

## **SECTION ONE - A**

---

# **DRUG USE BY POPULATION**

---

### **A. DRUG USE IN THE “MAINSTREAM” POPULATION**

- Drug Use Among Students
- Drug Use in the General Adult Population
- Update on Marijuana Legislation
- Driving Under the Influence of Marijuana and Other Drugs
- Use of Designer Drugs Among Adolescents and Young Adults
- Emerging Issues in General Population Drug Use

---

# 1. Drug Use Among Students

**The vulnerability of young people to drug use is widely acknowledged.** The results of the most recent CAMH Student Monitoring Survey indicates that many Toronto junior high and high school students experiment with (in order of popularity): alcohol, tobacco, marijuana, designer drugs, and in growing numbers, powdered cocaine.<sup>17</sup>

**Fortunately, student experimentation with illicit drugs tends to be relatively short-lived and usually harmless.** However, given the likelihood that students will be exposed to many illicit drugs, it is crucial to understand the potential dangers of these various substances.<sup>4,7,17</sup>

**Alcohol continues as the substance of choice according to local student surveys conducted since 1977.** The most recent report is based upon responses from 6,616 Toronto junior high and high school students from across the city in 2003. It indicates that alcohol use has grown among students over the past five years. In 2003, 61.5% of the students surveyed said they had used alcohol at least once in the 12 months preceding their interview. This compares to the 56% reported in both 2001 and 1999<sup>17</sup>.

**Binge drinking, defined as more than 5 drinks on one occasion was reported by approximately 18% of the Toronto students questioned.** This high-risk behavior appears even more common in the province as a whole, with 26.5% of all Ontario students surveyed in 2003 admitting to past year binge drinking.<sup>17</sup>

**Past year marijuana (a.k.a. cannabis, weed, grass) use was reported by 25% of all Toronto students.**<sup>17</sup> This is the highest rate observed since 1979, when an identical rate was noted. This is a concern with respect to the statistics currently available pointing to a high prevalence of driving under the influence of marijuana.<sup>32,33,34,35,36</sup> Public service and school programs addressing these risks, however, are limited by current legislation.

**Cocaine powder use among Toronto students has increased over the last decade, from 1.1% reported in 1993 to 4.0% in 2003.** Currently elevated levels of cocaine use in Toronto are evidenced in multiple sources for this report.<sup>14,15,17,47,54,57</sup>

**Reported crack use among Toronto students remains at a traditionally low level,** with 2.2% reporting use.

**With respect to designer drugs, the 2003 student survey indicates relatively low use of both ecstasy and GHB. According to this CAMH report, only 1% of Toronto students reported GHB use while less than 4% cited past year use of ecstasy.**

**However, signs of low, slightly decreasing levels of ecstasy and GHB among student respondents do not imply designer drug use has abated.**<sup>24,57,59</sup> A large variety of chemicals and combinations have also taken a place in the club scene for adolescents and young adults. In addition to the risks associated with each of these individual substances, including lack of assurance regarding their ingredients, the dangerous, yet popular, practice of poly-drug use further heightens the risks .

**While the designer drug category includes a large variety of new substances, the CAMH survey also indicates the use of a number of more “traditional” drugs among Toronto students.** These include the non-medical use of stimulants reported by 3%, methamphetamine use by 3%, the non-medical use of barbiturates and sedatives by 2%, and LSD use by 2%. As reported over the past five years or more, only 1% of Toronto students reported past year use of heroin or non-medical tranquilizers.

---

Inhalant use among Toronto students is reported at relatively high levels in the most recent data. Approximately 3.0% of Toronto students report sniffing glue, while the use of other inhalants is reported by 8%. This potentially fatal practice was most popular among the youngest students surveyed.

The observed increases in inhalant use among Toronto students mirrors recently reported trends from the United States. Lifetime inhalant use for 12 to 17 year olds almost doubled between 1999 and 2002, from 5.4% to 10.5%.<sup>4,83</sup>

The 2003 PRIDE survey, covering grades six through twelve in the United States, “indicated that inhalant use rose at a statistically significant level for almost all grade levels, both yearly and monthly, the past year.<sup>83</sup> Monthly rates are equal to or higher than their highest [levels] since 1998.”

Key findings of this U.S. student survey on solvent use included:

- Use would most likely occur at school or at home
- Girls in the seventh and eighth grades use nearly as much as boys
- In all other grades, boys use more than girls
- Only about 56% of sixth grade students believe inhalants are harmful

Increases in solvent use by youth are also seen in other jurisdictions; an excerpt from an article on use in the United Kingdom follows:

*Volatile substance abuse is largely a teenage practice; it is estimated that in the UK 3.5-10% of young people have at least experimented and that 0.5-1% are current users. The products abused are many and varied but only about 20 chemical compounds, notably toluene, chlorinated solvents such as 1,1,1-trichloroethane, fuel gases such as butane and aerosol propellants, are commonly encountered. The acute hazard varies with the compound, product and mode of abuse. Mortality in the UK is now about 100 per year, from all social classes, 90% of whom are male.*

*Chronic toxicity is difficult to assess, partly because of the diversity of products abused. However it is clear that some long-term abusers suffer permanent damage to the central nervous system, heart, liver and kidney. Toxicological analysis may be relied upon for confirmation of diagnosis, providing attention is paid to the kinetics of excretion and stability in the sample.*

*Responses include codes of practice for the sale of products and educational strategies; legislation has also been enacted.*

*There is little evidence that any of these measures have made a significant impact on the problem.*

Ramsey J, et al, (2002) “An Introduction to the Practice, Prevalence and Chemical Toxicology of Volatile Substance Abuse,” in: Human Toxicology, vol. 8, number 4, pages 261-291.

