

Medication use among pregnant women

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Abstract

Objectives

This study examines medication use among women aged 15 to 49, comparing pregnant women with their non-pregnant contemporaries. A portrait of women who used medication during pregnancy is also presented.

Data sources

Analysis is based on data from the 1994/95 through 2002/03 National Longitudinal Survey of Children and Youth (NLSCY), as well as the 2003 Canadian Community Health Survey (CCHS) and the 1996/97 National Population Health Survey (NPHS).

Analytical techniques

Estimates of medication use are based on cross-sectional data. Logistic regression was used to determine factors associated with use of medication.

Main results

Medication use among women aged 15 to 49 has risen over the last 10 years. Although the proportion of pregnant women who used medications increased, it remained below the figure for other women the same ages. Over one-quarter of women (27%) were taking prescription medications while pregnant.

Keywords

drug prescriptions, fetus, non-prescription drugs, pregnancy

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The impact of a pregnant woman's behaviour on her baby's development is no longer debated. The risks associated with smoking and drinking during pregnancy are well-known and have been extensively documented.¹⁻⁷ It is also recommended that pregnant women consult a health care professional before taking any medications, even those available without a prescription.

Drugs are rarely tested on pregnant women because of the potential risks to the fetus.⁸ Knowledge about the effects of drugs on the unborn child comes from, among other sources, clinical trials, cohort or case studies, and drug registries that are generally maintained by pharmaceutical companies. Such studies have examined not only the effects of medication on pregnant women, but also possible influences on the infant, such as prematurity, low birth weight, mortality and fetal malformations.⁹ Information on long-term effects is more limited.

The US Food and Drug Administration (FDA), has defined five categories for classifying the risk of medications for use during pregnancy. These are based on whether or not the medications have been tested, and if they pose a risk to the fetus.¹⁰ Medications tested on women

Methods

Data sources

Estimates of use of medication during pregnancy are based on longitudinal data from the first five cycles of the National Longitudinal Survey of Children and Youth, conducted from 1994/95 through 2002/03. Comparisons of medication use among pregnant women and other women of reproductive age are based on data from the 1996/97 National Population Health Survey (NPHS) and the 2003 Canadian Community Health Survey (CCHS).

The NLSCY, a longitudinal survey, was introduced in 1994/95 to follow and provide a portrait of children aged 0 to 11 through to age 25. The survey is conducted every two years. A cross-sectional component for children aged 0 to 1 is also conducted every two years; this sample is followed over three cycles, until the children reach age 5.

Factors associated with medication use (prescription or non-prescription) among pregnant women were determined with pooled data from cycles 1 through 5. In total, 20,738 biological mothers who had always lived with their child were selected. The cross-sectional response rates were: 86.3%, cycle 1 (1994/95); 90.4%, cycle 2 (1996/97); 85.2%, cycle 3 (1998/99); 74.2%, cycle 4 (2000/01); and 74.0%, cycle 5 (2002/03). The children were selected from the Labour Force Survey or the birth register (only for children aged 1 selected in cycle 3). For more information about the NLSCY methodology, consult the Statistics Canada Web site.¹¹

The NPHS, which began in 1994/95, collects information about the health of Canadians every two years. The survey covers household and institutional residents in all provinces and territories, except people living on Indian reserves and Canadian Forces bases, and in some remote areas.

For each of the first three NPHS cycles (1994/95, 1996/97 and 1998/99), two cross-sectional files were produced: General and Health. The General file contains socio-demographic and some health information for each member of participating households (collected using the General questionnaire). The Health file contains additional, in-depth health information (collected using the Health questionnaire) about one randomly selected household member, as well as the information from the General file about that individual. Starting in 2000/01, the NPHS became strictly longitudinal, and the General and Health questionnaires were combined.

For the first three NPHS cycles, two cross-sectional response rates were calculated: household and individual. The household response rate is the percentage of households where at least the General questionnaire was completed for the randomly selected respondent. The individual response rate is the percentage of responding households for which the Health questionnaire was completed for the randomly selected respondent. In 1996/97, the household response rate was 82.6%, and the individual response rate was 95.6%. More detailed descriptions of the NPHS design, sample and interview procedures can be found in published reports.^{12,13}

The proportions of women of childbearing age who had consumed medications in the month before their 2003 interview were calculated based on data from women aged 15 to 49 who were part of the CCHS cycle 2.1 sub-sample.

