CANADIAN PARTNERSHIP AGAINST CANCER
PARTENARIAT CANADIEN CONTRE LE CANCER

CANCER CONTROL SNAPSHOT 4

Smoking and Lung Cancer in Canada

Lung cancer is the second most common cancer among Canadian men and women and remains the leading cause of cancer death.[1] In 2010, an estimated 24,200 Canadians will be diagnosed with lung cancer and 20,600 will die of it. It is well established that tobacco use is a major preventable cause of cancer, accounting for 85% of all new cases of lung cancer in Canada.[2] Tobacco use also contributes to a number of other cancers including cancers of the larynx, oral cavity and pharynx, esophagus, and bladder and is a major risk factor for heart disease, stroke, and respiratory illnesses.

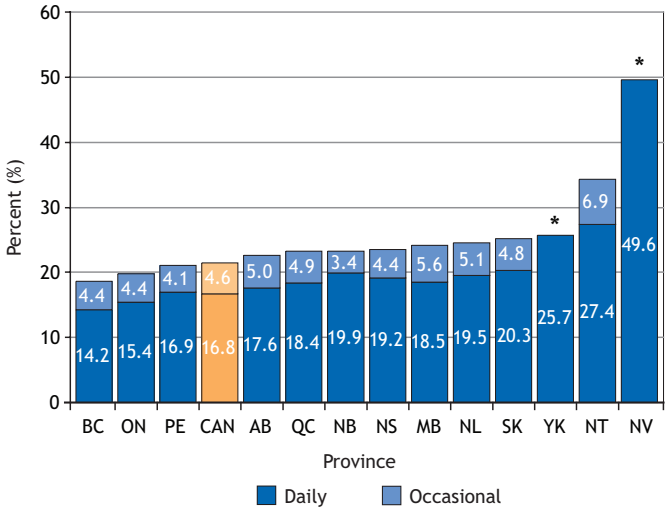
Smoking patterns and trends in Canada

Despite the well known and detrimental effects of smoking, data from the 2008 Canadian Community Health Survey (CCHS) show that 16.8% of Canadians smoke daily and an additional 4.6% smoke occasionally (Figure 1). The percentage of Canadians who currently smoke varies widely across the country with smoking rates highest in Nunavut (>50%) and lowest in BC (18.6%).

In all age groups, men are more likely than women to smoke (Figure 2). Smoking rates are highest among younger Canadians aged 20-34 years.

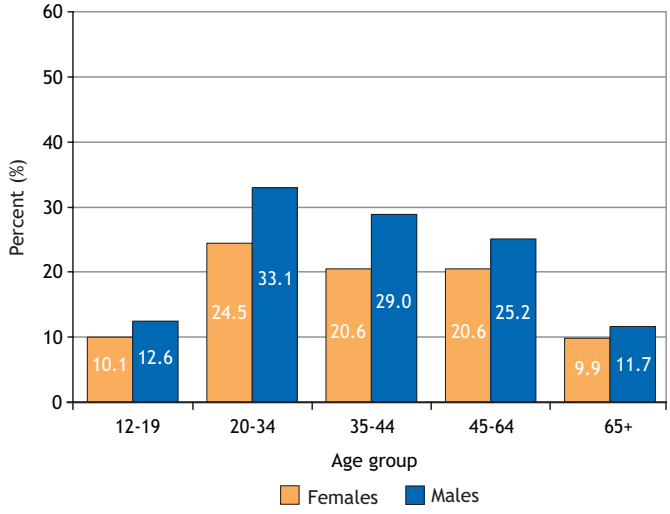
Over the past decade, smoking rates have been declining in Canada for both men and women, although rates for women appear to have leveled off since 2006 (Figure 3). Data from the Canadian Tobacco Use Monitoring Survey (CTUMS) show

Figure 1: Percentage of population aged 12 and older reporting daily or occasional smoking by province/territory, CCHS 2008.†



* Suppressed due to statistical unreliability caused by small numbers

Figure 2: Percentage of population aged 12 and older reporting daily or occasional smoking by sex and age, Canada, CCHS 2008.†



† Date Source: Statistics Canada, Canadian Community Health Survey

IN THIS ISSUE • Over one-fifth of Canadians still smoke • In the next 20 years, more lives will be saved by smoking cessation than by preventing young adults from starting smoking • Cessation rates among middle-aged Canadians have worsened in recent years • Quitting smoking even at middle-age considerably reduces the risk of death from lung cancer • Physician advice to quit improves smoking cessation success

