



Quitting Smoking, 1999-2003: Nicotine Addiction in Minnesota

January 2004

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NICOTINE ADDICTION IN MINNESOTA**

This report was prepared by:

Blue Cross and Blue Shield of Minnesota

Minnesota Department of Health

Minnesota Partnership for Action Against Tobacco

University of Minnesota

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INTRODUCTION

Quitting Smoking, 1999-2003: Nicotine Addiction in Minnesota is one in a series of collaborative research reports about smoking based on the 2003 Minnesota Adult Tobacco Survey. Four organizations — the Minnesota Department of Health, the Minnesota Partnership for Action Against Tobacco (MPAAT), Blue Cross and Blue Shield of Minnesota (Blue Cross), and the University of Minnesota — joined together to conduct the survey and produce this report.

This report describes Minnesotans' efforts to quit smoking and provides an update to the findings from the 1999 Adult Tobacco Prevalence Survey that were presented in our July 2001 report, *Quitting Smoking: Nicotine Addiction in Minnesota*. (See Appendix A for a description of the research methods for both surveys.) Other reports in the series explore patterns of young adult smoking and exposure to and attitudes regarding secondhand smoke.

Our objective in conducting these surveys was to obtain scientifically valid data on Minnesotans' knowledge, attitudes, and behaviors concerning adult tobacco use and exposure to secondhand smoke in order to support policy development, advocacy, and program planning. Our overarching goals are to help current smokers quit, to prevent more people from starting to smoke, and to protect all Minnesotans by reducing exposure to secondhand smoke.

This report describes quitting smoking patterns among the general population of adult Minnesotans. Between November 2002 and June 2003, 8,821 adults (age 18 and older) were interviewed for the Minnesota Adult Tobacco Survey.

This report interprets the 2003 survey results in light of several important changes that have occurred in the state since the 1999 Adult Tobacco Prevalence Survey. (See *Recent environmental shifts may influence quitting*, page 6.) Results from the 1999 and 2003 surveys are compared to show changes in smokers' attitudes and behaviors that may have occurred because of these environmental shifts. All comparisons between 1999 and 2003 presented in this report are statistically significant at or beyond $p < .05$, unless otherwise noted.

For several reasons, this report focuses on cigarette smoking, rather than use of other forms of tobacco, such as cigars, pipes, or chewing tobacco. First, 18 percent of adult Minnesotans smoke cigarettes or both smoke cigarettes and use other forms of tobacco. A comparatively small, additional 4 percent use only other forms of tobacco. Second, this survey collected less information about individuals' efforts to quit using other tobacco products than about cigarette smoking. Finally, less is known about the effectiveness of methods to help users of these other tobacco products quit successfully.

EVERY MINNESOTAN PAYS THE HUMAN AND ECONOMIC COSTS OF SMOKING

The human cost

Smoking is a major cause of death and disease in the United States. As the leading cause of preventable death in the United States, smoking prematurely kills more than 440,000 Americans each year from diseases caused by smoking or exposure to secondhand smoke. Smoking causes death primarily from cancer, cardiovascular disease, and respiratory diseases. Smokers who die of smoking-related diseases shorten their lives by an average of 13 to 14 years.¹ In Minnesota, one in every seven deaths, or 5,600 deaths each year, is attributable to smoking.²

Beyond mortality, the Centers for Disease Control (CDC) estimated that more than 8.5 million Americans suffer from smoking-related illnesses, primarily chronic bronchitis, emphysema, and heart disease.³ Many people experience decreased quality of life because of these illnesses. In Minnesota, an estimated 280,000 children are exposed to secondhand smoke in their homes. These children experience asthma, bronchitis, middle ear infections, and sudden infant death syndrome at higher rates.⁴

The economic cost

According to CDC estimates, tobacco use costs Americans more than \$75 billion each year in excess direct medical expenses, representing 8 percent of total U.S. health care costs.¹ Smokers incur these increased medical costs because they suffer from certain diseases at higher rates. Minnesotans lose an estimated \$1.6 billion annually from health care

expenses for tobacco-related disease.⁵ That figure does not include the excess medical costs of treating children who are exposed to secondhand smoke.