The CCHS, conducted every two years, was designed to collect cross-sectional information about the health of the Canadian population. The CCHS and its sub-samples cover the household population aged 12 or older in the provinces and territories, except residents of Indian reserves, Canadian Forces bases, and some remote areas. Data collection for cycle 2.1 began in January 2003 and ended in December of that year. The response rate was 81.2%, which produced a sub-sample of 38,072. A description of the CCHS methodology is available in a published report.¹⁴

Analytical techniques

Pregnant women's use of medication, alcohol and cigarettes between 1993 and 2002 was estimated using cross-sectional NLSCY data based on their child's year of birth.

Differences in medication use by type of medication were calculated using cross-sectional data from the 1996/97 NPHS and the 2003 CCHS. Significant differences between use by pregnant women and by other women of reproductive age were determined with the Bonferroni test; the significance level was set at $p < 0.05$.

The proportions of women who had consumed medications in the month before the 1996/97 NPHS interview were calculated based on data for 22,778 women aged 15 to 49 for whom information on medication use and factors that may have influenced that use were available. Records for 56 respondents were excluded from this analysis because the women did not give a "yes" response when asked if they were pregnant, or there was no response. Another 60 women were excluded from the calculations of medication use by type.

Logistic regression was used to determine factors associated with use of medication in the month before the CCHS and NPHS interviews. The following characteristics of the mother were examined: pregnancy status, province of residence, age, chronic condition(s), immigrant status, education, and household income. The reference group was generally defined as the largest group in the population. Household income was the exception; "highest" was used as the reference group.

Pooled observations based on cross-sectional data from the first five NLSCY cycles were used to determine factors associated with prescription and non-prescription medication use. Logistic regression was then used to identify characteristics associated with taking medication during pregnancy. The data were weighted using the total cross-sectional weights available for each cycle, representing children between the ages of 0 and 1 at the time of the survey interview. The characteristics used were the same as those from the CCHS and NPHS, with the addition of lone-parent household and collection cycle. Pregnancy status was excluded because only mothers who had given birth to the child were considered.

Because of low rates of partial non-response, non-responses for data from the NLSCY were ignored. The analyses included only biological mothers who responded to questions about medication use. Cases of non-response for a chronic condition, for example, were imputed as not having the characteristic.

"Missing" data from the CCHS and the NPHS about medication use or the type of medication were excluded from calculations of prevalence rates and from the logistic regression analysis. Because of very low partial non-response rates, missing data were excluded for the presence of a chronic condition, education level and immigration status. In total, 186 records from the CCHS were excluded because of missing data on medication use; 85 NPHS records were excluded. Another 145 CCHS and 175 NPHS records, for which data were missing for one of the other questions, were also excluded. A "missing" category was created for household income for cases of non-response to this question (13% for the CCHS and 19% for the NPHS). The analysis reflects 9,826 records for women of childbearing age from the CCHS and 22,518 from the NPHS.

Differences in rates of use for different medications, differences between types of medications, and differences between odds ratios were calculated using the bootstrap method, which accounts for survey design effects.^{15,16} The bootstrap method was also used to test differences between rates of use in 1993/94 and 2001/02. Level of significance was set at $p < 0.05$.

and considered to have a remote possibility of harming the fetus are in Category A. Two possibilities comprise Category B: animal studies have not indicated a risk to the fetus and controlled studies in women are not available, or animal studies have shown an adverse effect, but controlled studies in women did not. Category C covers medications that have been tested on animals and indicated a fetal risk, as well as those drugs for which the effects remain unknown. Drugs that present a fetal risk, but whose benefits represent an acceptable risk for the mother, are in Category D. Drugs that remain dangerous to the mother are in Category X. A recent US study found that just under 5% of pregnant women consumed drugs in categories D or X, and nearly 38% had taken medications in Category C.¹⁰

