Article

Current Smoking Trends

by Teresa Janz

June 2012



Statistics Canada Statistique Canada



How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website at www.statcan.gc.ca e-mail us at infostats@statcan.gc.ca, or telephone us, Monday to Friday from 8:30 a.m. to 4:30 p.m., at the following numbers:

Statistics Canada's National Contact Centre

Toll-free telephone (Canada and United States):

| Inquiries line | 1-800-263-1136 |
|---|----------------|
| National telecommunications device for the hearing impaired | 1-800-363-7629 |
| Fax line | 1-877-287-4369 |

Local or international calls:

Inquiries line 1-613-951-8116
Fax line 1-613-951-0581

Depository Services Program

Inquiries line 1-800-635-7943 Fax line 1-800-565-7757

To access this product

This product, Catalogue no. 82-624-X, is available free in electronic format. To obtain a single issue, visit our website at www.statcan.gc.ca and browse by "Key resource"> "Publications."

HTML version published: June 2012 PDF version published: June 2012

Frequency: Irregular

ISSN 1925-6493

Published by authority of the Minister responsible for Statistics Canada © Minister of Industry, 2012

All rights reserved. Use of this publication is governed by the Statistics Canada Open Licence Agreement (http://www.statcan.gc.ca/reference/copyright-droit-auteur-eng.htm).

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under "About us" > "The agency" > "Providing services to Canadians."

Current smoking trends



Health at a Glance

Statistics Canada – Catalogue no. 82-624-X

by Teresa Janz

Highlights

- In 2011, one in five, or about 5.8 million Canadians smoked--more males (22.3%) than females (17.5%).
- Fewer people are heavy smokers today compared to a decade ago--and more males (23.5%) than females (14.2%) are heavy smokers.
- The smoking rate fell more rapidly among teens (15 to 19 years) than any other age group.
- One in ten 15 to 17 year olds (about 121,000) smoked in 2011. They were three times more likely to smoke in homes where someone smoked regularly (22.4% versus 7.0%).
- Smoking has a substantial impact on health and life expectancy—smokers could lose about 9 years of life expectancy.

Smoking is the leading cause of premature death in Canada. And while much progress has been made in reducing tobacco use, it remains a serious health problem. Recent studies have estimated that 21% of all deaths over the past decade are due to smoking. Most lung cancer patients are current or former smokers, and lung cancer causes more deaths than any other cancer. Based on the latest available statistics, there were 19,000 lung cancer deaths in Canada in 2008, accounting for about 27% of all cancer deaths in that year.

The costs of treating the numerous diseases and conditions caused by smoking are quite substantial. According to estimates, health care spending related to smoking accounts for between 6% and 15% of total annual healthcare costs in high-income countries like Canada.⁴

This article highlights smoking data from the 2011 Canadian Community Health Survey (CCHS)⁵, exploring trends and variations by age, sex, and heavy and light smoking. Characteristics of youth smokers and the impact of smoking on life expectancy are also presented.

Current smoking rate: includes people who smoke daily or occasionally (excludes former smokers).

Daily smoking rate: includes people who smoked at least one cigarette per day for each of the 30 days preceding the survey.

Heavy: 25 or more cigarettes per day,

Moderate: 15 to 24 cigarettes per day, and

Light: 14 or fewer cigarettes per day.

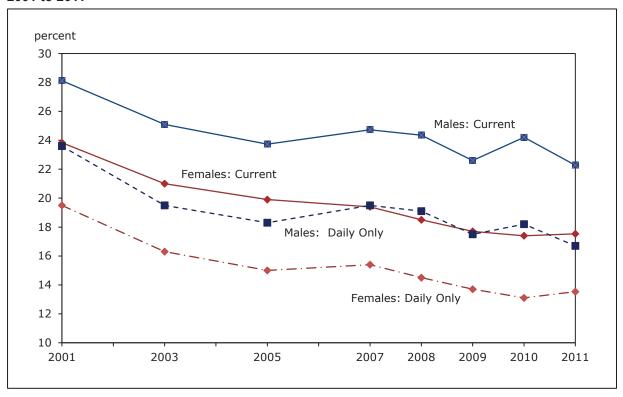
Occasional smoking rate: includes people who smoked at least one cigarette during the past 30 days but not every day.

