



Canadian Drug Summary: Prescription Stimulants

Introduction to Prescription Stimulants

The most common use of prescription stimulants is to treat individuals diagnosed with attention-deficit hyperactivity disorder (ADHD). Other medical uses include the treatment of narcolepsy and other sleep disorders. Table 1 lists some of the variety of generic, trade and street names for prescription stimulants.

Table 1: Common generic, trade and street names for stimulants

Generic name	Trade name	Street names
Methylphenidate	Ritalin®, Concerta®, Biphentin®	Vitamin R, skippy, rids, uppers
Dextroamphetamine sulfate	Dexedrine®	bennies, black beauties, hearts
Amphetamine and dextroamphetamine	Adderall®	Beans, dexies, amps

Prescription stimulants are normally taken in pill form, but some people who abuse them for the drug's euphoric effects tamper with the medication. However, such tampering can cause complications because insoluble fillers in the tablets can block small blood vessels.

Effects of Stimulant Use

Short-term: These medications, which are in the same class of drugs as cocaine and methamphetamine, increase alertness, energy and attention in low doses. These effects of stimulant drugs are produced as the drug increases levels of dopamine, a neurotransmitter associated with pleasure, movement and attention, in the brain.

At low doses, prescription stimulants narrow blood vessels in the body, which causes a decrease in blood flow and oxygen to the heart, at the same time causing an increase in blood pressure and heart rate. Stimulants also increase body temperature and breathing rate, as well as decrease the ability to sleep and the desire to eat. Other short-term effects can include sweating, dilated pupils, restlessness, aggressive behaviour, dizziness, tremors, increased ability to concentrate, paranoia and hallucinations.

Long-term: Repeated use of stimulants can lead to feelings of hostility and paranoia. At high doses, they can lead to serious cardiovascular complications, including heart attack, stroke and lethal seizures. Stimulants have the potential to be addictive, a risk that is amplified when they are misused. As is the case with illicit and other legal prescription drugs, the abuse of prescription stimulants can alter a person's judgment and decision-making ability, which can increase the likelihood of engaging in risky behaviours such as drug-impaired driving and unsafe sex.



If prescription stimulants are used chronically, withdrawal symptoms—including fatigue, depression and disturbed sleep patterns—can emerge when the drugs are discontinued.

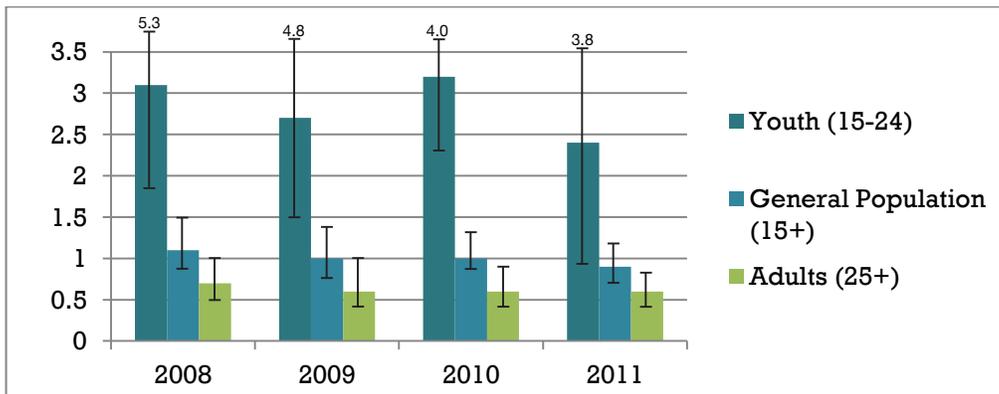
Legal Status of Prescription Stimulants in Canada

Prescription stimulants are classified as Schedule III drugs under the *Controlled Drugs and Substances Act* (CDSA). Their use is legal only when they are prescribed by licenced practitioners and are used by the person for whom they are prescribed. Illegal possession of stimulants and “double doctoring” (i.e., obtaining a prescription from more than one practitioner without telling the prescribing practitioner about other prescriptions received in the past 30 days) can result in three years imprisonment. Trafficking, importing, exporting or producing stimulants can result in 10 years imprisonment.¹