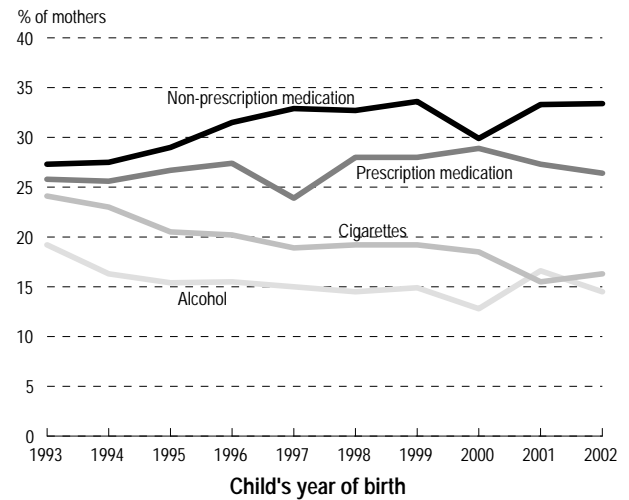
Medication use among the general population in Canada has increased in recent years.¹⁷ According to Statistics Canada's Survey of Household Spending, each household spent an average of \$268 for prescription medications in 2003, up from \$198 in 1997. Even when the higher actual cost of medications is taken into account, this represents a 21% increase over the period.¹⁸

This study of medication use among pregnant women aged 15 to 49 is based on data from the first five cycles (1994/95 to 2002/03) of the National Longitudinal Survey of Children and Youth (NLSCY) (see *Methods, Definitions and Limitations*). Data from the 2003 Canadian Community Health Survey (CCHS) and the 1996/97 National Population Health Survey (NPHS) were the basis for a comparison of medication use among women by pregnancy status, as well as the types of medications used.

Rise in medication use

Unlike smoking and alcohol consumption, which have both declined among pregnant women over the last 10 years, medication use by this group has increased (Chart 1). This rise is attributable to growing use of *non-prescription* medications. The percentage of women who reported taking such medications while they were pregnant rose from

Chart 1
Percentage of mothers who smoked cigarettes or used alcohol or medication during pregnancy, by child's year of birth, Canada excluding territories, 1993 to 2002



Data source: 1994/95 to 2002/03 National Longitudinal Survey of Children and Youth

27% in 1993 to 33% in 2003. Use of *prescription* medication remained relatively stable at around 26%, although it reached 29% in 2000.

Pregnant women and health care professionals are generally aware of the risks posed by medications. Despite the rise in use over the last several years, according to the 2003 CCHS, when factors such as province of residence, household income, and the mother's age, education, immigrant status, and possible chronic conditions were taken into account, the odds of medication use for pregnant women were one-sixth of those of non-pregnant women (Appendix Table A). In the CCHS, medication use was defined as having taken any type of medication in the month before the survey interview. Respondents were not asked specifically about prescription and non-prescription medications.

Similar differences were found using data from the 1996/97 NPHS. When controlling for the same characteristics, the odds of medication use by pregnant women were one-fifth the odds among other women of childbearing age.

Most commonly used medications

Of course, the effects of medications can vary depending on their type.^{19,20} Detailed information on the types of medication used is available from both the 2003 CCHS and the 1996/97 NPHS. As expected, use of most types of medication was lower among pregnant women (Table 1). Pain relievers were the medications most commonly used by pregnant women, with 42% reporting having taken them in the month before the 2003 interview. Stomach (11%) and cold remedies (10%) completed the trio of medications most commonly used during pregnancy.

In 2003, the most commonly consumed medications for women who were not pregnant were also pain relievers (79%), followed by cold medications (28%) and oral contraceptives (22%).

Between 1996/97 and 2003, the proportion of pregnant women who had taken medication in the month before their survey interview increased overall, and for most types of medication. Antibiotics and asthma medications were the exceptions.