Figure 3: Percentage of current smokers (daily or occasional) aged 15 and older by sex, Canada, CTUMS Wave 1, 1999-2009.†

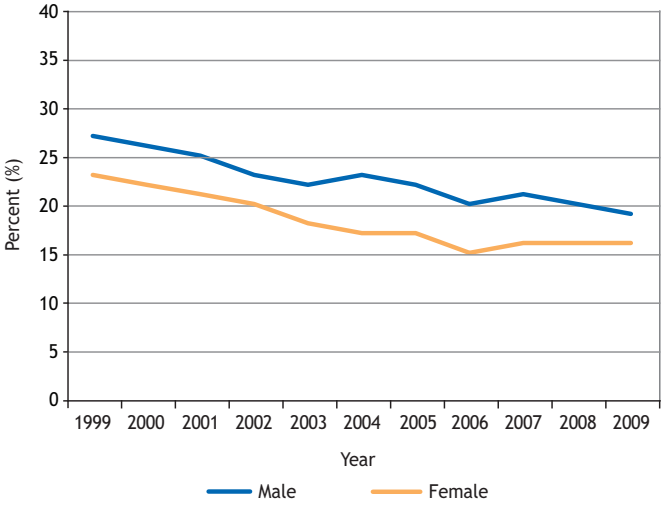


Figure 4a: Percentage of current smokers (daily or occasional) by age group, Canada, CTUMS Wave 1, 1999-2009.†

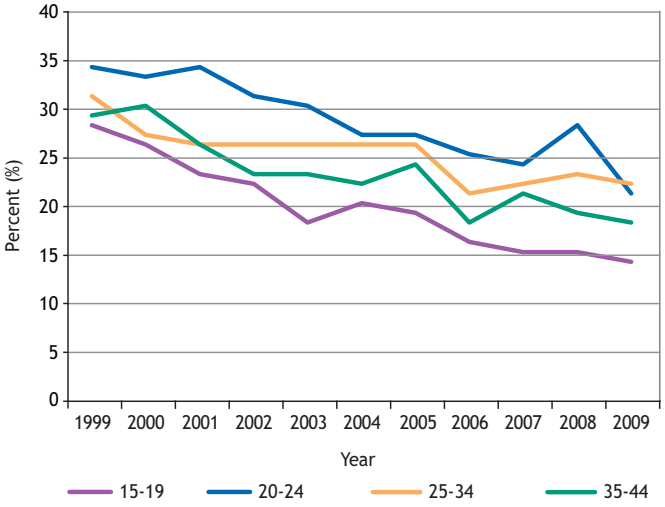
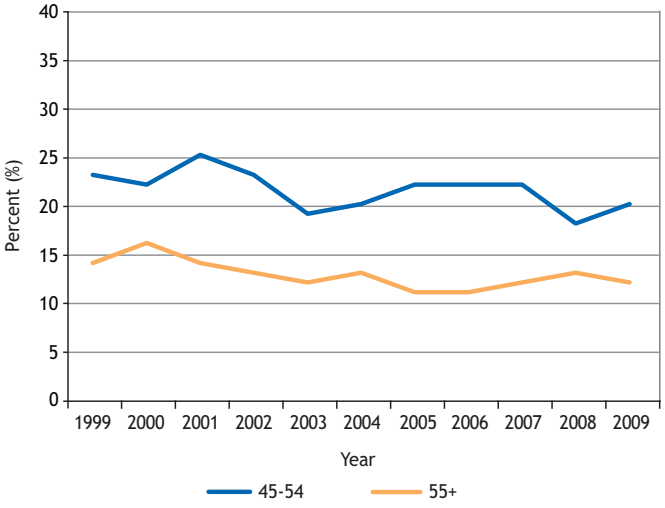


Figure 4b: Percentage of current smokers (daily or occasional) by age group, Canada, CTUMS Wave 1, 1999-2009.†



† Data Source: Statistics Canada, Canadian Tobacco Use Monitoring Survey

that in 1999, 27% of men and 23% of women were current smokers compared to 19% and 16% in 2009 for men and women, respectively.

The decline seen in smoking rates in Canada has not been consistent across age groups. For Canadians aged 15 to 44, there have been steep declines in smoking rates over the past decade. From 1999 to 2009, smoking rates among those aged 15 to 44 have declined between 9% and 14% across age groups (Figure 4a).