For more information on Drug Use Among Students in this report, see:

- Driving Under the Influence of Marijuana and Other Drugs
- Use of Designer Drugs Among Adolescents and Young Adults
- Emerging Issues in General Population Drug Use
- The Findings Section on Individual Drugs.

---

## 2. Drug Use in the General Adult Population

**As noted above for students, alcohol remains the most popular recreational drug for the general population of adults in Toronto.** According to the 2003 CAMH monitor, 78% of the adults in Toronto indicated use of alcohol at least once in the year preceding their interview.<sup>2</sup>

**In terms of illicit drug use, marijuana (a.k.a. cannabis, pot, weed) is the most popular among Toronto adults.** In the most recent survey of Toronto adults by the Centre for Addiction and Mental Health, 15% of the respondents reported past year marijuana use.<sup>2</sup> This is consistent with reports from other North American cities.<sup>3,4,29,48</sup>

**The most immediate concern with respect to the popularity of marijuana is evidence of the high prevalence of individuals driving while under the influence of this drug.**<sup>32,33,34,35,36</sup>

**An increase in the use of cocaine powder over the past few years is evident in several of the local data sources.**<sup>15,24,57</sup> The many physical problems associated with cocaine use, along with the risks of physical addiction, distinguish this stimulant from a “softer” recreational drug such as marijuana.

**Two newer, potentially dangerous substances are also reportedly gaining popularity locally; these are the designer stimulant methamphetamine and the narcotic oxycodone.**<sup>24,44,57,94</sup> These drugs also share a high potential for addiction and serious physical problems.

**The popular chemical drugs (a.k.a. designer drugs, club drugs) among young adults attending dance parties pose unique dangers due to the lack of control over the contents of the millions of drug formulations sold.**<sup>9,10,27</sup> The mainstream classification of this group of drug users is perhaps surprising, however, many of the young adults involved in the dance community are university students and graduates.<sup>23</sup>

**While the indicators of ecstasy and GHB use are currently stable or falling, the ever increasing array of designer chemicals available to those interested continues to pose unknown, potentially fatal risks.** The dangers of these drugs are heightened through the popular practice of poly-drug use.<sup>1,54</sup>

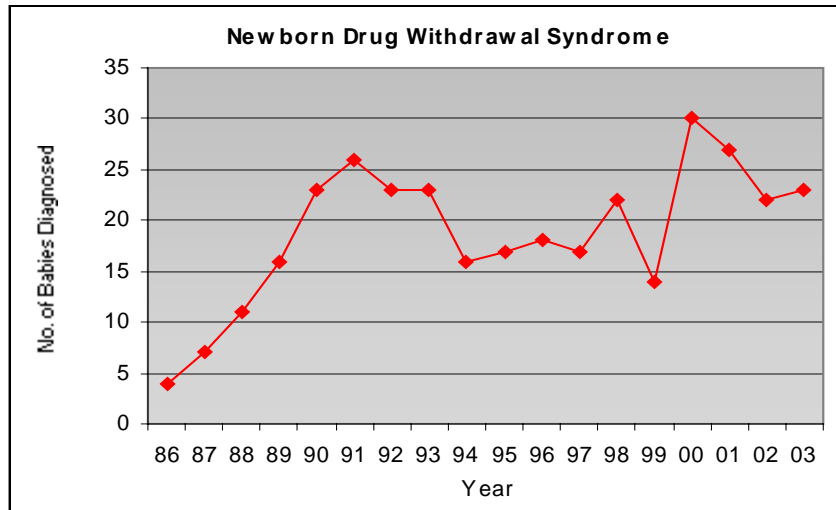
**When drugs are used by pregnant women, the associated dangers are enhanced.** The thalidomide tragedies over forty years ago demonstrated how a seemingly “mild” drug taken by a pregnant woman could have devastating effects on the development of her baby. In fact, it was discovered in 1961 that taking only one dose of thalidomide early in pregnancy can severely affect the growth and development of fetal limbs, as well as the eyes, ears, heart, genitals, kidneys, digestive tract, and nervous system.<sup>100</sup>

**A 2004 report from the United Nations Office on Drugs and Crime highlighted the special circumstances often encountered in the treatment of women with drug-related problems.**<sup>105</sup>

*“Women with substance use problems...experience significant barriers to accessing treatment and are believed to be under-represented in treatment settings. Cultural taboos and stigma mean their substance use problems are often not acknowledged by themselves, their families or helping professionals who could support them in seeking treatment. Pregnant and parenting women using substances face particular societal condemnation, and pregnant women often delay seeking services with serious implications for the mother and the fetus. Women who are parents usually have primary responsibility for childcare, as well as other household responsibilities. However, few treatment services provide childcare, and in some cultures it is very difficult for women to leave their homes and family responsibilities to seek treatment.”*

United Nations Office on Drugs and Crime<sup>105</sup>

The following graph illustrates the numbers of babies born in Toronto over the past eighteen years diagnosed with newborn drug withdrawal syndrome. The numbers of Toronto infants diagnosed with this syndrome were relatively low before 1990. The trends of the early 1990's likely reflect increased recognition of this condition by health practitioners as well as any increases in actual incidence of these conditions. For the past ten years, the number of infants born with this syndrome has fluctuated between 15 and 30.



The research on prevention and treatment indicates that pregnancy provides a unique window of opportunity to work with women on problems of addiction. The added incentive of protecting a new life will often help those who tend to neglect their own health and well-being.<sup>53,81,88,105</sup>

Breaking the Cycle, a Toronto program, was one of a handful cited by the authors of the recent U.N. report “Substance Abuse Treatment and Care for Women,” as an exemplary model for addressing the complex issues surrounding maternal drug addiction among homeless women.

