

## Article

# Trends in teen sexual behaviour and condom use

by Michelle Rotermann

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## Abstract

Results from the 1996/1997 National Population Health Survey and the 2003 and 2005 Canadian Community Health Survey suggest that the proportion of teens who have had sexual intercourse has declined. In 2005, 43% of 15- to 19-year-olds reported that they had had sexual intercourse at least once, down from 47% in 1996/1997. As well, the proportion of teens reporting that they had become sexually active before age 15 declined. About one-third of those who had had intercourse in the previous year did so with more than one partner. Condom use was reported by around three-quarters of sexually active 15- to 19-year-olds who had had multiple partners or who were not married or in a common-law relationship.

## Keywords

adolescent behaviour, coitus, contraception behaviour, sexual intercourse, sexual partners

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**S**exual intercourse at an early age, having multiple sexual partners, and unprotected sex put teens at risk of sexually transmitted infection (STI) and of unwanted pregnancy. Since the mid-1990s, some of these behaviours have become less prevalent, while the prevalence of others has not changed or has increased. However, trends differ by age, gender and jurisdiction.

This article presents recent trends in sexual behaviours among Canadian teenagers, based on nationally representative surveys conducted in 1996/1997, 2003 and 2005.

## Sexual activity

In 2005, 43% of teens aged 15 to 19 reported that they had had sexual intercourse at least once, down from 47% in 1996/1997 (Table 1). All of the decline reflected the behaviour of young women, among whom the proportion reporting ever having had intercourse fell from 51% to 43%. The proportion of young men who reported having had intercourse remained at 43%.

Throughout the period, the percentage of teens reporting sexual intercourse was higher at older ages. About one-third of 15- to 17-year-olds had had

intercourse, compared with about two-thirds of 18- and 19-year-olds.

In 2005, 58% of Quebec teens reported having had sexual intercourse, significantly above the estimate for the rest of Canada (the other provinces combined); the proportions were 37% in Ontario and 40% in British Columbia, which were significantly lower. The remaining provinces did not differ from the rest of Canada.

From 1996/1997 to 2005, the proportion of Nova Scotia teens reporting that they had had sexual intercourse rose from 31% to 49%, while the figure fell from 41% to 37% among those in Ontario. In Prince Edward Island and New Brunswick, 2005 figures were down substantially from 2003 estimates.

**Table 1**  
**Number and percentage of 15- to 19-year-olds who had sexual intercourse at least once, by gender, age group and province, Canada excluding territories, 1996/1997, 2003 and 2005**

	1996/1997		2003		2005	
	'000	%	'000	%	'000	%
<b>Total</b>	920	47*	862	45	868	43
<b>Gender</b>						
Males <sup>†</sup>	434	43	437	46	432	43
Females	486	51*	425	45	435	43
<b>Age group</b>						
15 to 17 <sup>†</sup>	380	32	348	30	362	29
18 to 19	540	70 <sup>‡</sup>	514	68 <sup>‡</sup>	506	65 <sup>‡</sup>
<b>Province</b>						
Newfoundland and Labrador	23	46	19	54 <sup>‡</sup>	17	49
Prince Edward Island	4 <sup>E</sup>	37 <sup>E</sup>	5	52*	3	35
Nova Scotia	16 <sup>E</sup>	31 <sup>†*E</sup>	29	49	29	49
New Brunswick	28 <sup>E</sup>	43 <sup>E</sup>	24	52 <sup>†‡</sup>	19	43
Quebec	297	59 <sup>‡</sup>	252	62 <sup>‡</sup>	263	58 <sup>‡</sup>
Ontario	269	41 <sup>†*</sup>	302	40 <sup>‡</sup>	302	37 <sup>‡</sup>
Manitoba	30	39 <sup>‡</sup>	31	43	27	39
Saskatchewan	38 <sup>E</sup>	54	27	39 <sup>‡</sup>	28	43
Alberta	82	44	80	39 <sup>‡</sup>	77	39
British Columbia	133	47	93	37 <sup>‡</sup>	103	40 <sup>‡</sup>

<sup>†</sup> reference category

\* significantly different from corresponding estimate for 2005 (p < 0.05)

<sup>‡</sup> significantly different from estimate for reference category or within year rest of Canada (p < 0.05)

<sup>E</sup> use with caution (coefficient of variation 16.6 to 33.3%)

Note: Because of rounding, counts may not add to total.

Sources: 1996/1997 National Population Health Survey; 2003 Canadian Community Health Survey, cycle 2.1; 2005 Canadian Community Health Survey, cycle 3.1.