Who is paying the medical costs for tobacco use?

- **Minnesota businesses** face increased health care insurance costs and/or direct medical expenditures for their employees.
- **Minnesota state and local governments** pay more to cover enrollees in MinnesotaCare and Medical Assistance, the state's public health care programs.
- **Minnesotans with smoking-related diseases** often pay additional out-of-pocket costs for their treatments, medications, medical equipment, and other items.
- **All Minnesotans**, whether through taxes that cover government health programs or increased health premium contributions, co-payments, or deductibles, share the costs of tobacco use.

In addition to medical costs, smoking costs the U.S. economy an estimated \$82 billion each year in lost productivity because of premature death.¹ The Minnesota economy loses approximately \$996 million annually in lost productivity.²

Lost productivity costs specifically borne by Minnesota businesses include lost work time because of smoking breaks and more illnesses, early retirements due to smoking-related illnesses, and training to replace workers who leave or die prematurely.

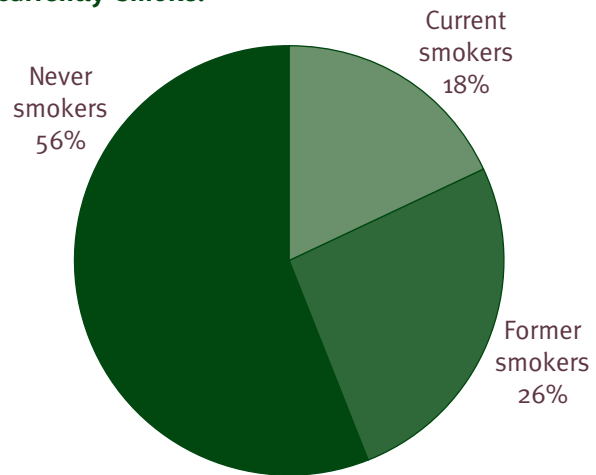
MANY ADULT MINNESOTANS STILL SMOKE

Nearly one in five (18%) Minnesota adults reported that they were current smokers at the time of the 2003 Minnesota Adult Tobacco Survey (Figure 1). That represents more than 666,000 adult Minnesotans.

The 18 percent prevalence of current smoking measured in the 2003 survey is slightly lower than the 20 percent prevalence finding from the 1999 Adult Tobacco Prevalence Survey. While this difference is encouraging, one can not yet conclude that this modest decline represents more than a minor variation over time in smoking prevalence. In fact, the smoking prevalence measured by the Minnesota Behavioral Risk Factor Surveillance System, a survey conducted every year, has remained relatively stable since 1990.⁶

While lower than the 2002 national median cigarette smoking prevalence of 23 percent,⁶ this rate is still too high, considering the high costs associated with smoking. California's tobacco control program demonstrated the potential to achieve an even lower statewide smoking prevalence⁷ and the associated long-term health and economic benefits of reduced disease.⁸

Figure 1: 18 percent of Minnesota adults currently smoke.



Data Source: 2003 Minnesota Adult Tobacco Survey

ADULT SMOKING STATUS – DEFINITIONS

The Centers for Disease Control and most previous studies use the following standard criteria to define adult smoking status: *

A **current smoker** reported smoking at least 100 cigarettes in his or her lifetime and now smokes every day or some days.

A **former smoker** reported smoking at least 100 cigarettes in his or her lifetime but does not smoke now.

A **never smoker** reported not smoking 100 cigarettes in his or her lifetime.

* Most national surveys of tobacco use employ this standard definition of adult smoking status. Another report from the 2003 Minnesota Adult Tobacco Survey, *Patterns of Smoking Among Minnesota's Young Adults*, explores a new, broader definition of smoking status for the young adult (ages 18 to 24) population.

