Alcohol

Introduction

Beverage alcohol is a legal drug that enjoys wide popularity across Canada. Alcohol comes in a variety of colours and consistencies, ranging from clear (e.g., vodka, gin) to dark brown (e.g., stout or dark lager beer). Although it is most often consumed orally in liquid form, alcohol is sometimes available as a solid (e.g., gelatin shots, absorbed in fruit) and can also be inhaled as a vapor. Common terms for alcohol include booze, beer, wine, liquor and spirits.

For those who drink alcohol occasionally and in moderate amounts, use is associated with social and even moderate health benefits for some. For example, alcohol consumption has been shown to reduce the risk of heart disease and diabetes, particularly among middle aged and older adults who drink very lightly (no more than one drink per day). However, alcohol misuse is a significant risk factor for numerous chronic health conditions, such as cirrhosis of the liver and several types of cancers, as well as acute problems such as injuries (e.g., from road crashes), violence and suicide.

The most recent comprehensive cost study, conducted in 2002, estimated the total cost of alcohol-related harm to Canadians to be $14.6 billion per year.[1] This figure includes the following annual costs:

- $7.1 billion in lost productivity due to disability and premature death
- $3.3 billion for direct health care costs
- $3.1 billion for direct enforcement costs

Key Points

- Alcohol is by far the most common drug used by Canadians.
- The use and risky use of alcohol by Canadian youth appears to be declining.
- Risky drinking by adults in Canada has increased for both genders since 2003.
- The rate of hospital inpatient events ending in discharge or death where alcohol was identified as the primary source of a behavioural or mental disorder increased from 47 to 51 per 100,000 between 2006 and 2011.
- An estimated 3.2% of the Canadian population age 15 and older—approximately 886,000 individuals—abused or were dependent on alcohol in 2012.

Effects of Alcohol Use

Short term: Intoxication, injury, violence, accidents, spousal abuse, suicide, alcohol toxicity (overdose), death.

Long term: Alcohol dependence, increased risk of several types of cancer (e.g., cancers of the mouth, throat, liver, breast and digestive track), diabetes, cirrhosis, pancreatitis, low birth weight, fetal alcohol spectrum disorder (FASD).