Recent trends by sex

The **current smoking rate** in Canada (12 and older) was 19.9% in 2011—down from

25.9% in 2001.6 (Chart 1). The rates for men and women both dropped 6 percentage points during this period—men from 28.1% to 22.3% and women from 23.8% to 17.5%.

Chart 1
Percentage of current and daily smokers, by sex, household population 12 and older, Canada, 2001 to 2011



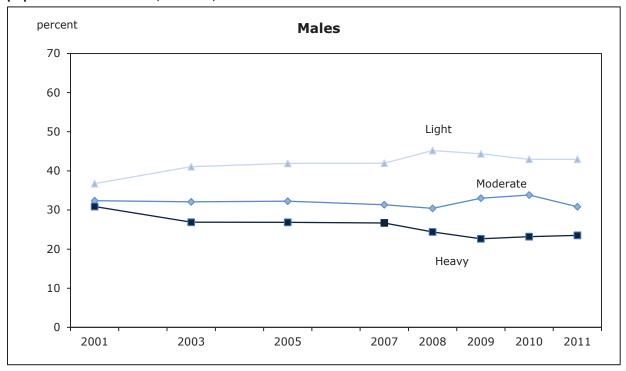
Source: Statistics Canada, Canadian Community Health Survey.

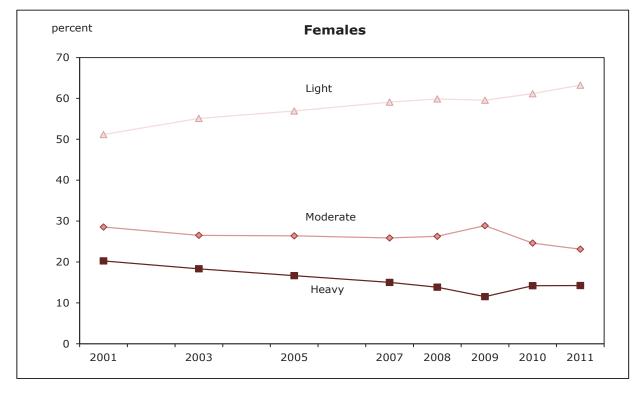
Light smoking is increasing

While any amount of smoking can be harmful⁷, heavy smokers face increased health risks because certain types of illnesses are more likely to occur when the number of cigarettes smoked increases.⁸ To illustrate, daily smokers (who represent three quarters of current smokers), were classified as **heavy, moderate or light** smokers according to the number of cigarettes smoked per day (Charts 2a and 2b).

When using this classification to look at changes between 2001 and 2011, the most recent smoking data show that the percentage of light daily smokers increased among both sexes, but the trend was more pronounced for women. The number of women who were light daily smokers rose from 51.2% to 62.6%, compared to men who shifted this behaviour from 36.7% to 43.0% during the ten-year period studied (Charts 2a and 2b).

Charts 2a and 2b Percentage of heavy, moderate and light smokers among daily smokers, by sex, household population 12 and older, Canada, 2001 to 2011





Source: Statistics Canada, Canadian Community Health Survey.

Of note, the average number of cigarettes smoked per day dropped from 17 in 2001 to 15 in 2011. However, for heavy smokers, the average remained unchanged at 28 over the same period.