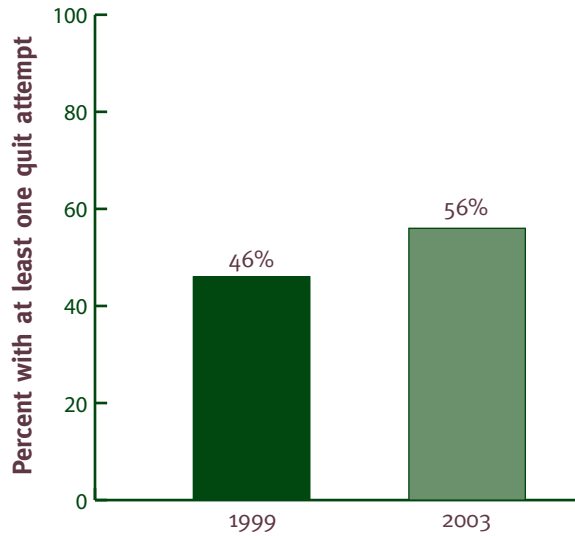
MORE MINNESOTANS ARE TRYING TO QUIT SMOKING

National health survey results indicate that seven out of 10 American adult smokers want to quit.⁹ The 2003 Minnesota Adult Tobacco Survey reveals that, compared to 1999, more adult smokers have attempted to quit smoking and more are preparing to quit smoking.

Quit attempts dramatically increase

In the 1999 Adult Tobacco Prevalence Survey, 46 percent of Minnesota current adult smokers reported that they had stopped smoking for one day or longer in the past 12 months because they were trying to quit. This percent rose dramatically to 56 percent of adult smokers in the 2003 Minnesota Adult Tobacco Survey (Figure 2). That is, nearly 370,000 adult Minnesota smokers attempted to quit in the year before the 2003 survey — an increase of nearly 52,000 individuals making quit attempts since 1999.

Figure 2: The percent of current adult smokers with at least one quit attempt in the past 12 months increased from 1999 to 2003.



Data Sources: 2003 Minnesota Adult Tobacco Survey
1999 Adult Tobacco Prevalence Survey

More smokers are getting ready to quit

Describing smokers in terms of their readiness to quit smoking, or “stage of change,” provides a second way to quantify the desire to quit. (See *Readiness to Quit — Definitions*.) The percent of smokers in the *preparation* stage of readiness to quit grew from 20 percent in the 1999 Adult Tobacco Prevalence Survey to 25 percent in the 2003 Minnesota Adult Tobacco Survey ($p < .10$) (Figure 3). The 2003 result means that over 150,000 adult Minnesota smokers were planning a quit attempt within the next month — approximately 22,500 more smokers than in 1999.

READINESS TO QUIT—DEFINITIONS

Current smokers’ readiness to quit often is characterized in terms of the following “stages of change.”

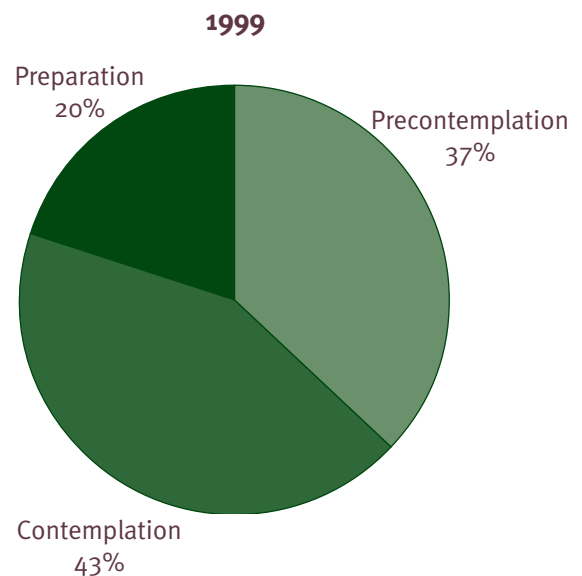
Precontemplation: Smokers not seriously considering stopping smoking within the next six months.