Past-Year Use of Prescription Stimulants in Canada

- **General population (age 15+):** The prevalence of the use of prescription stimulants among the general population was 0.9% in 2011 and has remained relatively stable since 2008 (CADUMS 2008, 2009, 2010, 2011).²
- **Youth (age 15-24):** Youth have the highest rate of prescription stimulant use among all Canadians (2.4% for 2011).²
- **Adults (age 25+):** The rate of prescription stimulant use among Canadian adults was 0.6% in 2011.²
- **Gender:** Data from the 2011 CADUMS indicate that the prevalence of the use of prescription stimulants is significantly higher among males (1.2%) compared to females (0.5%).²

Figure 1: Prevalence of self-reported prescription stimulant use among Canadians by age category (CADUMS)²



Note: The prevalence estimates reported by CADUMS for 2011 and the adult prevalence estimate for 2010 that are included in this summary are qualified because of high sampling variability and should be interpreted with caution.

Misuse of Prescription Stimulants

While prescription stimulants are prescribed for therapeutic purposes, they have the potential to be misused because of their psychoactive properties. The risk for psychological and physical dependence (addiction) is increased through accessibility, multiple opportunities for diversion along the supply chain, and perceptions of relative safety compared to other illicit drugs, among other factors. Stimulants are often misused for both cognitive enhancement and recreational purposes (i.e., to get high). For the former purpose, they increase wakefulness, alertness, focus and attention.



When stimulants are used without medical supervision, used for the wrong purpose or administered inappropriately, there is an increased risk for adverse effects and harms.

- In 2010-11, 2.2% of Canadian students in Grades 6-12 reported the past-year use of prescription stimulants to get high and not for medical use.³
- A survey of grades 7, 9, 10 and 12 students from Atlantic Canada noted that 8.5% of students reported non-medical stimulant use in 2007.⁴
- Among Americans aged 12 and older, the past-year prevalence of the non-medical use of prescription stimulants was 1% in 2011.⁵
- A systematic review reported that the prevalence of non-medical use of prescription stimulants ranged from 5 to 35% in studies of North American adolescent and young adult populations.⁶
- There is little data on the prevalence of prescription stimulant misuse from other countries as their prevalence estimates generally include illicit drugs such as Ecstasy, as well as prescription stimulants.
- There is little Canadian morbidity and mortality data related to prescription stimulant misuse.

Prescription Stimulant-related Harms

In Alberta, the most common reason for emergency department visits related to prescription drugs between 2003 and 2006 was disorders caused by stimulants other than cocaine (16.6 visits per 100,000).⁷

Additional Resources

- First Do No Harm: Responding to Canada's Prescription Drug Crisis
- National Dialogue on Prescription Drug Misuse

¹ *Controlled Drugs and Substances Act*, S.C. 1996, c. 19, <http://laws-lois.justice.gc.ca/eng/acts/C-38.8/index.html>.

² Health Canada. (2012). Canadian Alcohol and Drug Use Monitoring Survey (CADUMS).

³ Health Canada. (2012). Youth Smoking Survey (YSS): Summary of Results for 2010-11.

⁴ Poulin, C. (2001). Medical and nonmedical stimulant use among adolescents: From sanctioned to unsanctioned use. *Canadian Medical Association Journal*, 165, 1039-1044.

⁵ Substance Abuse and Mental Health Services Administration. (2011). *Results from the 2011 National Survey on Drug Use and Health: Summary of National Findings*, NSDUH Series H-44, HHS Publication No. (SMA) 12-4713. Rockville, MD: Substance Abuse and Mental Health Services Administration.

⁶ Wilens, T.E., Adler, L.A., Adams, J., Sgambati, S., Rotrosen, J., Sawtelle, R., ... Fusillo, S. (2008). Misuse and diversion of stimulants prescribed for ADHD: A systematic review of the literature. *Journal of the American Academy of Child and Adolescent Psychiatry*, 47, 21-31.

⁷ Wild, C., Wolfe, J., Newton-Taylor, M. & Kang, H. (2008). *Prescription Drug Misuse in Edmonton and Alberta: A Rapid Assessment*. Addiction and Mental Health Research Laboratory, University of Alberta.

ISBN 978-1-927467-66-4



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