Table 1
Percentage of women who used medication in past month, by pregnancy status and type of medication, Canada, 1996/97 and 2003

	1996/97 NPHS		2003 CCHS	
	Pregnant: Yes	No†	Pregnant: Yes	No†
Medication use in past month	57.1*	84.6	62.2*	88.8‡
Pain relievers	40.5*	72.5	42.2*	78.6‡
Cough/Cold remedies	6.1* ^E	20.7	10.2* ^E	27.7‡
Birth control pills	1.7* ^E	17.9	F	21.8‡
Penicillin or other antibiotics	12.0 ^E	11.1	8.5 ^E	11.0
Allergy	2.2* ^E	9.7	3.2* ^E	14.9‡
Stomach remedies	9.1 ^E	7.8	11.3 ^E	13.2‡
Codeine/Demerol/Morphine	F	6.1	F	8.4‡
Asthma	4.2 ^E	6.0	3.6* ^E	6.8
Antidepressants	F	4.5	F	7.1‡
Other	13.5* ^E	20.9	22.9	27.7‡

Data sources: 1996/97 National Population Health Survey; 2003 Canadian Community Health Survey

† Reference category

* Significantly different from estimate for reference category ($p < 0.05$)

‡ Significantly different from estimate for 1996/97 ($p < 0.05$)

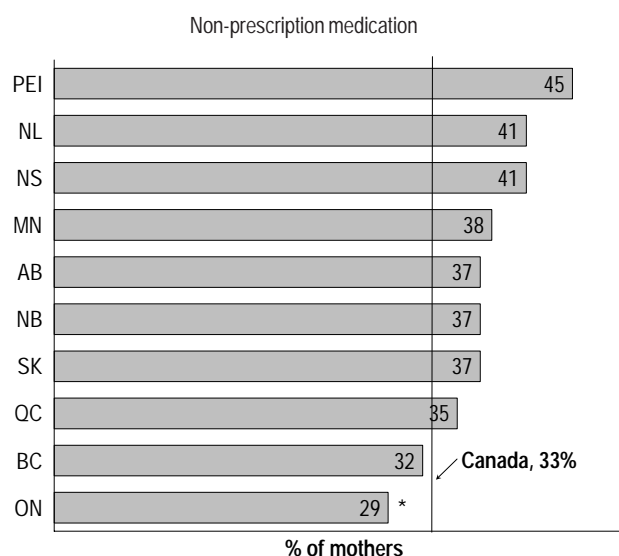
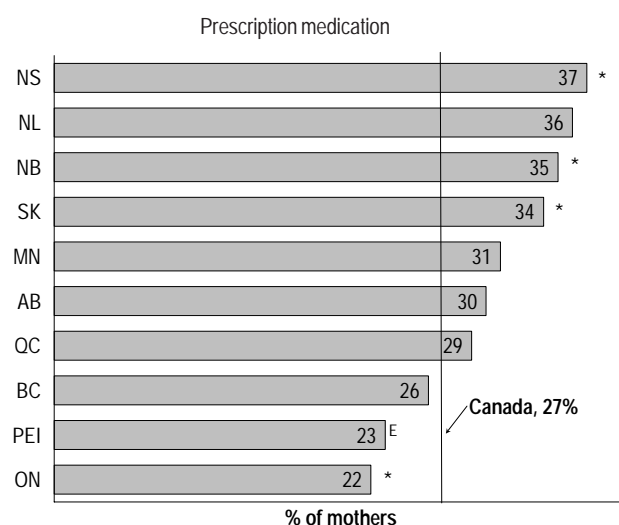
^E Coefficient of variation 16.6% to 33.3% (interpret with caution)

F Coefficient of variation greater than 33.3% or sample size less than 10 (suppressed because of extreme sampling variability)

Provincial profile

Among mothers of children born in 2001 or 2002, use of *prescription* medications during pregnancy in Canada averaged 27% (Chart 2). Three provinces had rates significantly above the national average: Nova Scotia (37%), New Brunswick (35%) and

Chart 2
Percentage of mothers who used medication during pregnancy, births in 2001 or 2002, by province, household population, Canada excluding territories



Data source: 2002/03 National Longitudinal Survey of Children and Youth
Note: Based on records for 2,661 children.

* Significantly different from estimate for Canada ($p < 0.05$)

^E Coefficient of variation 16.6% to 33.3% (interpret with caution)

Saskatchewan (34%). Ontario (22%) was the only province where the average was significantly below the national figure.