Unfortunately, smoking rates for those aged 45 years and older have decreased much less, a decline of about 3% between 1999 and 2009 (Figure 4b). The slower rate of decline among older Canadians may reflect a higher degree of nicotine dependence in this age group, in which case, more intensive approaches may be needed to help older smokers quit.[3]

Prevention and cessation are important

Preventing young Canadians from starting smoking will reduce the number of tobacco-related deaths in the second half of this century. Smoking cessation among current smokers on the other hand, will have a more immediate impact in reducing tobacco-related mortality.[4-5] A 2001 analysis shows that a much larger decrease in tobacco related deaths worldwide would be achieved by 2050 by reducing the number of adults who are current smokers than by preventing young adults from taking up the habit (Figure 5).[6] This is because most of the projected deaths from tobacco use by 2050 will occur among current smokers while the main effects of young adults not starting to smoke will occur much later.[6]

It's never too late to benefit from quitting smoking

There is strong evidence to support the benefits of smoking cessation, regardless of age when quitting. The lifetime cumulative risk of death from lung cancer gets progressively lower as the time since cessation gets longer (although it never gets quite as low as in lifelong non-smokers). The cumulative risk of death from lung cancer up to age 75 for men who smoke is 15.9% compared to 9.9%, 6%, 3% and 1.7% for those who stopped smoking at 60, 50, 40 and 30 years of age,[8] respectively (Figure 6). A subsequent paper by Doll and colleagues showed similar results.[9]

Who's having trouble quitting?

Despite evidence showing the risk of death from lung cancer is considerably lower if cessation occurs by middle age, data from the CCHS show that smoking cessation rates have worsened among Canadians aged 45 and older. From 2003 to 2008, the percent of recent smokers who quit smoking in the past 2 years decreased from 21.2% to 15.6% among those aged 45-64 years and from 26.0% to 19.9% among those aged 65 and older (Figure 7). Smoking cessation rates

Figure 5: Cumulative number of tobacco-related deaths worldwide to 2050 according to three scenarios. Adapted from Jha (2000).[7]

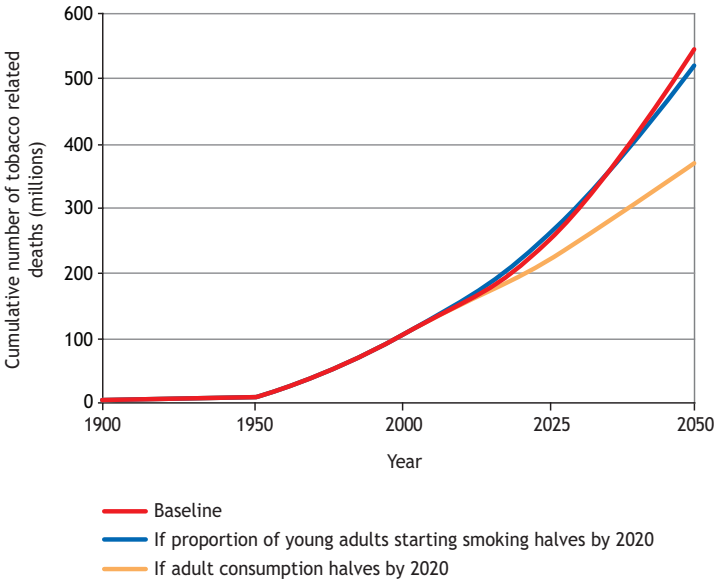
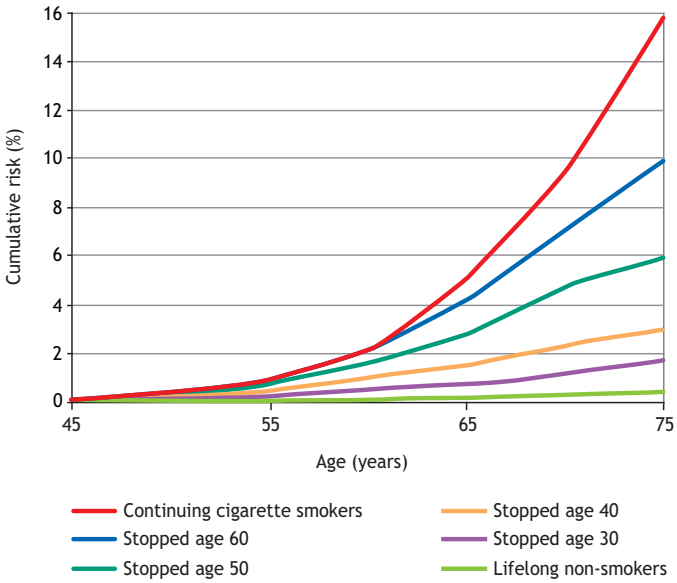


Figure 6: Cumulative risk (%) of death from lung cancer up to age 75 among men by age of smoking cessation. Adapted from Peto, Darby et al (2000).[8]



for younger Canadians aged 20-34, on the other hand, have remained relatively stable. Evidence showing the benefit of smoking cessation by middle age supports targeting the middle-aged for smoking cessation – the very group in Canada which has shown the least decline in smoking (Figure 4b).