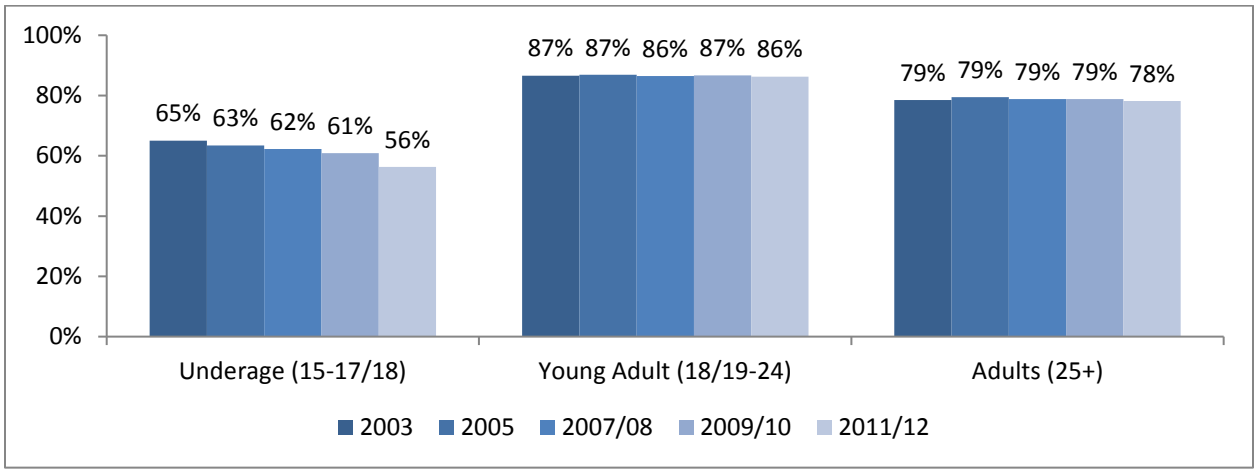
Legal Status of Alcohol in Canada

Alcohol is a legal, regulated substance in Canada. The provincial and territorial governments maintain wholesale monopolies on the distribution of alcohol and, with the exception of Alberta, are also the leading retailers of alcohol. All jurisdictions have statutes prohibiting the sale of alcohol to minors (age 17 and under in Alberta, Manitoba and Quebec; age 18 and under elsewhere in Canada) and laws prohibiting sale to those who are visibly intoxicated. Driving while impaired by alcohol (i.e., with a blood alcohol content [BAC] equal to or greater than 0.08) is prohibited under federal law. Most provincial jurisdictions also have administrative sanctions (e.g., 24-hour roadside suspension of licence) for drivers with a BAC equal to or greater than 0.05.

Past-Year Use of Alcohol in Canada

- **General population (age 15+):** According to data collected by Statistics Canada from the Canadian Community Health Survey, consumption remained essentially constant among young adults from legal drinking age to age 24 and among adults age 25+ from 2003 to 2012. The prevalence of past-year alcohol use by underage youth, however, declined significantly from 65% in 2003 to 56% in 2012 (see Figure 1).[2]
- **Students (Grades 7–12):** Based on data from the 2012–2013 Youth Smoking Survey, past-year self-reported use of alcohol among students increases substantially with each grade level, from an estimated 8% among students in grade seven to 67% among those in grade 12. In 2012–2013, the overall prevalence of alcohol use in the past 12 months decreased to 41% compared to the 45% recorded in 2010–2011.[3]
- **Age of initiation:** Data from the Canadian Alcohol and Drug Use Monitoring Survey (CADUMS) indicates that the average age of initiation for the consumption of alcohol was significantly delayed from 15.6 years in 2004 to 16.2 years in 2012.[4]
- **Post-secondary students:** Data from the spring 2013 National College Health Assessment Survey, which is drawn from a convenience sample of 32 post-secondary institutions and therefore is not representative of all post-secondary students in Canada, indicates that 36% of post-secondary students drank more than four drinks on a single occasion at least once in the past two weeks. Risky drinking in the last two weeks was more prevalent among male students (41%) than among female students (33%). (Note: the rate for female students would be higher if the more accepted measure of more than three drinks on a single occasion were used to identify risky drinking).[5]
- **Gender:** According to the Canadian Community Health Survey, self-reported past-year drinking remained constant from 2003 to 2012 for both men and women, with approximately 83% of men and 75% of women reporting drinking alcohol at least once in the past year.[2]

Figure 1: Prevalence of self-reported past-year alcohol use among Canadians by age category



Source: Statistics Canada, Canadian Community Health Survey, 2003–2012

Ranking Among Top Five Substances

According to the 2012 CADUMS, 70% of youth age 15–24 and 80% of adults age 25+ reported consuming alcohol in the past year, making it the leading psychoactive substance used by Canadians by a wide margin (see Table 1).[4]

Table 1: Top five substances used in the past year by Canadians, 2012

	#1	#2	#3	#4	#5
General Population (age 15+)	Alcohol (78.4%)	Cannabis (10.2%)	Cocaine/Crack (1.1%)*	Hallucinogens (0.9%)*	Ecstasy (0.6%)*
Youth (15–24)	Alcohol (70.0%)	Cannabis (20.3%)	Hallucinogens (3.9%)*	N/A (suppressed)	N/A (suppressed)
Adults (25+)	Alcohol (80.0%)	Cannabis (8.4%)	Cocaine/Crack (0.7%)*	Hallucinogens (0.4%)*	N/A (suppressed)