**Table 2**  
**Number and percentage of 15- to 19-year-olds who had sexual intercourse before age 15 or at ages 15 and 16, by gender and age group, Canada excluding territories, 1996/1997, 2003 and 2005**

Age when first had sexual intercourse	1996/1997		2003		2005	
	'000	%	'000	%	'000	%
<b>Total</b>						
Less than 15	230	12*	172	9	162	8
15 to 16	428	22	420	22	426	21
<b>Gender</b>						
<b>Males</b>						
Less than 15	104	11	87	9	80	8
15 to 16	194	20	206	22	215	22
<b>Females</b>						
Less than 15	126	13*	85	9	82	8
15 to 16	234	25	214	23	210	21
<b>Age group</b>						
<b>15 to 17</b>						
Less than 15	138	12*	95	8	99	8
15 to 16	213	18	213	19	225	18
<b>18 to 19</b>						
Less than 15	92	12*	76	10	63	8
15 to 16	215	28	207	28	200	26

\* significantly different from corresponding estimate for 2005 (p < 0.05)

Notes: Comprises sexually active and sexually inactive 15- to 19-year-olds. Because of rounding, counts may not add to totals.

Sources: 1996/1997 National Population Health Survey; 2003 Canadian Community Health Survey, cycle 2.1; 2005 Canadian Community Health Survey, cycle 3.1.

## Early sexual intercourse

The younger a person is when he or she becomes sexually active, the longer they are at risk of unwanted pregnancy or of contracting a sexually transmitted infection.<sup>1</sup> Research has also shown that an early age at first intercourse is related to risk behaviours such as unprotected sex, alcohol consumption and smoking.<sup>2-5</sup> The proportion of teens who reported having had sexual intercourse before they were 15 years old fell from 12% in 1996/1997 to 8% in 2005 (Table 2). Among girls, the percentage reporting intercourse before age 15 decreased, while among boys, the figure did not change significantly. As well, in 2005, the proportions of both 15- to 17-year-olds and 18- and 19-year-olds reporting early sexual intercourse were significantly lower than in 1996/1997.

## Multiple partners

The number of sexual partners is an important indicator of sexual risk behaviour, particularly with respect to contracting an STI.<sup>6,7</sup> In 2005, about one-third of the 15- to 19-year-olds who had had intercourse in the past year reported having done so with more than one partner, around the same percentage as in 1996/1997 (Table 3). Throughout the period from 1996/1997 to 2005, males were more likely than females to report having had multiple partners in the past year, a finding consistent with other studies.<sup>4-8</sup> Having had sex with more than one partner was more common at older ages. In 2005, 36% of 18- to 19-year-olds reported having had multiple partners in the past year, compared with 29% of 15- to 17-year-olds.

## Condom use

Condom use is a means of preventing unplanned pregnancies and reducing the risk of contracting a STI. In 2005, three-quarters of sexually active 15- to 19-year-olds who had been with multiple partners in the past year and/or who were not married or in a common-

**Table 3**  
**Number and percentage of sexually active 15- to 19-year-olds who reported having multiple partners in past year, by gender and age group, Canada excluding territories, 1996/1997, 2003 and 2005**

	1996/1997		2003		2005	
	'000	%	'000	%	'000	%
<b>Total</b>	231	29	271	35	261	33
<b>Gender</b>						
Males <sup>†</sup>	123	35	154	40	151	40
Females	108	25 <sup>‡</sup>	117	30 <sup>‡</sup>	110	27 <sup>‡</sup>
<b>Age group</b>						
15 to 17 <sup>†</sup>	85	27	107	35*	95	29
18 to 19	146	31	164	35	166	36 <sup>‡</sup>

<sup>†</sup> reference category

<sup>‡</sup> significantly different from estimate for reference category ( $p < 0.05$ )

\* significantly different from corresponding estimate for 2005 ( $p < 0.05$ )

Sources: 1996/1997 National Population Health Survey; 2003 Canadian Community Health Survey, cycle 2.1; 2005 Canadian Community Health Survey, cycle 3.1.

law relationship reported using a condom the last time they had intercourse (Table 4). Males were considerably more likely than females to report having used a condom, a finding consistent with other studies.<sup>1,2,9-11</sup> From 2003 to 2005 (the only years for which nationally representative and comparable data are available), the proportion of sexually active young women who reported condom use rose from 65% to 70%; among young men, the proportion remained around 80%.

In 2005, condom use was more common at ages 15 to 17 than at ages

## The data

The prevalence of sexual intercourse and condom use and the number of sexual partners among 15- to 19-year-olds were estimated from the 1996/1997 National Population Health Survey (NPHS) cross-sectional file and from cycles 2.1 and 3.1 of the Canadian Community Health Survey (CCHS).

Respondents to the cross-sectional component of the NPHS were surveyed from June 1996 to August 1997, with an overall response rate of 83%. The sample aged 15 to 19 for the questions about sexual intercourse and age at first intercourse numbered 4,449; the analyses of multiple partners were based on a sample of 3,600. Both samples were weighted to represent a population of approximately 2.1 million. Virtually all the NPHS data (98.5%) were collected in telephone interviews. Details of the design and sampling techniques have been described elsewhere.<sup>12</sup>

Cycle 2.1 of the CCHS was conducted from January to December in 2003; cycle 3.1, from January to June in 2005. The response rates for cycle 2.1 and cycle 3.1 were 81% and 79%, respectively. The samples used for this article numbered 11,022 and 9,874 respondents aged 15 to 19, weighted to represent populations of approximately 2 million and 2.1 million, respectively. Telephone interviews accounted for 70% of all cycle 2.1 interviews, and 61% of cycle 3.1 interviews. Details of the CCHS design and sampling techniques have been published elsewhere.<sup>13</sup>

