cigarettes in last 30 days (Non-smokers)	Occasional Smokers	Daily Smokers
Number of Students	(33,016)	(6,449)	(8,055)
ALCOHOL AND MARIJUANA USE			
Percent who drank alcoholic beverages on three or more occasions in last 30 days	6.6%	31.0%	54.0%
Percent who used marijuana or hashish on three or more occasions in last 30 days	2.1%	10.5%	42.7%
EARLY SEXUAL ACTIVITY			
Percent who have had sexual intercourse three or more times in lifetime	5.5%	15.3%	40.7%
Percent who have been pregnant or gotten someone pregnant	1.1%	2.5%	9.5%
SUICIDE ATTEMPTS AND EMOTIONAL DISTRESS			
Percent who tried to kill themselves during the last year	3.4%	11.5%	21.0%
Percent who felt under great amount of stress or pressure in last 30 days	10.4%	16.9%	23.5%
Percent who felt sad “all the time” or “most of the time” in last 30 days	9.3%	18.3%	25.4%
Percent who felt very discouraged or hopeless in last 30 days	10.2%	21.0%	28.8%
Percent who felt nervous, worried or upset “all the time” or “most of the time” in last 30 days	12.3%	21.2%	28.5%

During the last 30 days, how frequently have you smoked cigarettes?

	No cigarettes in last 30 days (Non-smokers)	Occasional Smokers	Daily Smokers
ENGAGED IN VIOLENCE/CARRIED WEAPON			
Percent who hit or beat up another person three or more times in last 12 months	8.6%	16.0%	31.2%
Percent who carried a weapon (gun or other weapon) on school property at least one day in last 30 days	5.5%	13.7%	26.5%
PHYSICAL ACTIVITY			
Percent who exercised hard for at least 20 minutes on three or more days in the past week	70.3%	69.0%	57.2%
UNHEALTHY DIET AND EATING BEHAVIORS			
Percent who had only one serving or no servings of fruit, fruit juices or vegetables yesterday	20.1%	25.2%	37.5%
Percent who have binge-eaten in last 12 months (eaten so much in a short period of time that they felt out of control)	15.3%	25.1%	27.8%
SCHOOL AND SCHOOL ENVIRONMENT			
Percent who like going to school “very much” or “quite a bit”	47.7%	30.3%	16.9%
Percent who plan to go to college	86.2%	78.0%	54.9%
Percent who have skipped or cut full days of school three or more times in last 30 days	3.0%	8.0%	26.2%
Percent whose two most frequent grades are A’s and B’s (including A’s only and B’s only)	65.5%	46.1%	20.7%
Percent whose two most frequent grades include some combination of C’s, D’s and F’s	9.4%	18.7%	42.4%
ENGAGED IN RUNAWAY OR DELINQUENT BEHAVIOR			
Percent who ran away from home at least once in last 12 months	5.1%	16.4%	36.1%
Percent who damaged or destroyed property three or more times in last 12 months	5.5%	16.7%	35.5%
Percent who took something from a store without paying three or more times in last 12 months	6.6%	24.0%	42.9%
SAFETY			
Percent who “often” or “always” wear a seat belt when they ride in a car	73.8%	56.4%	37.5%
Percent who “often” ride with friends after they (the friends) have been using alcohol or other drugs	2.3%	10.6%	34.7%

**During the last 30 days, how
frequently have you smoked cigarettes?**

	No cigarettes in last 30 days (Non-smokers)	Occasional Smokers	Daily Smokers
GENERAL HEALTH			
Percent who had their last physical exam three or more years ago	15.4%	14.9%	20.0%
Percent who have a mental or physical condition or other health problem that has lasted at least 12 months	11.1%	13.7%	17.3%
RELATIONSHIP WITH PARENTS AND FAMILY			
Percent who say parents care about them "very much"	76.7%	61.1%	52.8%
Percent who can talk to father about problems they are having "most of the time" or "some of the time"	68.0%	53.1%	45.3%
Percent who can talk to mother about problems they are having "most of the time" or "some of the time"	84.2%	73.6%	66.3%
PHYSICAL OR SEXUAL ABUSE			
Percent who say that they had ever been hit by an adult in their household so hard or so often that they had marks or were afraid of that person?	8.1%	16.2%	24.8%
Percent who have ever experienced some form of unwanted or forced sexual touching	5.5%	11.1%	20.4%
FAMILY ALCOHOL OR DRUG PROBLEMS			
Percent who say that alcohol use by a family member has repeatedly caused family, health, job or legal problems	13.3%	21.6%	32.4%
Percent who say that drug use by a family member has repeatedly caused family, health, job or legal problems	7.0%	12.8%	23.2%
PARTICIPATION IN ACTIVITIES			
Percent who spend			
- six or more hours per week doing homework	26.2%	15.3%	9.4%
- three or more hours per week on band, choir, orchestra, music lessons or music practice	30.0%	24.0%	14.5%
- six or more hours per week playing sports on a school team	41.7%	39.0%	19.5%
- 11 hours or more per week doing work for pay	8.5%	12.0%	17.0%

Source: The above table was prepared by the Center for Health Statistics, Minnesota Department of Health, using data from the 1998 Minnesota Student Survey conducted by Minnesota Department of Children, Families and Learning.

For further information: Contact Pete Rode, Center for Health Statistics, (651) 296-6036.

Appendix B

Stages of Cigarette Smoking

Preparatory Stage	“Attitudes and beliefs about the utility of smoking are formed. At this stage, even if no actual smoking behavior is enacted, the child or adolescent may see smoking as functional-as a way to appear mature, cope with stress, bond with a new peer group, or display independence.”
Trying Stage	“. . . encompasses the first two or three times an adolescent smokes. Peers are usually involved in situations that encourage trying.”
Experimental Stage	“. . . repeated but irregular smoking. At this third stage, smoking is generally a response to a particular situation (such as a party) or to a particular person (such as a best friend).”
Regular Use	“. . . smokes on a regular basis, usually at least weekly, and increasingly across a variety of situations and personal interactions.”
Nicotine Dependence and Addiction	“. . . characterized by physiological need for nicotine. This need includes tolerance for nicotine, withdrawal symptoms if the person tries to quit, and a high probability of relapse if the person does quit”

Adapted from U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office on Smoking and Health, Preventing Tobacco Use Among Young People: A Report of the Surgeon General, 1994, p. 126.