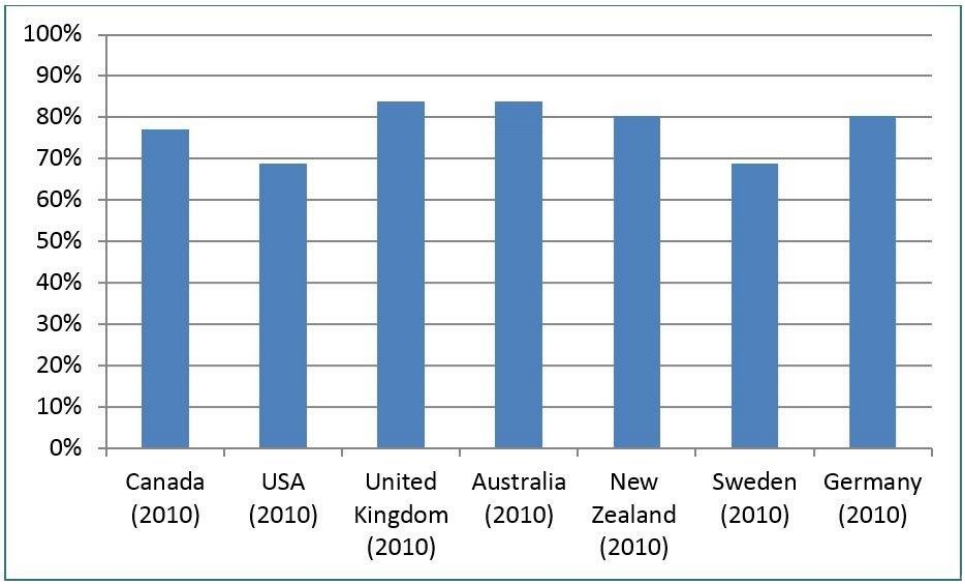
Source: CADUMS 2012

Note: Figures identified with an asterisk should be interpreted with caution because of the small sample size.

Past-Year Use of Alcohol Internationally

Data from the World Health Organization's Global Health Observatory shows that while the prevalence of past-year use of alcohol in Canada (77.1%) is lower than that reported in Australia (84.0%), the United Kingdom (83.9%), New Zealand (80.3%) and Germany (80.3%), it is higher than that reported in the United States (68.9%) and Sweden (68.8%) (Figure 2).[6]

Figure 2: Prevalence of self-reported past-year alcohol use among the general population age 15+ by country



Source: World Health Organization, Global Health Observatory, 2014

Associated Harms

Risky Drinking

- **General population (age 15+):** According to data from Statistics Canada, risky alcohol use (defined as more than four drinks per occasion monthly or more often in the past year for men or more than three drinks per occasion for women) is common among the general population in Canada, with approximately 25% of drinkers reporting engaging in this pattern of consumption in 2012. The prevalence of risky drinking among men and women differs significantly, however, with 32.2% of male drinkers and 18.5% of female drinkers age 15+ reporting risky alcohol use on a monthly or more frequent basis. The Statistics Canada data also indicate that monthly or more often risky drinking has increased significantly for both males and females since 2003.[2]
- **Adults (age 25+):** According to the 2012 Canadian Community Health Survey, the self-reported rate of monthly or more frequent risky drinking among drinkers age 25 and over in the general population was 22%. These data also indicate that risky drinking is significantly higher among adult male drinkers than female drinkers (30% vs. 15%), and among male and female young adult drinkers (53% vs. 46%).[2]
- **Students (Grades 7–12):** Risky alcohol use by students (defined as more than four drinks per occasion at least once in the past 30 days for both boys and girls) varied across Canada in 2007–2008, from a high of 29.7% in Newfoundland and Labrador to a low of 19.3% in Alberta.[7]
- **Post-secondary students:** Data from the 2004 Canadian Campus Survey[8] and Canadian Addiction Survey[9] indicate that self-reported high-risk drinking (defined as more than four drinks per occasion at least weekly for males and females) is more common among undergraduate students than young adults of legal drinking age up to age 24 in the general population (see Table 2).