Contemplation: Smokers seriously considering stopping smoking within the next six months.

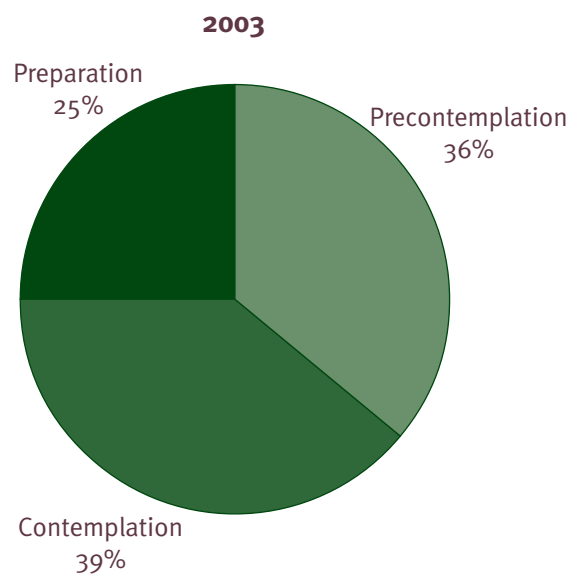
Preparation: Smokers planning to stop smoking within the next 30 days who have also tried quitting within the past 12 months.

Action and maintenance, two additional stages, describe former smokers, who are not the focus of this section.

Figure 3: Current adult smokers’ readiness to quit increased from 1999 to 2003.



Data Source: 1999 Adult Tobacco Prevalence Survey



Data Source: 2003 Minnesota Adult Tobacco Survey

RECENT ENVIRONMENTAL CHANGES MAY INFLUENCE QUITTING

The social environment may either encourage or discourage a smoker from attempting to quit. An understanding of how efforts to reduce tobacco use in Minnesota since 1999 shaped the social environment will help the reader understand the results in this report. Many of these efforts developed from the funds that the State of Minnesota received in its settlement of the lawsuit filed with Blue Cross against the tobacco companies in 1994. The 1998 settlement terms and subsequent legislation dedicated some of these funds to reducing tobacco use in Minnesota. Blue Cross also settled with the tobacco companies in 1998; however, with the exception of a portion given to the Blue Cross and Blue Shield of Minnesota Foundation in 1999, its settlement funds remain unavailable because of legal issues.

Environmental factors that support quitting

- ***MPAAT and the state's health plans increased access to quit-smoking assistance***, including both medications and counseling. (See *Quitting assistance is now available to every Minnesotan*, page 10.)
- ***Health professionals received support in encouraging patients to quit***. Health plans have reimbursed clinicians for treatment of tobacco use as a chronic illness, offered incentive programs for active identification and assistance to smokers, facilitated recommendations to smokers to use telephone helplines, and provided print and training resources about supporting quit attempts.
- ***Media campaigns encouraged the use of stop-smoking telephone helplines***. Both Blue Cross (since 2000) and MPAAT (since 2001) have aggressively promoted the availability of their telephone helplines using televised ad campaigns and other media. In addition to increasing use of the helplines, the messages also promoted the general idea of quitting smoking.
- ***A media campaign described the dangers of secondhand smoke***. In the spring of 2001, MPAAT launched a media campaign that educated Minnesotans about the harm secondhand smoke causes to themselves and others.
- ***Some communities passed smoke-free ordinances***. Duluth, Cloquet, Moose Lake, and Olmsted County enacted smoke-free workplace ordinances that also extend protection to restaurants. Several communities also made their parks smoke-free.
- ***The Minnesota Clean Indoor Air Act was strengthened***. The new regulations, announced in 2002 and effective in September 2003, expanded the requirement for smoke-free workplaces to include factories, warehouses, and other similar places.
- ***The Target Market campaign organized youth***. Between 2000 and 2003, this innovative Minnesota Department of Health program engaged Minnesota's youth (ages 12 to 17), through organizing and a mass media campaign, to realize that they are being targeted by the tobacco industry's sophisticated marketing.