*“The programme has been successful in achieving its objective of reaching and engaging a very high-risk population of women. As a result, women have improved access to services such as prenatal services and child welfare services, improved newborn outcomes and the mother-infant interactions, and improved sobriety. An evaluation of the pregnancy outreach programme found that it had been successful in reaching its target population of pregnant homeless women early in their pregnancies, resulting in improved birth outcome among those women reached in the first two trimesters of their pregnancies....”*

*The financial efficacy of the partnership model has been demonstrated. The value of the in-kind contributions of the partner organizations exceeds the base funding amount from Health Canada, ensuring the richness and stability of programme services. The cross-sectoral, integrated partnership model to support pregnant substance-using women and their children has been replicated in a number of communities and there has been interest in the project across Canada and internationally.”<sup>105</sup>*

**For more information on Drug Use in the General Adult Population in this report, see:**

- **Driving Under the Influence of Marijuana and Other Drugs**
- **Use of Designer Drugs Among Adolescents and Young Adults**
- **Emerging Issues in Drug Use (including Oxycodone and Methamphetamine)**
- **The Findings section on Individual Drugs.**

---

## 3. Update on Marijuana Legislation

This is an update of the section, " Changes in the Regulation of Marijuana" from Drug Use in Toronto, 2001.<sup>1</sup>

**Marijuana possession and use are illegal in Canada under the Controlled Drugs and Substances Act of 1996. However, there are exceptions to this law:**

**May, 1999** - Health Canada established an application procedure for individual Canadians, supported by a medical practitioner, to apply for permission to possess and cultivate marijuana for medical purposes.

**June, 1999** - the document "Research Plan for Marijuana for Medical Purposes" was released by Health Canada. This report describes a five-year plan for the evaluation of the risks and benefits of the use of marijuana for medical purposes.

**December, 2000** - Health Minister Alan Rock announced that Prairie Plan Systems Inc (PPS) of Saskatoon would provide Health Canada with a supply of affordable, standardized, high quality marijuana suitable for medical purposes.

**July, 2001** - the regulations governing the possession and production of marijuana were announced.

***"Canada becomes the first country in the world to legalize the use of marijuana by people suffering from terminal illnesses and chronic conditions."*** ---www.ctv.ca ,  
**July, 2001.**

**September, 2002** - the Special Senate Committee on Illegal Drugs released its final report<sup>37</sup> which concludes that marijuana is less harmful than alcohol and should be governed by the same sort of regulations that control tobacco. The absence of cautions regarding driving under the influence of cannabis, a popular and highly risky practice, contradicts other known sources of information on this topic.<sup>57,60,61,62</sup>

**December, 2002** – The House of Commons Special Committee on Non-Medical Use of Drugs released its final report, recommending decriminalization of possession of small amounts of marijuana, however, a "small amount" was not specifically defined.<sup>95</sup>

**December, 2002** – Charges of possession and trafficking against two volunteers at a medical marijuana club were thrown out of a Quebec Court. Quebec court Judge Gilles Cadieux cited a contradiction in allowing the ill to use marijuana while prohibiting a legal source of the drug.

**January, 2003** - Ontario's Superior Court agreed with the December, 2002 decision in Quebec that the federal government's Medical Marijuana Access Regulations were unconstitutional because they prevented those who needed the drug for medicinal purposes from acquiring it legally.

**May, 2003** - the Cannabis Reform Bill, B C-38, was tabled in the House of Commons. Under the proposed legislation, marijuana possession remained illegal, however, possession of 15 grams or less was to be decriminalized; charges for small amounts of marijuana would be punishable by fine. This proposal also included tougher penalties for growers.

**July, 2003** - Canadian and Ontario medical associations cautioned doctors that they were the legal distributors of the drug under the planned legislation.

---

**October, 2003** - the Ontario Court of Appeals allowed that patients approved for use of medicinal marijuana must be insured a safe supply of the drug. At the same time, the court amended the bill's original proposal decriminalizing possession of 15 grams or less to 10 grams or less.

**December 23, 2003** - the Supreme Court of Canada ruled that Canadian Parliament could prohibit the possession of cannabis to control it as a psycho-active drug under its broad 'criminal law power' given clear issues of public health and safety both for the user and those affected by the user's conduct.

**June, 2004** - Bill C-38 died when the federal election was called.

**November 1, 2004** – The federal government reintroduced legislation to decriminalize small quantities of marijuana. Under Bill C-17, individuals found with under 15 grams of the drug would face a fine instead of a criminal charge. It replaced the proposed C-38.

**In order to stem criticism that decriminalization of marijuana would result in more people driving under the influence of this drug, the Liberals also introduced C-16, companion legislation meant to address drug-impaired driving.** This bill sets out conditions under which a police officer may demand blood or urine from an individual believed to be driving while intoxicated.

*“ The Dutch government passed groundbreaking legislation in 1976 that distinguished cannabis-based soft drugs from "hard drugs" such as heroin or cocaine. Cannabis was still officially illegal but the possession of up to 30 grams was no longer to be prosecuted as a criminal offence.*

*Today, coffee shops sell marijuana and hash in five-gram bags without fear of penalty. Menus offer a vast selection, ranging from potent high-grade White Widow or Skunk varieties, grown in greenhouses, to milder outdoor strains such as Orange Bud. The liberal Dutch approach laid the foundation for a multibillion-dollar economy, attracting millions of visitors each year and generating substantial tax income for the Dutch government. Contrary to claims soft drugs open the way toward hard-drug addiction, Dutch advocates said coffee shops are a safe place for experimentation that keep potential users away from criminal pushers. The government insists while it tolerates soft drugs, it is tough on hard-drug dealers. A 2002 report from the European Monitoring Centre for Drugs and Drug Addiction, said so-called "problem drug use" in the Netherlands is the lowest among countries in the European Union and candidate states”.*

**Globe and Mail, November 30, 2002**

**For more information on Marijuana in this report, see**

- **The following section on Driving under the Influence of Marijuana and Other Drugs**
- **The Findings section on Marijuana (Cannabis).**

---

## 4. Driving Under the Influence of Marijuana and Other Drugs

The number of annual road fatalities in Ontario involving drinking and driving has been decreasing for more than 30 years.<sup>35,36</sup> Widespread public education and awareness campaigns appear to have been successful in reducing these tragedies.