There was generally no significant difference in use of prescription medication between mothers of infants born in 1993 or 1994 and mothers of those born in 2001 or 2002. Two provinces, however, differed from the others, with significant increases in the proportion of women who consumed prescription medication during pregnancy: Saskatchewan and British Columbia (Appendix Table B).

Non-prescription medications were consumed during pregnancy by about one-third (33%) of mothers of children born in 2001 or 2002. The only significant provincial difference was in Ontario, where the proportion was low at 29% (Chart 2).

Between 1993/94 and 2001/02, the proportion of women who took non-prescription medications while they were pregnant rose from 27% to 33%. Increases were significant in three provinces: Newfoundland and Labrador, Prince Edward Island, and Québec (Appendix Table B).

The mother's age

More and more, women are waiting longer to have children. Over the last two decades, the average age of first-time mothers rose from 26.9 years to 29.6.²¹ And between 1993/94 and 2001/02, the proportion of pregnant women aged 35 to 39 who used prescription medications rose significantly, from 20% to 30% (Table 2). However, when province of residence, chronic conditions, education, immigrant status and family status were considered, the mother's age was not significantly related to the use of *prescription* medications during pregnancy (Appendix Table C).

There was a significant association between the age of pregnant women and their use of *non-prescription* medications. When the other characteristics were taken into account, pregnant women aged 35 or older had relatively low odds of using non-prescription drugs, compared with those aged 25 to 29 (Appendix Table C). As well, between 1993/94 and 2001/02, the proportion of 30- to

Table 2
Percentage of mothers who took medication during pregnancy, by type of medication, mother's age group and child's year of birth, 1994/95 and 2002/03

Mother's age group	Prescription		Non-prescription	
	Child born in: 1993/94	2001/02	Child born in: 1993/94	2001/02
Younger than 25	29.8	28.3	26.9	29.9
25 to 29 ¹	23.7	27.2	30.2	33.9
30 to 34	27.6	23.5	28.3	34.0*
35 to 39	20.3	29.8*	18.6	35.4*
40 or older	F	37.0 ^E	F	25.8 ^E

Data source: 1994/95 and 2002/03 National Longitudinal Survey of Children and Youth

Note: Based on records for 4,031 (1994/95) and 2,661 (2002/03) children.

* Significantly different from 1993/94 estimate ($p < 0.05$)

^E Coefficient of variation 16.6% to 33.3% (interpret with caution)

^F Coefficient of variation greater than 33.3% (suppressed because of extreme sampling variability)

39-year-old women who used non-prescription medications during pregnancy increased: from 28% to 34% for those aged 30 to 34, and from 19% to 35% for those aged 35 to 39 (Table 2).

Chronic conditions and other factors

A variety of factors can be related to medication use by pregnant women, and these factors themselves may be interrelated. However, as might be expected, even when controlling for other possible influences, pregnant women who had at least one chronic condition had significantly higher odds of medication use (with or without prescription), compared with those who reported no chronic conditions (Appendix Table C).

The proportion of immigrant women who consumed medications while pregnant, regardless of the type of medication, was significantly lower than that for Canadian-born women.

The proportion of lone-parent mothers who took prescription medications during pregnancy was lower than that among other pregnant women.

The mother's level of education was associated only with taking non-prescription medications. The odds of a pregnant woman without postsecondary education taking such medication were low, compared with the odds for those with at least some postsecondary education.

Definitions

The National Longitudinal Survey of Children and Youth (NLSCY), which follows children over time, also considered the mother's behaviour during pregnancy. The Canadian Community Health Survey (CCHS) and the National Population Health Survey (NPHS) both asked women between the ages of 15 and 49 if they were pregnant at the time of the interview.

Medication use during pregnancy was based on the following NLSCY questions: "Have you taken prescription medications since becoming pregnant with this child?" and "Have you taken over-the-counter medication since becoming pregnant with this child?"

In addition to medication use, the NLSCY asked the biological mother of the selected child if she had smoked cigarettes or consumed alcohol during her pregnancy. *Tobacco use* reflects mothers who said "yes" to "Did you smoke during your pregnancy with this child?" Those who gave any reply other than "never" to "How frequently did you consume alcohol during your pregnancy with this child (e.g., beer, wine, liquor)?" were placed in the *alcohol use during pregnancy* category.