Environmental barriers that do not support quitting

- ***The tobacco industry continues to market its product.*** Since 1998, spending on advertising and promotion of cigarettes increased by 67 percent. In Minnesota, the industry spent an estimated \$196 million in 2001 to recruit new smokers, increase consumption, and maintain customer loyalty.¹⁰
- ***Funding decreased for smoke-free media campaigns and local policy efforts.*** MPAAT's focus shifted to individual-level stop-smoking services in 2002 and its media campaign was redesigned to promote those services.
- ***Target Market was eliminated.*** The Minnesota legislature sharply reduced funding for youth prevention initiatives in 2003, bringing an end to the Target Market advertising campaign and youth organizing efforts.
- ***Tobacco settlement funds are not yet available to Blue Cross.*** Since the 1998 tobacco settlement, ongoing legal battles have tied up Blue Cross' allocated funds. Blue Cross plans to implement large-scale health improvement programs with a significant portion of this money.

QUITTING SMOKING IS DIFFICULT

Many former smokers say that quitting was one of the hardest things they ever did. Quitting smoking is difficult because smokers become addicted to nicotine and because the social environments of smokers tend to support smoking.

Smoking is addictive

Of the current cigarette smokers who had tried to quit in the 12 months before the 2003 Minnesota Adult Tobacco Survey, 68 percent made multiple quit attempts. Fourteen percent had tried to quit six or more times that year. Smokers who tried to quit reported an average of 3.1 quit attempts in the past 12 months, suggesting the need for many attempts before quitting successfully.

Among former smokers, 5 percent had quit within the six months prior to the survey. This group of nearly 48,000 recent quitters faces a high risk of relapse.

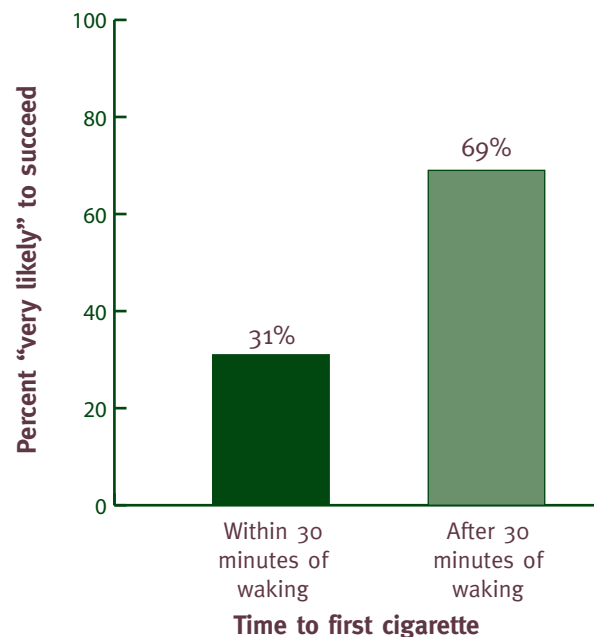
To characterize and measure addiction, the survey asked smokers, “How soon after you wake up do you have your first cigarette?” Nearly half (46%) of Minnesota smokers have their first cigarette within 30 minutes of waking. Indicating an even greater level of addiction, 19 percent — nearly 123,000 Minnesota smokers — light their first cigarette within five minutes of waking.