However, despite the progress made to date, the deadly practice of drinking and driving continues.<sup>31,32,35,39</sup> Based on the findings of the 2003 Ontario student survey, approximately 30% of Toronto junior high and high school students had, in the past year, been in a car whose driver was under the influence of alcohol.<sup>17</sup>

The problems of driving under the influence of drugs other than alcohol are often overlooked. Although it is a criminal offence to drive while impaired by any drug, with penalties running to life imprisonment, the police have neither the authority nor the ability to test for drug impairment and elicit evidence for prosecution, as they have for alcohol-related offenses.

The lack of a roadside test is particularly troubling in the case of marijuana, given the drug's popularity and evidence of its impact on driving. As is the case with alcohol, marijuana-related driving impairment is highly dependent upon level of consumption. At moderate levels of use, there is "strong evidence from performance studies that THC has significant effects on the cognitive and psychomotor tasks associated with driving."<sup>32</sup> While THC induced effects are generally conceded to return to baseline within 3 - 4 hours, "some complex, divided attention tasks have indicated deficiencies in performance up to 24 hours after cannabis use."<sup>34</sup> A further concern is the tendency for those who have consumed this drug to underestimate their own impairment.<sup>33</sup>

***" Young people are now more likely to tok e and drive than they are to drink and drive."***

**--The Globe and Mail, February 1, 2003, quoting [then] Deputy Chief Mike Boyd of the Toronto Police**

The self-reported rates regarding driving while intoxicated among Toronto students are alarming.<sup>17</sup> The following table displays the percentage of students in grades 10 to 12 with a driver's license who admitted to driving under the influence in the preceding year.

	Toronto	South West	Central West	Central East	East	North	All
Sample Size	288	343	403	236	315	369	1973
Drinking and Driving(%)	12.4	14.7	13.5	11.3	14.8	17.1	13.8
Cannabis Use and Driving(%)	13.8	24.7	18.8	22.8	19.1	24.4	20.1

The police believe the use of marijuana by drivers is dangerous and is increasing, but they have limited roadside tools to detect marijuana-related impairment.

Even more concerning is the potent combination of marijuana and alcohol. An interaction between these drugs can produce a combined effect greater than might be expected from the individual quantities consumed<sup>32,33,34,39</sup> In a 1987 Canadian study, 80% of the injured drivers who had used marijuana also had used alcohol prior to their crash.<sup>39</sup>

---

*"Critical skills needed for the safe operation of motor vehicles and other forms of transport can be impaired following cannabis use...Closer examination of the combined use is warranted in those driving situations where [the drugs consumed] produce qualitatively different effects. It may well be so that alcohol reduced drivers' insight or motivation to the point where they would no longer attempt to compensate for the [relaxed] THC effect. As a result, the combined effects on drivers' performances could well be greater than the sum of either drug acting separately."*

**-H.W.J. Robbe, "Influence of Marijuana on Driving", Institute for Human Psychopharmacology<sup>33</sup>**

**Given the anticipated changes in the laws with respect to marijuana, Bill C-16, was introduced in Parliament in November of 2004 to give police broader powers in roadside investigations.** The proposed legislative reforms would amend the criminal code of Canada and give police the authority to conduct:<sup>43,46,52</sup>

1. Standard Field Sobriety Tests (SFST), where there is a reasonable suspicion that a driver has consumed an impairing drug. SFSTs are 'divided-attention' tests, administered at the roadside, that evaluate a subject's ability to multi-task;
2. Drug Recognition Expert (DRE) evaluations administered at the police station in instances where the officer reasonably believes a drug impaired driving offence was committed. This includes a situation where the driver fails the SFST;
3. A saliva, urine or blood sample collection, should the DRE officer identify that impairment is caused by a specific family of drugs.

**Drug Recognition Expert evaluations are currently in use in most U.S. states, Australia, New Zealand and some European countries.** Police in Quebec, British, Columbia and Manitoba use DRE evaluations, but only if the suspect participates voluntarily. DRE evaluations have been recognized by Canadian courts and tested in U.S. courts up to the Supreme Court level.<sup>46,52</sup>

**"Whether we like it our not, drugs are a part of modern life. Their use is more common and more insidious than we would like to admit. Aspirin, tranquilizers, caffeine, alcohol, and tobacco help many people get through the day. To deal with the increasing complexity of daily life, we have become a society of substance users. Children grow up in an environment where mood-altering, pain-reducing, sleep-inducing substances are widely marketed and accepted.**

**Those who use "hard" drugs do so for many of the same reasons. Some use drugs for pleasure. Many use drugs to relieve physical or psychological pain. The mentally ill often take drugs to achieve a higher level of functioning. For those who use drugs as a refuge, they see the harm they inflict upon themselves as the lesser of two – or several – evils..**

**Clearly there needs to be a greater understanding of the health issues of addiction in order to replace fear, apathy, and anger with empathy and action."**

**From "A Framework For Action, A Four Pillar Approach to Drug Problems in Vancouver,"  
Donald MacPherson, City of Vancouver, April 24, 2001.**

## 5. Use of Designer Drugs Among Adolescents and Young Adults

**Designer drugs, also known as chemical drugs, club drugs, or rave drugs, are those produced by chemically altering and combining existing substances.** Hundreds of designer drugs exist. Those most popular in Toronto have included ecstasy and GHB. Statistics regarding local use of these substances have been documented in previous editions of Drug Use in Toronto.<sup>1</sup>