Effective tools for smoking cessation

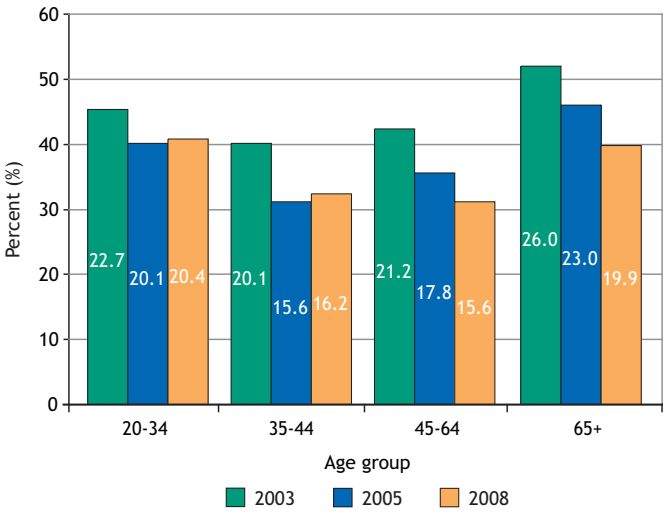
The U.S. Public Health Service smoking cessation guidelines urge primary care physicians to treat tobacco use as a chronic condition requiring repeated intervention[10] (Guidelines can be accessed online at www.surgeongeneral.gov/tobacco/treating_tobacco_use.pdf). Guidelines recommend that physicians use the five A's when treating patients who smoke:

- **ASK** – systematically identify all tobacco users at every visit
- **ADVISE** – strongly urge all tobacco users to quit
- **ASSESS** – determine willingness to make a quit attempt
- **ASSIST** – aid the patient in quitting
- **ARRANGE** – schedule follow-up contact

Lack of time[11] or the belief that smokers do not like to be asked about their smoking behavior[12] have been identified as barriers to asking about tobacco use. Research shows however, that even brief advice to quit smoking can improve cessation rates[10, 13-15] and that even a small reduction in smoking prevalence can result in significant reductions in tobacco-related mortality.[16]

While policy interventions are effective in decreasing smoking prevalence,[4] studies demonstrate the effectiveness of nicotine replacement therapy (NRT) in improving the

Figure 7: Percent of recent smokers who have quit within the past two years by age group, Canada, CCHS 2003, 2005 and 2008.



Date Source: Statistics Canada, Canadian Community Health Survey

chances of success for patients who wish to quit smoking, and combining rapid-acting NRT with the patch can offer additional advantage over single drug therapy. For a recent summary of evidence on NRT, see *Pharmacotherapy for Smoking: What works and what to consider? (Part I and Part II) (articles #26 and #27)* at www.acfp.ca/tfp_original.php. Pharmacotherapy combined with brief counseling and/or telephone quit line support can further improve the chances of successful cessation.[17-19]

For information on smoking quit lines in your province, visit www.hc-sc.gc.ca/hc-ps/tobac-tabac/quit-cesser/now-maintenant/1-800/prov-eng.php.

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TAKE-HOME MESSAGES

PREVENTING YOUTH FROM STARTING SMOKING remains a public health priority (this will show an impact on tobacco related mortality during the decades beyond 2050). Smoking cessation among current smokers however, will have a more immediate impact on mortality.

Evidence supports a significant decrease in mortality even if cessation occurs at middle age. This provides incentive to target this group for smoking cessation, particularly since smoking rates among middle aged Canadians have shown little decline over the past decade and cessation rates have worsened.

This document has been made possible through a financial contribution from Health Canada, through the Canadian Partnership Against Cancer. The views expressed herein represent the views of the Canadian Partnership Against Cancer. The Canadian Partnership Against Cancer would like to acknowledge and thank the individuals and organizations that have contributed to the development of this report.

This document was produced in December 2010 and can be found at: www.cancerview.ca in the Resource Library
For feedback, contact info@partnershipagainstcancer.ca

The Canadian Partnership Against Cancer
1 University Avenue, Suite 300, Toronto, Ontario M5J 2P1
416-915-9222

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