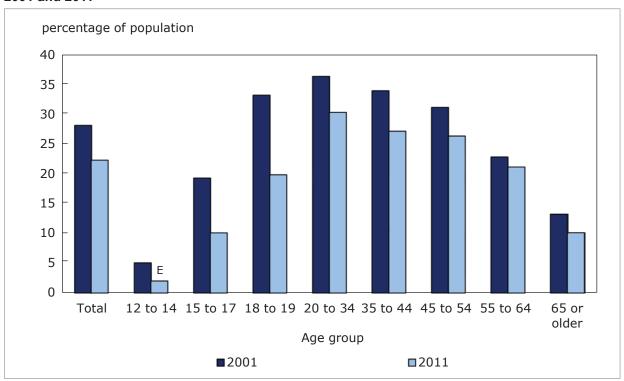
The percent of daily smokers who smoke heavily has been gradually falling. Over the past ten years, the percentage of men who were heavy smokers dropped from 30.9% to 23.5%, while for women the decline was from 20.3% to 14.2%. The percentage of men who were moderate smokers remained about the same (32.4% to 33.5%), whereas the percentage of

moderate smokers among women decreased from 28.5% in 2001 to 23.2% in 2011.

Most progress among adolescents

While there were meaningful declines in the smoking rates across most age groups in the 2001 to 2011 period, some groups have seen greater progress. Among males, substantial decreases in smoking rates occurred across all age groups (except for those in the 55 to 64 category), but the largest decrease was among 18 to 19 year-olds who experienced a drop from 33.2% to 19.8%, and among 15 to 17 year-olds who saw a decline from 19.3% to 10.1%.

Chart 3
Current smoking rate, males, by age group, Canada, household population 12 and older, 2001 and 2011

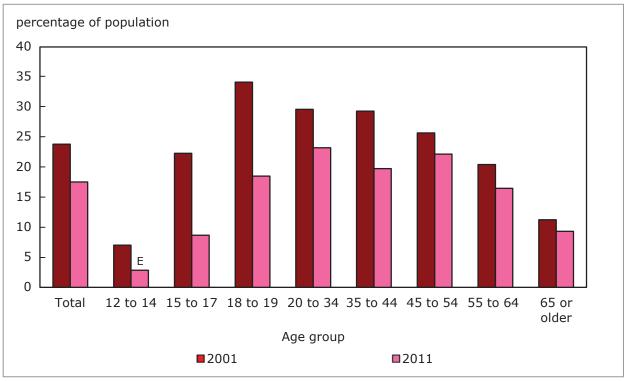


E Use with caution (coefficient of variation 16.6% to 33.3%). **Source:** Statistics Canada, Canadian Community Health Survey.

Between 2001 and 2011, smoking rates declined sharply in all age groups among females. In a pattern similar to males, the greatest decline was for females aged 18 to 19

whose smoking rate decreased from 34.2% to 18.5%, followed by 15 to 17 year-olds, whose smoking rate dropped from 22.3% to 8.7%.

Chart 4
Current smoking rates, females, by age group, Canada, household population 12 and older, 2001 and 2011



E Use with caution (coefficient of variation 16.6% to 33.3%). **Source:** Statistics Canada, Canadian Community Health Survey.

Focus on teens

The decision to start smoking has been linked to several key factors including individual characteristics such as age and sex, the immediate social environment (particularly friends and family), and the broader social environment such as school and community. ⁹ Research shows that the younger a person starts smoking, the more difficult it will be to quit later in life. ¹⁰

Many Canadians start to smoke in their teenage years. In 2011, smokers continued to

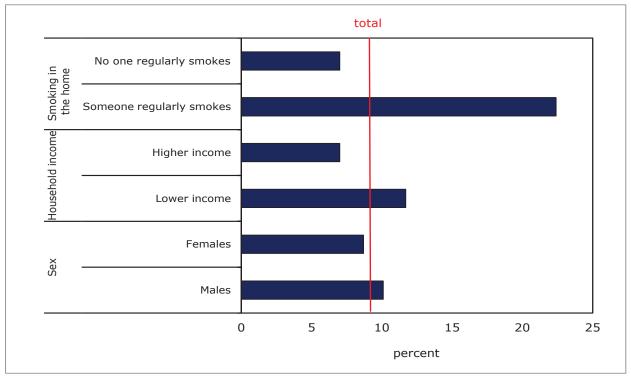
report that, on average, they smoked their first whole cigarette at the age of 16, and started smoking regularly at 18 years of age.