The CCHS and NPHS measured *medication use in the previous month*, meaning the month before the survey interview. Women were considered to have used medication in the previous month if they responded "yes" at least once when asked about 21 specific medications or said "yes" to taking any "other medications." The same medications were listed on both surveys, although the CCHS question presented more examples. The medications listed in Table 1, based on the CCHS, were obtained from responses to the following questions (*italics* indicate details not asked in the NPHS):

"Over the past month, have you taken:

- analgesics such as Aspirin or Tylenol (includes arthritis medications and anti-inflammatories)?"
- cold/flu remedies?"
- birth control pills?"
- penicillin or other antibiotics?"
- allergy medications *such as Reactine or Allegra?*" (Sudafed was also given as an example in the NPHS)
- medications for stomach ailments?"
- codeine, Demerol or morphine?"
- asthma medication *such as an inhaler or a nebulizer?*"
- antidepressants *such as Prozac, Paxil or Effexor?*"

Other medication(s) includes weight loss pills, heart and hypertension medications, diuretics, steroids, insulin, pills to control

diabetes, sleeping pills, laxatives, hormone replacement therapy, thyroid medication, or any other medication.

In the NLSCY, the presence of *chronic conditions* among mothers was established by asking about long-term health problems. In cycle 1, this list contained 21 conditions; an "other" category captured conditions not mentioned in the list. For the CCHS, the mothers' chronic conditions were established based on positive responses to the question listing 30 conditions. The NPHS asked if a specialist had diagnosed any chronic condition from a list of 20; these conditions were all included in the CCHS list. Both questions about chronic conditions included an "other" category.

Five categories were used for the *mother's age*: younger than 25; 25 to 29; 30 to 34; 35 to 39; and 40 or older. The CCHS and NPHS recorded the age of the time of the interview, while the NLSCY used the mother's age when her child was born.

For all three surveys, *education* reflects the highest level attained by the mother at the time of the interview: less than secondary graduation; secondary school graduation; and at least some postsecondary.

Household income was based on the number of people in the household and total household income from all sources in the 12 months before the interview. The groupings apply to all three surveys.

Household income group	People in household	Total household income
Lowest	1 or 2	Less than \$15,000
	3 or 4	Less than \$20,000
	5 or more	Less than \$30,000
Middle	1 or 2	\$15,000 to \$59,999
	3 or 4	\$20,000 to \$79,999
	5 or more	\$30,000 to \$79,999
Highest	1 or 2	\$60,000 or more
	3 or more	\$80,000 or more

For the NLSCY, household income, education, and living in a lone-parent household are variables observed at the time of the interview, 6 to 18 months after the birth of the child.

In the NPHS, *immigrant status* is based on country of birth (other than Canada); in the CCHS and NLSCY, not being a Canadian citizen at birth equals immigrant status.

Lone-parent family refers to a child living with one parent at the time of the NLSCY interview.

Limitations

The sampling unit for the National Longitudinal Survey of Children and Youth (NLSCY) is the child. This analysis used information about the biological mothers of the selected children. Only live births were considered; therefore, medication use or other behaviours during pregnancy that may have resulted in stillbirths were excluded. In addition, neither the precise medication used, nor its type, can be determined from the NLSCY data. Some women may have considered folic acid or prenatal vitamins as medications, even if they were following physician and/or Health Canada recommendations.²²⁻²³ The NLSCY did not measure the use of folic acid or prenatal vitamins among pregnant women.

All data are based on self-reports and are thus subject to recall errors and errors resulting from misunderstanding questions. Given the gap in time between the pregnancy and the survey interviews, it is possible that some women may have incorrectly recalled certain details of their medication use. As well, some household characteristics at the time of the interview may have differed from those at the time of the woman's pregnancy.

Both the Canadian Community Health Survey (CCHS) and the National Population Health Survey (NPHS) asked women if they were pregnant at the time of the interview, and about their use of medication in the previous month. It is possible that some women may have been pregnant, but were not yet aware of their condition.