**Because designer drugs are produced in a variety of unregulated environments, including private basements, garages, and mobile homes, their inconsistency both in chemical composition and effects is a major concern.** Unlike medications produced in pharmaceutical laboratories or licensed distilleries, the consumer, and often the distributor, have little knowledge regarding the ingredients, the strength or any possible adulterants contained in most designer drugs. A number of recent studies indicate that only a fraction of the drugs sold as ecstasy are pure MDMA.<sup>9,10,12,13,14,15</sup>

**In general, the most recent indicators of student ecstasy use throughout Ontario have remained relatively stable or appear slightly lower throughout the province, as compared to the past five years. GHB use appears to be lower and decreasing in selected groups.** Anecdotal reports confirm the swing away from GHB by many of those in the dance party scene.<sup>24,27</sup> However, GHB does remain popular in some gay clubs, as well as other venues.<sup>54</sup>

**The Toronto Raver Info Project, or TRIP!, is a community-driven effort, dedicated to preventing harmful drug use and unsafe sex within the Toronto electronic music community.** The TRIP! Booth operated by this group is a space within a party where people can come to “hang out” and talk with knowledgeable volunteers about staying healthy and safe while partying.

**A 2002-3 TRIP! survey was undertaken to assess the patterns of drug use at local dance parties.** Eleven parties in the Toronto area were used to recruit respondents by TRIP! outreach workers, who distribute harm reduction materials at local events. In total, 396 questionnaires were completed by individuals between the ages of 15 and 48.

**The question "What drug do you take most often?" was answered by 329 of the respondents.** Their answers were as follows:

Drugs Taken Most Often	Number of Responses	Percentage
Marijuana	179	54
Ecstasy	99	30
Ketamine	16	5
Alcohol	13	4
Crystal Methamphetamine	6	2
Cocaine	4	1
Acid(LSD)	3	1
Caffeine	3	1
Nicotine	3	1
Mushrooms	2	<1
Heroin	1	<1

---

Clearly, the most popular drug among these respondents was marijuana, cited by 54%.

The most popular designer drug selected was ecstasy, selected by 30% of respondents.

Ketamine was a distant second among designer drugs, cited by 4.8% of respondents.

*Ketamine was first synthesized by the Parke-Davis company as a veterinary anesthetic in 1963. It is still produced for this purpose under the names Ketalan (Parke Davis), Ketajet, Ketaset (Fort Dodge) and Vetalan. It is available in both liquid and powder form. It can be taken orally, injected, smoked or snorted. In addition, joints or blunts can be dipped into the liquid form. Ketamine causes dream-like, or hallucinatory effect[s]. Users often describe "out of body" experiences. In addition, the drug can cause an inability to feel pain. At high doses, ketamine produces delirium, amnesia, impaired motor function, coma, and sometimes fatal respiratory effects. In addition to these reactions, the level of dissociation and loss of physical control makes accidents related to use a significant issue. Of further concern is the drug's high potential for inducing psychological addiction.<sup>43</sup>*

**"Ketamine Fast Facts," U.S. Dept. of Justice, 2003.**

**It should be noted that ketamine is, technically, not a designer drug, given its legal production.** However, it is often used in combination with other drugs in this category, and is commonly categorized as such.

**Of particular note in this survey is the absence of GHB from these responses. Previously one of the most popular club drugs in Toronto, GHB seems to have lost some of its appeal.** This apparent drop in GHB use is likely related to the hundreds of GHB-related emergencies in Toronto hospitals over the past five years.<sup>1,14,15.</sup> Fortunately, these overdoses were generally acute, leaving no permanent effects.

**In the period January 1, 1999 through December 31, 2002, 24 ecstasy-related deaths occurred in Ontario compared with 3 related to GHB.** Thus, while GHB use is more likely to cause loss of consciousness, and thus a hospital visit, ecstasy has been far more deadly province-wide.

**As noted in the discussion of dangerous drug combinations, GHB-related dangers increase significantly when combined with alcohol.**

**GHB is often confused with GBL, a chemical used in its production.**<sup>103</sup>

**"GBL is Gamma-Butyrolactone. This chemical has been used in the US in industrial solvents, and originally sold over the counter in the US as a dietary supplement targeting body builders. It has since been banned in the US, and is now being resold as a chemical cleaner. The problem in the US is that GBL is being sold as GHB in clubs, but it metabolizes in the body more slowly, as it has to be converted to GHB from GBL before having an effect. So people are taking a dose of what they think is GHB, waiting a period of time and feeling no effects, so taking more. Then, because they are in fact taking GBL, the original dose hits in combination with the second dose, and they OD."**

**AIDS Committee of Toronto, Community worker**

**Some decrease in the use of GHB and ecstasy, however, does not imply an overall decrease in chemical drug use locally.** Along with the lasting popularity of ecstasy and GHB in several communities, the increasing assortment of designer drugs available is evidenced in a number of sources.<sup>15,16,27</sup>

---

As noted in previous reports, chemical compounds commonly sold as ecstasy are known as ecstasy analogues; one of the more dangerous of these “ecstasy imposters” is PMA (paramethoxyamphetamine). This drug was detailed in Drug Use in Toronto, 2001, due to a large

seizure in Peel in January, 2001<sup>1</sup>. PMA was also associated with a number of deaths in Ontario in the mid 1970s. No further information has been reported with respect to PMA in Toronto since 2001.