Current smokers’ individual levels of addiction clearly influence their predictions of their ability to stop smoking successfully. The survey asked, “If you decided to give up smoking altogether, how likely do you think you would be to succeed?” One-third (31%) of the more addicted smokers (who have their first cigarette *within* 30 minutes of waking) thought they would be very likely to succeed if they decided to quit. Yet, more than two-thirds (69%) of the less addicted smokers (who have their first cigarette *after* 30 minutes of waking) thought they would be very likely to succeed (Figure 4).

QUITTING SUCCESSFULLY TAKES MANY ATTEMPTS

The 2001 Surgeon General’s report notes that former smokers made an average of eight to 11 quit attempts before succeeding.¹¹ The bad news is that failed quit attempts can be discouraging. The good news is that each time smokers attempt to quit, they learn what works and what does not work for them. With this knowledge, tobacco users have a better chance of succeeding each time they try to quit in the future.

Figure 4: Adults who smoke soon after waking are less likely to think they will succeed if they decide to give up smoking altogether.



Data Source: 2003 Minnesota Adult Tobacco Survey

Further, smoking intensity, or number of cigarettes per day, also is associated with a smoker’s personal prediction of success in quitting. Figure 5 demonstrates that the more cigarettes smoked per day, the more likely smokers are to predict that they will not stop smoking successfully.

Addiction to tobacco remains a serious challenge for Minnesota smokers. The 1999 Adult Tobacco Prevalence survey results provided similar evidence of the need for multiple attempts before quitting successfully. The 1999 survey also detected the high level of addiction among Minnesota smokers. Finally, smokers’ confidence in their ability to quit was similarly related both to level of addiction and to smoking intensity, respectively, in the 1999 survey results.

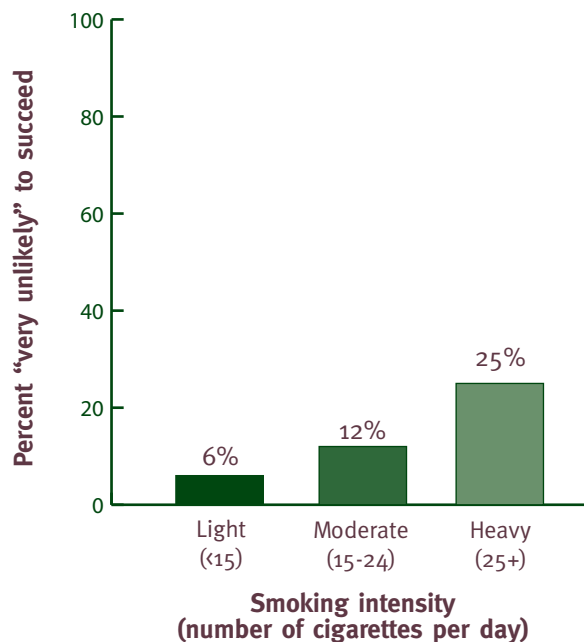
The social environments of smokers support smoking

Quitting smoking also is difficult because the social environment of many current smokers supports the behavior. In the 2003 Minnesota Adult Tobacco Survey, nearly two-thirds (63%) of current smokers reported having a spouse, parent, friend, or other person close to them who also smokes cigarettes or uses other forms of tobacco. In contrast, only about one-third of former (32%) and never (30%) smokers reported having someone close to them who uses tobacco (Figure 6).

Of the current smokers with someone close who smokes, one-quarter (26%) said that “most or all” of the people close to them use tobacco. In contrast, a very small percent of the former (4%) and never (6%) smokers with someone close who smokes reported that “most or all” of the people close to them use tobacco.