The distinction between prescription and non-prescription medication is not always precise. Sometimes the same medication can either be purchased over the counter or obtained with a doctor's prescription.

Household income, by contrast, was not significantly associated with pregnant women's use of either type of medication.

Concluding remarks

Medication use among women of reproductive age has increased over the last 10 years. Pregnant women are no exception to this trend, and most of the increase in this group reflects growing use of non-prescription medications. Medication use among pregnant women did, however, remain lower than that for other women in their childbearing years.

Not surprisingly, women who reported at least one chronic condition had higher odds of medication use during pregnancy, whether the medication was obtained with or without a prescription. A significant rise of 16 percentage points was noted in use of non-prescription medication among pregnant women aged 35 to 39, distinguishing this age group from the others.

While many medications present little risk to pregnant women, health care professionals and women themselves must be aware of the risks and benefits associated with any drugs considered for use during pregnancy. ●

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Appendix

Table A

Adjusted odds ratios relating medication use to pregnancy status and other selected characteristics, by timing of medication use, female household population aged 15 to 49, Canada, 1996/97 and 2003

	Took medication in past month			
	1996/97 NPHS		2003 CCHS	
	Adjusted odds ratio	95% confidence interval	Adjusted odds ratio	95% confidence interval
Pregnant				
Yes	0.22*	0.15, 0.31	0.16*	0.10, 0.26
No†	1.00	...	1.00	...
Province				
Newfoundland and Labrador	1.19	0.71, 2.00	0.78	0.43, 1.41
Prince Edward Island	1.22	0.72, 2.05	1.08	0.58, 2.01
Nova Scotia	1.39	0.84, 2.30	1.11	0.62, 1.98
New Brunswick	1.17	0.77, 1.77	1.40	0.80, 2.43
Québec	0.72*	0.56, 0.92	0.77	0.52, 1.13
Ontario†	1.00	...	1.00	...
Manitoba	1.58*	1.24, 2.00	0.82	0.49, 1.38
Saskatchewan	0.84	0.54, 1.31	1.11	0.65, 1.89
Alberta	1.21*	1.07, 1.38	1.05	0.69, 1.58
British Columbia	0.90	0.66, 1.21	0.65*	0.45, 0.95
Yukon/Northwest Territories/Nunavut	0.77	0.48, 1.24
Age group				
Younger than 25	0.95	0.74, 1.23	1.30	0.85, 2.02
25 to 29†	1.00	...	1.00	...
30 to 34	0.83	0.65, 1.07	0.68	0.45, 1.02
35 to 39	0.73*	0.57, 0.95	0.87	0.54, 1.39
40 or older	0.81	0.63, 1.04	0.71	0.47, 1.07
Chronic condition(s)				
Yes	2.62*	2.21, 3.10	3.40*	2.60, 4.44
No†	1.00	...	1.00	...
Education				
Less than secondary graduation	1.00	0.82, 1.21	0.55*	0.39, 0.77
Secondary graduation	0.88	0.72, 1.08	0.85	0.59, 1.23
Postsecondary or higher†	1.00	...	1.00	...
Household income				
Lowest	0.66*	0.48, 0.91	0.66	0.40, 1.08
Middle	0.83	0.65, 1.06	0.85	0.63, 1.15
Highest†	1.00	...	1.00	...
Immigrant status				
Yes	0.61*	0.49, 0.75	0.46*	0.33, 0.64
No†	1.00	...	1.00	...

Data sources: 2003 Canadian Community Health Survey; 1996/97 National Population Health Survey

Notes: Based on 9,826 (CCHS) and 22,518 (NPHS) women aged 15 to 49. A "missing" category for household income was included in the model, but the odds ratios are not shown.