Another so-called “ecstasy imposter” is 2C-B, also known as Nexus, Bromo and a variety of other names. Unlike PMA, however, 2C-B has a market of its own, separate from that as an ecstasy analogue. 2C-B, along with the chemicals 2CI, 2CT7 and 2CT2, is often classified as a phenethylamine. The “grainy” appearance of these tablets is noted. The effects of these pills tend to last longer than ecstasy. For more information on these drugs, see Drug Use in Toronto, 2001.<sup>1</sup>

*“Friends were considered to be the most accurate and most important source of information about ecstasy according to a study of young adult ecstasy users in central Ohio. More than one-third (40%) of the ecstasy users claimed that friends were their single most important source of information and 46% reported that they perceived their friends to be a very accurate source of information. Non-government websites such as DanceSafe and Erowid and MTV/VH1 specials were cited as very accurate sources of information on ecstasy by 25%, 23%, and 30%, respectively.”*

**NIDA Notes, U.S. National Institute On Drug Abuse, Volume 16(5), December, 2001**

Among the newer designer drugs currently used in Toronto are a class of substances known as **tryptamines**. Tryptamines make up a family of chemicals that serve many functions in animals, plants and fungi. Some examples of tryptamines present in the human body include serotonin and melatonin. Synthetic tryptamines are produced by mimicking these natural substances in a variety of forms. Among the tryptamines used in Toronto are: Foxy, DMT/5 Meo-DMT, and AMT. These drugs generally combine various types of hallucinogenic effects. Among many sources on these individual substances is the TRIP! Publication “Tryptamine”.<sup>16</sup> The following is an excerpt.

**Words of Caution:**

**Dose Measurements and Tryptamines**

- *Recreational use of Tryptamines requires only minute amounts of the substance, making it impossible to ‘eyeball’ out doses. The dosage range from ‘mild’ to ‘full on’ is a **very small range**, leaving little margin for error.*
- *For your safety, be sure that you or someone you know and trust has measured out the doses on a milligram-sensitive scale.*
- *If it’s your first time with any of these substances, be sure to do a very small amount at fist, before diving in, as dose sensitivity varies greatly among individual users.*
- *Because AMTs effects can take over 2 hours to fully develop, a common error is to re-dose (add more) thinking that the initial dose was too low. This has led to a number of very unpleasant and potentially dangerous overdose experiences*
- *MAOIs are a class of anti-depressant drugs that, if taken with tryptamines, can seriously [increase] their effects, and should therefore be avoided when using tryptamines.*
- *Research has yet to be done on the short or long-term effects of foxy/5-meo DIPT, so be warned; in choosing to ingest it you are making yourself a psychonautic guinea pig.*

**The risks associated with designer drugs are greatly increased by the mixing of multiple drugs.**

---

## 6. Emerging Issues In General Population Drug Use

Three drugs that have become more popular in the past few years are cocaine powder, oxycodone, and methamphetamine. Although three distinct types of substances, i.e. a natural stimulant, a narcotic pain killer and a chemical stimulant, respectively, they share a high potential for addiction, as well as serious, often fatal, physical effects.

In addition to use of these three drugs, other current issues raised at meetings of the Research Group on Drug Use are presented in this section.\* While largely anecdotal, these areas of concern are identified as trends to be watched in future reporting.

- **POWDERED COCAINE** (a.k.a. blow, nose candy, powder, white powder)

**Powdered Cocaine (cocaine hydrochloride) is a stimulant extracted from the leaves of the cocoa plant.** It produces behavioral, neurological, cardiovascular, respiratory and gastrointestinal changes. These may include feelings of euphoria, contemplation, increased energy and mental alertness. Physical side effects may include loss of appetite and increases in heart rate, blood pressure and respiration. At doses of several hundred milligrams, or less for some individuals, the symptoms listed above may be exaggerated, potentially resulting in agitation, anxiety, violent behaviour, and in some cases, paranoid psychosis. Serious physical symptoms may range from blurred vision, nausea and vomiting, seizures, lung damage, and death.

**Sold in the form of a fine, white, crystalline powder, cocaine can be snorted, smoked with tobacco, or dissolved in water and injected.** When snorted, the drug is absorbed into the blood stream through the nasal membranes. The drug reaches the brain - and produces its euphoric effect- within 3 to 5 minutes. When injected, the drug is released directly into the bloodstream and reaches the brain within 15 to 30 seconds.

**Cocaine users who inject the drug expose themselves to the additional risks associated with injection drug use, including blood borne infections such as HIV and Hepatitis.**

**Statistics regarding local powder cocaine use have been tracked for several decades. A number of these indicators show significant increases over the past several years;** these concur with anecdotal information of increased recreational use of powder cocaine among mainstream adults, students, party-goers, and other population groups.<sup>14,15,17,54,57</sup>

**Powdered cocaine is also used to make crack.** Crack is another highly addictive and powerful stimulant. It is produced by dissolving powdered cocaine in a mixture of water and ammonia or sodium bicarbonate (baking soda). It is easy and inexpensive to produce crack rocks, rendering the drug readily available and affordable. Thus, crack use is often associated with poor, disenfranchised populations.

**Increased powdered cocaine use is also currently being observed in several cities in the United States.** According to a recent report of the U. S Department of Health and Human Services, indicators of increasing cocaine use can be found in Atlanta, Chicago, Denver, New Orleans, New York and Texas.<sup>4</sup>

“There are reports that use and abuse of powder cocaine are increasing, and that use is emerging in new populations.<sup>4</sup>”  
**National Institutes of Health, December, 2003, “Report from the Community Epidemiology Work Group (CEWG) conference, June, 2003.”**

\*Organizations participating in the Research Group on Drug Use appear in the Acknowledgements