All differences were tested to ensure statistical significance, which was established at the 0.05 level. To account for survey design effects, standard errors and coefficients of variation were estimated using the bootstrap technique.<sup>14,15</sup>

The percentage of 15- to 19-year-olds who had had sexual intercourse at least once was based on yes/no responses to the following question in the NPHS and in cycles 2.1 and 3.1 of the CCHS: "Have you ever had sexual intercourse?" Respondents were asked how old they were "the first time," which was used to calculate the proportions who became sexually active at age 14 or younger, and at ages 15 and 16. The percentage who had had sexual intercourse with more than one person in the past year was based on the number of partners respondents said they had had in the previous 12 months. Estimates of condom use among sexually active young people who had been with multiple partners in the past year and/or who were not married or not in a common-law relationship were based on responses to: "Did you use a condom the last time you had intercourse?" Because condom use referred to the most recent sexual encounter, it does not necessarily reflect typical behaviour. It is also possible that the question itself generated confusion among respondents, as it does not specifically ask about male versus female condom use.

The mode of data collection can influence response rates, data quality and non-sampling errors, notably bias.<sup>16,17</sup> "Social desirability," which has been identified as a source of bias in the CCHS,<sup>13</sup> may be especially relevant to this analysis. Social desirability refers to a tendency for respondents to modify their answers in an effort to construct a more favourable image of themselves. Some studies have found that face-to-face interviews are more susceptible to this type of bias than are telephone interviews, while others have found that respondents interviewed by telephone are less likely to share or accurately report potentially embarrassing attitudes or behaviours.<sup>18,19</sup> Thus, social desirability has the potential to result in both over- and underestimation of a particular behaviour, since the perception of what is "desirable" may differ depending on a respondent's age, gender and socio-economic status. Some teens may give socially acceptable answers (under-report) to questions about sexual behaviour; others may exaggerate their sexual experience.

Differing proportions of the interviews in three surveys used for this analysis were conducted by telephone. To ascertain the impact of these differences, analyses were rerun for the subset of respondents from each survey who were interviewed by telephone. The results were generally the same as those for the full sample (data not shown), thereby lending support to the stability and credibility of the original estimates.

The term "sexual intercourse" was not defined in the NPHS or CCHS questions, so it is possible that some teens may have misinterpreted the question. As well, recall errors are possible.

**Table 4**  
**Number and percentage of sexually active 15- to 19-year-olds who used a condom the last time they had intercourse, by gender, age group and province, Canada excluding territories, 2003 and 2005**

	2003		2005	
	Number	%	Number	%
<b>Total</b>	541	72	567	75
<b>Gender</b>				
Males <sup>†</sup>	300	79	298	80
Females	241	65* <sup>‡</sup>	269	70 <sup>‡</sup>
<b>Age group</b>				
15 to 17 <sup>†</sup>	238	79	260	81
18 to 19	303	68 <sup>‡</sup>	307	70 <sup>‡</sup>
<b>Provinces</b>				
Newfoundland and Labrador	11	73	12	80
Prince Edward Island	4	88 <sup>‡</sup>	2	87 <sup>‡</sup>
Nova Scotia	20	77*	23	90 <sup>‡</sup>
New Brunswick	16	74	13	79
Québec	143	66* <sup>‡</sup>	150	66 <sup>‡</sup>
Ontario	199	75 <sup>‡</sup>	208	77
Manitoba	21	76	17	72
Saskatchewan	18	75	19	78
Alberta	50	73	53	82 <sup>‡</sup>
British Columbia	59	72	70	77

<sup>†</sup> reference category

\* significantly different from corresponding estimate for 2005 ( $p < 0.05$ )

<sup>‡</sup> significantly different from estimate for reference category or within year rest of Canada ( $p < 0.05$ )

**Note:** Data pertain to sexually active 15- to 19-year-olds who were not married or in a common-law relationship or who had multiple partners in past year.

**Sources:** 2003 Canadian Community Health Survey, cycle 2.1; 2005 Canadian Community Health Survey, cycle 3.1.

18 and 19. While 81% of the younger group reported that they had used a condom the last time they had intercourse, the figure for older teens

was 70%. Previous research has shown condom use to decrease with age, to be less common among oral contraceptive users, and to be more

common among individuals in short-term relationships.<sup>2,4, 20-24</sup>

In 2005, the percentage of 15- to 19-year-olds who reported that they had used a condom the last time they had sex was significantly higher in Prince Edward Island, Nova Scotia and Alberta, and significantly lower in Quebec, compared with the rest of Canada. Nova Scotia was the only province where teen condom use increased significantly between 2003 and 2005.

## Conclusion

Based on a representative sample of 15- to 19-year-olds, the proportion of teens who had had sexual intercourse at least once declined between 1996/1997 and 2005. As well, the proportion who reported becoming sexually active at a very early age decreased. However, among those who were sexually active, there was no significant change in the likelihood of having multiple partners or, for males, using condoms. So while some adolescents have adopted measures to reduce their risks of sexually transmitted infection and unwanted pregnancy, others report high-risk behaviour. ■

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