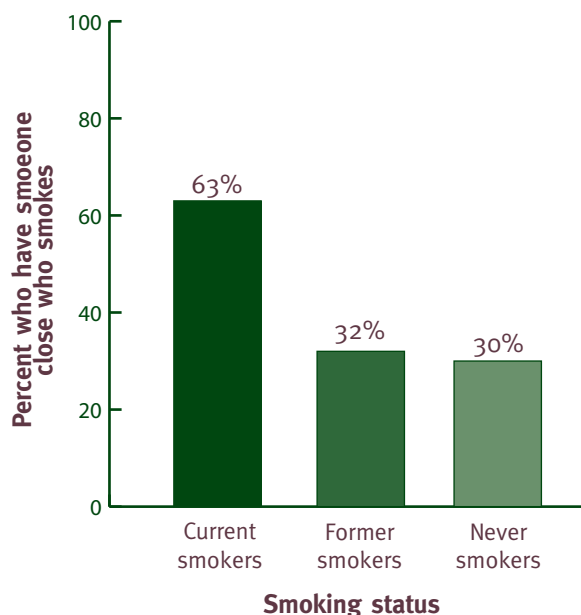
The 1999 Adult Tobacco Prevalence Survey results also showed these relationships. More often than never and former smokers, current smokers stated that the people close to them smoke.

Figure 5: Adults who smoke more cigarettes per day are more likely to think they will not succeed if they decide to give up smoking altogether.



Data Source: 2003 Minnesota Adult Tobacco Survey

Figure 6: Current adult smokers reported having someone close to them who also uses tobacco more often than former and never smokers did.



Data Source: 2003 Minnesota Adult Tobacco Survey

QUITTING ASSISTANCE IS NOW AVAILABLE TO EVERY MINNESOTAN

National public health goals aim to reduce the prevalence of cigarette smoking in the United States to less than 12 percent by 2010.¹² National experts have developed guidelines for states, communities, health care systems, and health care providers that describe evidence-based best practices to reach this goal.^{13,14} Among the recommendations, those specific to the treatment of tobacco use include:

- Reducing patients' out-of-pocket costs for effective quit-smoking medications
- Providing telephone helpline counseling in combination with medications
- Encouraging providers to identify and treat their patients who use tobacco

In Minnesota, the combined efforts of the major health plans and MPAAT have made some form of quitting assistance available to every Minnesota resident and are increasing accessibility to stop-smoking medications.

Effective stop-smoking medications are available to many Minnesotans

Several medications help reduce the symptoms of withdrawal from nicotine or help people cope better with those symptoms. Nicotine replacement therapy (NRT) products effectively increase the odds of quitting smoking. These medications include nicotine patches, gum, nasal sprays, inhalers, and lozenges. Bupropion, a non-nicotine medication marketed as Zyban®, also is effective and may be combined with NRT.¹⁴ Smokers may purchase many NRT products without a prescription. Zyban, however, requires a doctor's prescription.

Many Minnesotans have access to stop-smoking medications through their health plans. Individuals who have health insurance can call the telephone number on the back of their health plan identification card to find out what coverage on stop-smoking medications they may have.

Several behavioral counseling programs are available

Stop-smoking telephone helplines: Telephone-based stop-smoking counseling is an effective approach to quitting smoking.¹⁵ National studies have found that the *combination* of counseling and medication, however, leads to the greatest success in quitting.¹⁶ Therefore, many counseling programs include covered medications for participants. The following telephone helplines are available to Minnesotans:

Health plan stop-smoking telephone helplines: The major Minnesota health plans offer their members no-cost telephone counseling to help them stop smoking. These health plans include Blue Cross, HealthPartners, Medica, Metropolitan Health Plan, Preferred One, and UCare Minnesota. Some health plans provide stop-smoking medications to participants through their telephone helplines. Several others are also developing plans to do the same. The Mayo Clinic Tobacco Quitline also provides telephone counseling in conjunction with stop-smoking medications to its employees and their dependents.

to long-term reduced prevalence of smoking.

Developed for states, local communities, and health systems by a national task force, *The Guide to Community Preventive Services* recommends specific, evidence-based strategies to address such environmental factors. These strategies include: increasing the tax on tobacco products; media campaigns motivating smokers to quit; policies banning smoking in public places and the workplace; and counter-marketing efforts that make youth aware that they are being targeted by the tobacco industry.¹³ With such changes in the social environment, fewer Minnesotans would start to smoke and even more current smokers would attempt to quit, thus driving down the prevalence of cigarette smoking among adults below current levels.