Given the consequences of starting early, and therefore the importance of preventing smoking among teens, additional analysis is focused on youth in the critical 15 to 17 age category.¹¹ Despite the substantial progress made in reducing smoking rates among young people, about one in ten (121,000) 15 to 17 year olds smoked in 2011.

Persons in the 15 to 17 age group share a number of characteristics which appear to strongly influence the probability that they will start smoking. For example, 11.7% of youth living in lower income households¹² were smokers, compared with a youth smoking

rate of 7.0% in higher income households (Chart 5). Similarly, young persons living in a household where someone smoked regularly were more than three times more likely to smoke, 22.4% versus 7.0%.

Chart 5
Current (daily and occasional) smoking rates of 15 to 17 year-olds, by selected characteristics, Canada, 2011



Source: Statistics Canada, Canadian Community Health Survey.

Smoking and life expectancy

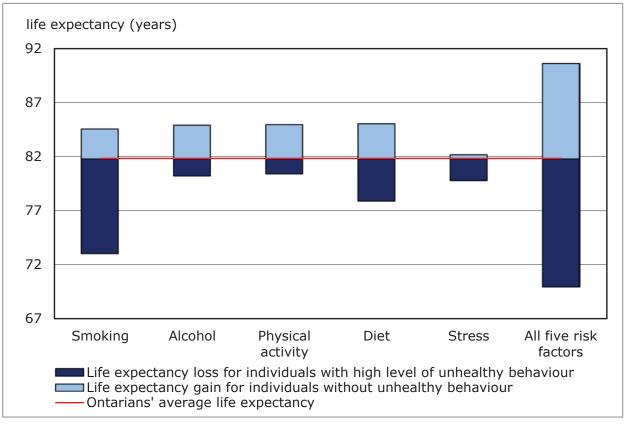
The benefits of quitting smoking are well-documented. For example, previous research has identified that within a year of quitting smoking, the chance of developing heart disease drops to half that of a smoker.¹³ Between 5 to 15 years after quitting, the chance of developing lung cancer decreases by almost half and the risk of dying from cancer is similar to a non-smoker.⁸

Smoking is also clearly related to life expectancy. The earlier in life a person quits the greater the health benefits. Quitting before the age of 30 avoids more than 90% of the lung cancer mortality attributed to smoking. ¹⁴ Generally, the earlier one stops, the greater the improvement in life expectancy. For example, stopping smoking at 60 years of age gains about 3 years of life expectancy while stopping smoking at 30 years of age gains about 10 years. ¹⁵

Recent research by the Institute for Clinical Evaluative Sciences (ICES) looked at smoking and other health-related behaviours for adults 20 years and older living in Ontario (using CCHS data from 2001 to 2005 linked

with death records from 2001 to 2010). The study concentrated on smoking, heavy alcohol consumption, poor diet, physical inactivity and stress—to better understand how these five behaviours impact life expectancy.

Chart 6
Life expectancy gains and losses, by health behaviours, Ontarians aged 20 and older, 2007



Source: Manuel DG, Perez R, Bennett C, et al. Seven more years: The impact of smoking, alcohol, diet, physical activity and stress on health and life expectancy in Ontario. An ICES/PHO Report. Toronto: Institute for Clinical Evaluative Sciences and Public Health Ontario; 2012. Page 25.

As Chart 6 shows, smoking is confirmed as an individual's single most important modifiable behaviour in terms of impact on health and longevity. Indeed, non-smokers can expect to gain about 3 years of life expectancy, while the heaviest smokers stand to lose about 9 years of life expectancy. In other words, average life expectancy is reduced from 82 years to 73 years

for adults who smoke. Notably, persons engaging in all five unhealthy behaviours have the most to lose, decreasing average life expectancy by about 12 years (from 82 to 70 years).