Table 2: Patterns of self-reported risky alcohol use among Canadian undergraduate students and young adults of legal drinking age, 2004

Measure	Undergraduate students (Canadian Campus Survey)		General population (age 18/19–24) (Canadian Addiction Survey)	
	Male	Female	Male	Female
More than four drinks on a single occasion at least weekly	20.6%	12.5%	15.7%	10.3%

Sources: Canadian Campus Survey, 2004; Canadian Addiction Survey, 2004

Note on methods for assessing prevalence of risky drinking

Risky or hazardous drinking can be defined in several ways. For example, it is possible to define risky drinking as any instance within the past year that exceeds the daily limits set out in *Canada's Low-Risk Alcohol Drinking Guidelines*. However, this is a relatively low threshold and using it would identify a majority of Canadian drinkers as "risky." More commonly, risky drinkers are defined as those who consume four or more drinks on a single occasion (or more than three drinks per occasion for women) once a month or more often in the past year. Compared to the Guidelines' definition, this measure produces a substantially smaller estimate of the number of risky drinkers in Canada.

Another way to assess risky drinking is by using a score of eight or higher on the Alcohol Use Disorders Identification Test (AUDIT). This threshold is even higher than the monthly risky drinking measure, however, meaning it will identify even fewer risky drinkers than the two approaches discussed previously. Given that the comparatively larger number of occasional risky drinkers account for a significant proportion of alcohol-related harm in Canada, measuring the instances of risky drinking in the past month is the recommended choice for identifying risky drinkers.

Use of Caffeinated Alcoholic Beverages by Young Adults

Caffeinated alcoholic beverages refer to either pre-mixed or hand-mixed drinks containing significant amounts of both caffeine and alcohol. Research has linked the consumption of caffeine and alcohol in combination with increased risk of several types of harm, including committing or being a victim of sexual assault; driving while under the influence of alcohol or riding in a vehicle with someone who has been drinking; being hurt or injured in a way that requires medical attention; and causing a person to drink more alcohol without realizing they are intoxicated because the caffeine keeps them awake longer.[10,11] National data collected in 2010 found that approximately 13% of young adult males of legal drinking age and 9% of young adult females who drank in the past month reported using caffeinated alcoholic beverages in the past 30 days. This figure was significantly lower among the general population age 15 and older, where only 3.2% of males and 1.7% of females reported drinking caffeinated alcoholic beverages in the past month.[12]

Morbidity and Mortality

Hospital administrative data provide an important measure of the impact of substance use on the healthcare system. Data from the Canadian Institute for Health Information indicate that the rate of hospital separations (i.e., the number of inpatient events ending in discharge or death) where alcohol was identified as the primary source of a behavioural or mental disorder increased from 47 to 51 per 100,000 between 2006 and 2011. The number of discharges related to alcohol represented 56% of all hospital separations related to substance abuse in 2011.[13]

Liver cancer is one of the fastest rising cancers in Canada. Alcohol abuse is associated with a higher risk and might play an increasingly important role in the growing incidence of liver cancer. Between 2001 and 2010, the incidence rate of liver cancer among Canadian males increased by an average of 2.3% per year. In Canadian females, the rate increased by 2.4% per year over the same time frame. In 2014, more than 2,000 Canadians are expected to develop primary liver cancer and an estimated 1,056 will die of this disease.[14,15]

In British Columbia, hospitalization rates attributable to alcohol increased from an estimated 361 per 100,000 residents in 2002 to 437 per 100,000 residents in 2011.[16]

In 2002, the *Costs of Substance Abuse in Canada* study estimated that there were a total of 8,103 deaths in Canada attributable to alcohol in that year.[1]

Based on data collected from the 2012 Canadian Community Health Survey, an estimated 3.2% of the Canadian population age 15 and older—approximately 886,000 individuals—abused or were dependent on alcohol in the past year.[17] The estimated rate of alcohol abuse or dependence was substantially higher for men (4.7%) than for women (1.7%).