REFERENCES

- ¹ Annual smoking-attributable mortality, years of potential life lost, and economic costs — United States, 1995-1999. *MMWR*. April 12, 2002;51(14):300-303.
- ² Minnesota Department of Health. Smoking-Attributable Mortality and Economic Costs in Minnesota. Fact Sheet. February 28, 2002. Available at: <http://www.health.state.mn.us/divs/hpcd/tpc/sammec.pdf>.
- ³ Cigarette smoking-attributable morbidity — United States, 2000. *MMWR*. September 5, 2003;52(35):842-844.
- ⁴ Minnesota Department of Health. Toll of Tobacco Use in Minnesota. Fact Sheet. December 2002. Available at: <http://www.health.state.mn.us/divs/hpcd/tpc/tobtoll03.pdf>.
- ⁵ Minnesota Department of Health. The Human and Economic Costs of Tobacco in Minnesota. Fact Sheet. April 2, 2002. Available at: <http://www.health.state.mn.us/divs/hpcd/tpc/tobcosts.pdf>.
- ⁶ U.S. Centers for Disease Control. Behavioral Risk Factor Surveillance System. Available at: <http://www.cdc.gov/brfss>. Accessed January 4, 2004.
- ⁷ Gilpin EA, Emery SL, Distefan JM, White MM, Pierce JP. *The California Tobacco Control Program: A Decade of Progress, Results from the California Tobacco Surveys, 1990-1998*. La Jolla, CA: University of California, San Diego; 2001.
- ⁸ Lightwood JM, Glantz SA. Short-term economic and health benefits of smoking cessation: Myocardial infarction and stroke. *Circulation*. August 19, 1997;96(4):1089-1096.
- ⁹ Cigarette smoking among adults — United States, 2000. *MMWR*. July 26, 2003;51(29): 642-645.
- ¹⁰ U.S. Federal Trade Commission. *Cigarette Report for 2001*. Washington, D.C.; 2003. The FTC report states that the six largest cigarette companies spent \$11.2 billion during 2001 to advertise and promote cigarettes in the U.S. The estimate for Minnesota is based on Minnesota's share of the U.S. population as of July 1, 2001.
- ¹¹ U.S. Department of Health and Human Services. *Women and Smoking: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2001.
- ¹² U.S. Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health*. 2nd ed. Washington, DC: U.S. Government Printing Office, November 2000.
- ¹³ Taskforce on Community Preventive Services. Recommendations regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. *American Journal of Preventive Medicine*. 2001;20(2S):10-15.
- ¹⁴ Fiore MC, Bailey WC, Cohen SJ, et al. *Treating tobacco use and dependence: Clinical Practice Guideline*. Rockville, MD: U.S. Department of Health and Human Services. Public Health Service, June 2000.
- ¹⁵ Lichtenstein E, Glasgow RE, Lando HA, Ossip-Klein DJ, Boles SM. Telephone counseling for smoking cessation: rationales and meta-analytic review of evidence. *Health Education Research*. 1996;11(2):243-257.
- ¹⁶ Hughes JR, Goldstein MG, Hurt RD, Shiffman S. Recent advances in pharmacotherapy of smoking. *Journal of the American Medical Association*. January 6, 1999;281(1):72-76.
- ¹⁷ Institute for Clinical Systems Improvement. *Health Care Guideline: Tobacco Use Prevention and Cessation for Adults and Mature Adolescents*. 2003. Available at: <http://www.icsi.org>.
- ¹⁸ Hughes JR, Gulliver SB, Fenwick JW, et al. Smoking cessation among self-quitters. *Health Psychology*. 1992;11(5):331-334.



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