Summary

Canadian Community Health Survey data show continued declines in smoking rates for both men and women, although the rate of decline has not been constant across all categories of smokers. The most noticeable decreases were seen among 15 to 19 year olds, with more modest drops among older age groups. Also, women have experienced slightly larger declines in smoking rates and are much more likely to be light smokers than are men.

Smoking continues to be the leading cause of premature death. Additionally, when it is combined with other unhealthy behaviours it can have a cumulative effect to further decrease life expectancy.



Teresa Janz is an analyst with the Health Statistics Division.

The author wishes to acknowledge Cathy Cotton, Linda Gionet, Tanya Navaneelan, Caryn Pearson, Crystal Van Boxtel, Brenda Wannell and Amanda Wright for their contributions.

References

- 1. Jones A, Gublis A, Baker EH. Differences in tobacco use between Canada and the United Staties. Int J Public Health. 2010;55(3):167-75.
- 2. Navaneelan T, Janz T. Cancer in Canada: Focus on lung, colorectal, breast and prostate. *Health at a Glance*; Statistics Canada (82-624-x).
- 3. Statistics Canada. Table 102-0552 Deaths and mortality rate, by selected grouped causes and sex, Canada, provinces and territories, annual. *CANSIM* (database). Available at: http://www5.statcan.gc.ca/cansim/a05?lang=eng&id=01020552.. Accessed May 03, 2012.
- 4. World Bank. Curbing the epidemic: governments and the economics of tobacco control. Washington D.C: World Bank; 1999.
- 5. The Canadian Community Health Survey (CCHS) is a cross-sectional survey that collects information related to health status, health care utilization and health determinants for the Canadian population. The CCHS was the main source of data for this article. It asks questions about smoking behaviours within the context of understanding issues related to health
- 6. All differences discussed in this paper were tested to ensure statistical significance at the 0.05 level. To account for survey design effects, standard errors and coefficients of variation were estimated using the bootstrap technique.
- 7. Schane RE, Ling PM, Glantz SA. Health effects of light and intermittent smoking: A review. *Circulation*. 2010;121(13):1512-22.
- 8. U.S. Department of Health and Human Services. The Health Benefits of Smoking Cessation: A report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services; 1990.
- 9. Leatherdale S.T MS. The relationship between student smoking in the school environment and smoking onset in elementary school students. *Cancer Epidemiology, Biomarkers & Prevention*. 2005;14(7):1762-1765.

- Breslau N, Peterson E. Smoking cessation in young adults: age at initiation of cigarette smoking and other suspected influences. *American Journal of Public Health*. 1996;86:215.
- 11. Health Canada. Available at: http://www.hc-sc. gc.ca/hc-ps/tobac-tabac/about-apropos/role/federal/strateg-eng.php. Accessed March 20, 2012.
- 12. Beginning with the 2011 reference year, the household income variable will be imputed. This basically means that missing values for income will be estimated using statistical techniques. For example, a nearest neighbour donor approach is used that finds a respondent with similar characteristics as the non-respondent and 'donates' the income value to the non-respondent. To create the two income groups, the Canadian population is divided into five equal groups (quintiles) according to their household income. Lower income is classified as the bottom two quintiles and higher income is the top three quintiles.
- Ghadirian P. Sleeping with a Killer: The effect of smoking on human health. Ottawa: Health Canada; 2004.
- 14. Jha P. Avoidable global cancer deaths and total deaths from smoking. *Nature Reviews Cancer*. 2009;9:655-664.
- 15. Doll R, Peto R, Boreham J, Sutherland I. Mortality related to smoking: 50 years' observations on male British doctors. *BMJ*. 2004;328:1519-28.
- 16. Manuel D, Perez R, Benentt C, et al. Seven More Years: The impact of smoking, alcohol, diet, physical activity and stress on health and life expectancy in Ontario. An ICES/PHO Report. Toronto: Institute for Clinical Evaluative Services and Public Health Ontario; 2012.