According to data from the Traffic Injury Research Foundation, following a significant decline from the mid-1980s to the early 2000s, the percentage of all motor vehicle deaths caused by drinking drivers in Canada has remained fairly stable fluctuating from a low of 29.6% in 2002 to a high of 33.6% in 2010 (the nine year average was 31.8%).[18]

Roadside surveys of night-time drivers conducted in Saanich and Vancouver, British Columbia, documented a declining trend in the percentage of drivers with BACs over 0.05, decreasing from 18.7% of drivers in 1995 to 7.8% in 2008. This trend appears to have been reversed in 2010, however, when the percentage increased to 10.7%—a number more comparable to the rate measured in 2006 (11.7%). Conversely, the percentage of night-time drivers over the BAC limit of 0.08 showed an increasing trend in these cities, rising from 2.0% in 1995 to 2.9% in 2006, then declining to 2.4% in 2010. While the overall increase over this 15-year period is not large (0.4%), the upward trend could indicate that renewed enforcement and education about drinking and driving is warranted.[19]

Substance Abuse Treatment

In 2002, there were an estimated 641,000 inpatient specialized treatment days and 2.4 million specialized outpatient treatment days attributable to alcohol in Canada resulting in a combined treatment cost of $807.3 million. This cost represented 66.4% of all publicly funded specialized addiction treatment for drugs and alcohol across Canada that year.[1]

Data from Alberta and Ontario from 2006–2007 indicate that the majority (approximately 60–65%) of publicly funded specialized addiction treatment involves alcohol as either the primary or secondary substance of concern.[20]

Enforcement

The most common criminal offence in Canada is driving while impaired by alcohol. The total number of reported incidents for criminal drinking and driving decreased from 88,300 in 2009 to 78,400 in 2013 according to police data published by Statistics Canada.[21]

In 2002, the last year for which cost data are available, 30.4% of all police-recorded criminal offences in Canada were attributable to alcohol, which translates to 761,638 police incidents. In total, the policing costs attributable to alcohol were estimated at $1.89 billion that year.

Also in 2002, an estimated 35.8% of all criminal court cases were attributable to alcohol, which translates to 133,120 cases that year. Based on these findings, alcohol-attributable court costs were an estimated $513 million.

Correctional costs include costs for penal institutions as well as probation and parole services for adult and youth offenders at the provincial/territorial and federal levels. In 2002, it was estimated that 24,236 adult sentences to provincial custody were attributed to alcohol, representing 24.4% of all adult sentences. Of all youth offenders sentenced to provincial custody, 2,103 were attributed to alcohol, representing 28.9% of all youth sentences. The estimated correctional costs of alcohol-attributable offences were $660.4 million in 2002, with adult corrections making up $502.2 million and youth corrections costing $158.2 million.

In total, enforcement costs (policing, courts and corrections) attributable to alcohol were $3.1 billion in 2002.

Pan-Canadian Investments and Initiatives

Alcohol misuse and FASD are both identified as priorities under the *National Framework for Action to Reduce the Harms Associated with Alcohol, Other Drugs and Substances in Canada*.[22] The National Alcohol Strategy (NAS) was created in 2007 in a process led by the Canadian Centre on Substance Abuse, Health Canada and the Alberta Alcohol and Drug Abuse Commission to address the harms from alcohol. *Canada's Low-Risk Alcohol Drinking Guidelines* were developed under the NAS, as was a website to encourage screening, brief interventions and referrals (SBIR) by primary care professionals to help address alcohol problems early. Finally, two jurisdictions in Canada (Nova Scotia and Alberta) have alcohol-specific provincial strategies guiding efforts to address the harm and costs of alcohol, while Manitoba is currently (August 2014) in the process of developing a province-wide strategy.

Additional Resources

- Alcohol & Drug Use Among Drivers: British Columbia Impaired Driving Roadside Survey 2010
- Canada's Low-Risk Alcohol Drinking Guidelines
- Cancer and Alcohol (LRDG Summary)
- Women and Alcohol (LRDG Summary)
- Alcohol and Youth (LRDG Summary)
- Screening, Brief Intervention & Referral (SBIR): Helping Patients Reduce Alcohol-Related Risks
- Alcohol Pricing in Canada
- Control and sale of alcoholic beverages in Canada, for the year ending March 31, 2013
- Strategies to Reduce Alcohol-Related Harms and Costs in Canada: A Comparison of Provincial Policies
- Addressing Alcohol Consumption and Alcohol-Related Harms at the Local Level

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