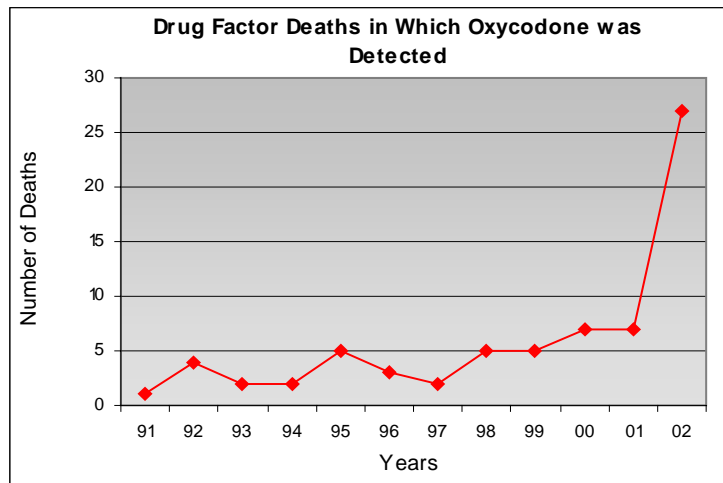
- **OXYCODONE**, (oxycodone hydrochloride), is a narcotic pain reliever. It is frequently prescribed for the relief of moderate to severe pain resulting from injuries, bursitis, neuralgia, arthritis, and cancer.

The longest lasting oxycodone pill currently on the market is Oxycontin, a time release version. The 160 mgs. of oxycodone hydrochloride available in the maximum dosage pill far exceed the strengths available in previous formulations of this drug; chewing these pills or crushing them for injection overrides the intended gradual release of each pill's active ingredients.

Reports of increased use and abuse of oxycodone and, in particular OxyContin, have been noted across North America over the past few years.<sup>1,3,4,94</sup> Those who abuse the drug on a long-term basis risk developing physical dependence. Withdrawal symptoms may include muscle and bone pain, insomnia, diarrhea, vomiting, chills and involuntary leg movements.

An oxycodone overdose can lead to severe respiratory depression that can result in death.

An increase in oxycodone use in Toronto is reflected in a number of local sources, including data available from the Office of the Chief Coroner of Ontario. Oxycodone-related deaths are displayed for the period 1991 to 2002.



Preliminary data for the year 2003 indicate that while these deaths continue at higher frequency than a few years ago, the 2002 data may be an isolated spike.

*On December 15, 2003, the Government of Newfoundland and Labrador announced the establishment of a task force to assess the extent of the abuse of Oxycontin in the province and develop a plan to deal with the issue. The initial findings of the Task Force confirm growing use and abuse of OxyContin in the province and increased accessibility to the drug by youth and young adults. "The task force has confirmed that OxyContin abuse in our province is a growing problem we must continue to address".*

*Short and long term recommendations outlined in the report include a continuation and expansion of educational awareness campaigns for youth, the general public and health professionals.*

[www.gov.nl.ca/health/publications/oxycontin](http://www.gov.nl.ca/health/publications/oxycontin)

- 
- **METHAMPHETAMINE (a.k.a. meth, speed) is a powerful, chemical stimulant produced in underground laboratories in the United States and Canada.**

**Methamphetamine was first synthesized in 1919 and introduced as therapeutic agent in the 1930's to combat nasal congestion.** Other uses developed, included controlling attention span disorders in hyperactive children, narcolepsy (uncontrollable sleep) and obesity. Designed to produce amphetamine-like effects, the drug causes increased motor activity and initial euphoria; however, these effects are often followed by depression, mental confusion, aggressive behaviour, and anxiety.

Methamphetamine is extremely addictive. Users can develop a tolerance to the drug quickly, resulting in the need for higher doses to achieve the desired effect. Meth increases blood pressure, heart rate, and body temperature. Large doses can cause damage to the small blood vessels in the brain, associated with strokes. Chronic use of methamphetamine can result in inflammation of the lining of the heart.

**Methamphetamine is sold in two forms:**

- 1) **SPEED** is 60% to 80% pure methamphetamine. It is yellowish orange in color. SPEED is generally injected or snorted.
- 2) **ICE** is 90-95% pure methamphetamine. It appears as rock candy, rock salt or glass slivers. ICE is the smoke-able form of methamphetamine. This form of meth is considered more dangerous than snorted or injected powder.

**Increases in methamphetamine use have been associated with serious health problems across North America over the past two decades.** These problems originated in the western United States (including Hawaii) in the 1980s. The drug has slowly made its way east. As a result, the increasing use of methamphetamine in Toronto evidenced in this report has been long anticipated.

**An increase in methamphetamine use in Vancouver has been the focus of workers in drug prevention since the Fall of 2002.**<sup>23</sup> A recent report highlights the extensive problems experienced by homeless youth in Vancouver with respect to this powerful stimulant.<sup>107</sup>

**U.S. and Canadian policies differ with respect to the sale of the alkaloids ephedrine and pseudoephedrine, ingredients of the ephedra plant used in the production of methamphetamine. Canada issued a recall order almost three years ago for products containing these substances that make claims of weight loss or increased energy.** However, the January, 2002 recall allows the sale of traditional medicines containing less than 8 mgs. of ephedrine/pseudoephedrine to a maximum of 32 milligrams a day.

**On December 30, 2003, the United States the Food and Drug Administration(FDA) issued a consumer advisory with respect to dietary supplements containing ephedra, stating that such products presented an unreasonable risk of illness or injury, and should not be consumed.** The agency also notified firms manufacturing and marketing these products that it intended to issue a final rule prohibiting their sale, which would become effective 60 days after its publication.<sup>100</sup>

**On April 12, 2004, the United States Food and Drug Administration prohibited the sale of dietary supplements containing ephedrine.** The sale of these products had already plummeted in the U.S. because of publicity about the February, 2003 ephedra-related death of baseball pitcher Steve Belcher.<sup>100</sup>

- 
- **POLY-DRUG USE, that is, the use of a combination of two or more drugs, is widespread in Toronto, following patterns seen in other jurisdictions.**<sup>1, 3, 24,58</sup> A variety of factors contribute to the popularity of poly-drug use; these include newly available chemical drugs, the production of drugs in different forms, various ways of consuming drugs (e.g. orally, snorting, smoking, and injecting), the club-drug culture in which an array of drugs are available, and the use of different substances with selected effects.<sup>50</sup>

**Mixing two or more substances often results in drug interactions, i.e. effects beyond those anticipated from each drug individually.**

**Widespread poly-drug use in the gay dance club community has been documented in two recent reports from the AIDS Committee of Toronto.**<sup>14,54</sup> The following excerpt from the November, 2004 publication indicates the degree of planning often used in this practice.