† Reference category

* Significantly different from estimate for reference category ($p < 0.05$)

... Not applicable

Table B
Percentage of mothers who took medication during pregnancy, by child's year of birth, type of medication and province, household population, Canada excluding territories, 1993/94 and 2001/02

	Prescription		Non-prescription	
	Child born in: 1993/94	2001/02	Child born in: 1993/94	2001/02
Newfoundland and Labrador	35.6 [†]	36.4	23.4	40.8 [†]
Prince Edward Island	26.7 ^E	23.2 ^E	26.3	45.1 [†]
Nova Scotia	35.9 [†]	37.3 [†]	40.8 [†]	41.0
New Brunswick	35.1 [†]	35.2 [†]	29.6	37.4
Québec	28.1	28.6	22.4 [†]	34.5 [†]
Ontario	25.0	22.0 [†]	27.8	29.5 [†]
Manitoba	31.2	30.7	36.9 [†]	37.6
Saskatchewan	22.9	33.9 ^{††}	30.9	36.7
Alberta	24.8	29.9	32.9	37.2
British Columbia	17.1 [†]	26.3 [†]	23.6	31.6

Data source: 1994/95 and 2002/03 National Longitudinal Survey of Children and Youth

Note: Based on records for 4,031 (1994/95 and 2,661 (2002/03) children.

[†] Significantly different from estimate for 1993/94 ($p < 0.05$)

^{††} Significantly different from estimate for Canada ($p < 0.05$)

^E Coefficient of variation between 16.6% to 33.3% (interpret with caution)

Table C
Adjusted odds ratios relating medication use during pregnancy to selected characteristics, mothers of children born between 1993 and 2002, household population, Canada

	Prescription		Non-prescription	
	Adjusted odds ratio	95% confidence interval	Adjusted odds ratio	95% confidence interval
Province				
Newfoundland and Labrador	1.57*	1.28, 1.92	0.84	0.68, 1.04
Prince Edward Island	0.85	0.67, 1.08	0.99	0.80, 1.22
Nova Scotia	1.29*	1.09, 1.52	1.42*	1.20, 1.67
New Brunswick	1.40*	1.17, 1.66	1.03	0.87, 1.22
Québec	1.10	0.96, 1.27	0.84*	0.73, 0.96
Ontario [†]	1.00	...	1.00	...
Manitoba	1.18	1.00, 1.39	1.12	0.96, 1.32
Saskatchewan	1.08	0.93, 1.26	1.05	0.90, 1.23
Alberta	1.08	0.92, 1.26	1.17*	1.01, 1.35
British Columbia	0.81*	0.69, 0.96	0.87*	0.75, 0.99
Age group				
Younger than 25	1.13	0.99, 1.29	0.88	0.77, 1.01
25 to 29 [†]	1.00	...	1.00	...
30 to 34	0.96	0.85, 1.08	0.94	0.84, 1.05
35 to 39	1.09	0.94, 1.27	0.80*	0.70, 0.93
40 or older	1.26	0.89, 1.79	0.59*	0.42, 0.81
Chronic condition(s)				
Yes	2.09*	1.91, 2.28	1.41*	1.28, 1.55
No [†]	1.00	...	1.00	...
Education				
Less than secondary graduation	0.89	0.76, 1.03	0.79*	0.69, 0.92
Secondary graduation	0.90	0.78, 1.03	0.79*	0.70, 0.90
Postsecondary or higher [†]	1.00	...	1.00	...
Household income				
Lowest	1.14	0.93, 1.38	0.83	0.69, 1.01
Middle	0.99	0.87, 1.12	0.95	0.84, 1.08
Highest [†]	1.00	...	1.00	...
Immigrant status				
Yes	0.72*	0.62, 0.84	0.67*	0.58, 0.77
No [†]	1.00	...	1.00	...
Lone-parent family				
Yes	0.82*	0.70, 0.97	0.98	0.83, 1.15
No [†]	1.00	...	1.00	...
NLSCY cycle				
1 (1994/95)	0.90	0.78, 1.05	0.76*	0.65, 0.89
2 (1996/97)	1.08	0.93, 1.26	0.91	0.79, 1.06
3 (1998/99)	0.95	0.83, 1.09	1.01	0.88, 1.15
4 (2000/01)	1.11	0.94, 1.31	0.90	0.77, 1.06
5 (2002/03) [†]	1.00	...	1.00	...

Data source: 1994/95 to 2002/03 National Longitudinal Survey of Children and Youth

Note: Based on records of 20,738 children.

* Significantly different from estimate for reference category ($p < 0.05$)

[†] Reference category

... Not applicable