*“Participants [men in ACT’s 2004 gay dance club study] reported that they did a number of different drugs during a night of clubbing. They varied the type, timing, and sequence to achieve a particular effect at specific times during the night. For example, many participants take Ecstasy and other drugs in a sequence, over a period of several hours, either to complement or mitigate the effects of Ecstasy. In explaining their particular drug-drug regimes, participants claimed that GHB, for example, supplements or precipitates “sexy” or “horny” feelings if consumed some time after taking a hit of Ecstasy. Ecstasy is an ‘upper’ and GHB is a ‘downer.’ Therefore, participants will use one, followed by the other, after an interval of one to several hours, to change their mood or energy level at different periods of a clubbing event. One participant also noted that marijuana imparts a mellow tone to the party mood derived from Ecstasy. And two participants stated that they sometimes use cocaine on the following day to counteract the feeling of depression associated with the “comedown” from Ecstasy.*

**from “Party Drugs in Toronto’s Gay Dance Club Scene,” AIDS Committee of Toronto, 2004.**<sup>54</sup>

**Given the frequency of poly-drug use, information on those combinations know to be especially dangerous must be promoted. Among the most hazardous:**

**Alcohol is especially dangerous when combined with other drugs** such as cocaine, heroin, or designer drugs such as GHB, GBL, and Ketamine.

**GHB or GBL should not be mixed with sleeping pills, or any prescription drugs in the benzodiazepine family;** a number of deaths have been attributed to the mixing of these drugs<sup>27,57</sup>

**Viagara combined with Ecstasy is sometimes referred to by club-goers as "Sex-tasy."** But health authorities warn that the combination can cause cardiac problems as well as the increased risks of unprotected sex and, therefore, sexually transmitted infections.

**Tryptamines should not be combined with MAOI antidepressants or other stimulants, due to potentially serious drug interactions.** In addition, a number of foods should be avoided when tryptamines are consumed. These include including yeast, cheese and cream, bean curd and fermented soy products, nuts, and pickled herring.

**Opiates and cocaine (a.k.a. speedballs) can be a lethal combination.**

**Methamphetamine and ecstasy can be particularly dangerous at dance parties, where over stimulation may result in hyperactivity, increased body temperature, and dehydration.**

---

**Trail-mix, a blend of methamphetamine, ecstasy, ketamine and Viagra is another dangerous combination.** Anecdotal reports indicate trail mix is widely available in Toronto. Trail mix containing heroin is also found in Vancouver. The RCMP estimates that approximately twelve percent of the pills sold as ecstasy in Vancouver in 2002 were trail mix.<sup>10</sup>

*“One of the most dangerous trends I have heard of revolves around the use of the salad bowl. From what I have heard, partygoers contribute pills they have collected individually in a large bowl. After mixing the contents, participants grab a handful of pills and swallow them, often with the help of a few gulps of alcohol. There’s often no telling how this one ends.”*

**Treatment counselor speaking at Research Group on Drug Use in Toronto, 2004.<sup>58</sup>**

• **ADDITIONAL EMERGING DRUGS IN TORONTO:**

**Salvia Divinorum** is a perennial plant which resembles the herb sage. Salvia divinorum contains a chemical hallucinogen known as Salvinorin A. Specially bred leaves can cause dramatic, sometimes frightening hallucinogenic effects when smoked. This and other plant-based products, (e.g. opium seeds and poppy plants) are reportedly available both by mail order on the Internet as well as in some garden shops in Toronto.<sup>27,57,58,59</sup>

*“The June, 2004 Community Epidemiologic Work Group meetings included two mid-west US cities reporting on the use of salvia - which I buy at the nursery and plant as an annual herb in my garden from time to time - who knew? Its use in St. Louis led to a city by-law banning its possession. In Minneapolis/St. Paul, salvia divinorum has been showing up in schools where it is either smoked or mixed with beverages.”*

**-Staff from Canadian Centre on Substance Abuse, on 2004 report from the U.S. National Institute on Drug Abuse**

**DXM (dextromethorphan)** is a cough suppressant available in a variety of prescription medications as well as over-the-counter in various pills, lozenges, tablets, capsules and gel caps. Taken as recommended (between 15-30 mgs.) DXM is generally considered safe. However, those who abuse DXM consume considerably higher doses, typically more than 360 mgs. in order to experience hallucinations and ‘out of body’ effects. The influence of DXM can last for up to six hours, during which time the risks of serious untoward effects include injury due to loss of visual perception and cognition, hypothermia, heart irregularities, seizures and death. Risks increase when used in a hot environment or while users physically exert themselves, as in a dance club setting. Recent anecdotal reports in Toronto indicate the practice of DXM injection drug use among some users.

**Cocoa-puffs**, or marijuana laced with crack, has reportedly been sold as weed in Toronto. However, there is some skepticism about these reports, given the economic disincentive for dealers.

**Ritalin** is a stimulant which is commonly prescribed for children with ADD (Attention deficit disorder) or ADHD (Attention deficit hyperactivity disorder). The drug may be diverted from legitimate sources, anecdotal reports indicate there have been thefts from local school dispensaries.

**Steroid** use at gyms and the use of potentially lethal **caffeine pills** are additional concerns.

**For more information on Emerging Issues in General Population Drug Use in this report, see:**

- **Emerging Issues for Marginalized Users**
- **The Findings section on Individual Drugs**