

BULLETIN 4

What substances are commonly used on the same occasion as cannabis?

April 2022

In this bulletin we analyze data on Canadian respondents to Wave 1 of the International Cannabis Policy Study (ICPS) collected in 2018.

This bulletin is part of a larger research and knowledge translation project about sex, gender and cannabis use led by the Centre of Excellence for Women's Health and funded by Health Canada. Information about the overall project is available on the [Sex, Gender and Cannabis Hub](#). This bulletin is the fourth in a series. The bulletins report on sex and gender based analyses of surveys and other data to sharpen our understanding of whether and how sex and gender affect cannabis use.

CO-USE OF CANNABIS AND OTHER SUBSTANCES

The use of other substances and cannabis either 'concurrently' (meaning use of two or more substances) and/or 'simultaneously' (meaning use of two or more substances *at the same time*) is harmful to health. These types of use are associated with increased risk of cannabis dependence [1], difficulties quitting cannabis [1], behavioural performance impairment effects [2], greater likelihood of experiencing comorbid substance use and mental health disorders [2], and increased social and behavioral consequences such as driving while impaired [2]. According to the 2020 Canadian Cannabis Survey, alcohol was the substance most commonly used in combination with cannabis, followed by tobacco [3]. The majority of respondents to the Canadian Cannabis Survey never combined cannabis use with illegal opioids (99%), prescription stimulants (96%), prescription opioids (95%), prescription sedatives (95%), illegal stimulants (94%), or illegal hallucinogens/dissociatives (91%) [3].

Sex and gender matter to these patterns. A US study with adolescent smokers found that high frequency cannabis use (more than 6 times in the past month) was associated with decreased odds of a past cigarette quit attempt among boys, but not girls [4]. In a sample of women and men (ages 18–50) with cannabis use disorder (CUD), concurrent use of different substances was higher among adult men [5]. Mixing cannabis with other substances is a key health concern affected by sex and/or gender, but sex and/or gender disaggregated data are very scarce.



WHAT IS INCLUDED IN THIS BULLETIN?

In this bulletin we report on our analysis of sex and gender differences in selected variables on cannabis use among Canadian respondents ($n = 10,057$) from Wave 1 (2018) of the International Cannabis Policy Study (ICPS), funded by the Canadian Institutes of Health Research. The sample size for the past 12-month users is $n = 2,768$. Future bulletins will analyze subsequent Waves of the ICPS. For a full description of the survey and methods for the ICPS see: <http://cannabisproject.ca/methods>. For a description of our approach to analyzing sex and gender in Wave 1 of the ICPS data, see the [Methodology on the Sex, Gender, and Cannabis Hub](#).

In this bulletin we focus on substances, other than alcohol, that respondents have used **on the same occasion** with cannabis in the past 12 months. We will report separately on cannabis and alcohol use in a future bulletin. In Wave 1, the ICPS asked 'Which substances have you used on the same occasion with cannabis in the past 12 months?' and offered the following responses:

- » Tobacco cigarettes
- » E-cigarettes/vaped nicotine
- » Synthetic cannabis (e.g., spice, K2, K3, scene, herbal mixtures, herbal incense)
- » Amphetamines (e.g., speed, crystal meth or ice, meth, Adderall)
- » MDMA (e.g., ecstasy, Molly, E, X)
- » Hallucinogens (e.g., LSD, acid, PCP, magic mushrooms or 'shrooms', mescaline, peyote)
- » Prescription pain relievers to get high (e.g., oxycodone, hydrocodone)
- » Heroin (e.g., smack, dope), illegal fentanyl, or other illegal/street opioids
- » I have not used any of these substances on the same occasion with cannabis
- » Don't know
- » Refuse to answer

Weighted chi-square analyses were used to conduct a sex and gender-based analysis for cannabis outcomes to compare results between men and women. Analyses were conducted using SAS Version 9.4 and SPSS Version 27. A threshold of $p \leq 0.05$ was used to denote statistical significance.



COMMONLY USED SUBSTANCES ON THE SAME OCCASION WITH CANNABIS IN THE PAST 12 MONTHS

Among the 61.5% of those respondents who did use other substances on the same occasion, 21.8% reported using **synthetic cannabis** on the same occasion as cannabis. There was a significant difference¹ in the proportion of women (7.5%) and men (33.2%) who reported this.

Synthetic cannabinoids are chemical compounds manufactured in laboratories, that can mimic the effects of tetrahydrocannabinol (THC). They are often sprayed on plant material and marketed as herbal mixtures, to create the impression they are cannabis. Synthetic cannabinoids can have very serious adverse health effects on mental, heart and renal health. They are marketed under names such as "Spice", "K2m", "K2", "K3", "Mamba incense", "Afghan incense", "herbal", "herbal incense", or "scene" [6, 7].

There were no significant differences in the proportion of women and men for use of the following substances:

Tobacco cigarettes

- » 57.0% reported using tobacco cigarettes on the same occasion as cannabis (56.3% women vs. 57.5% men).

E-cigarettes/vaped nicotine

- » 31.1% reported using e-cigarettes/vaped nicotine on the same occasion as cannabis (27.4% women vs. 33.9% men).

Amphetamines

- » 24.1% reported using amphetamines on the same occasion as cannabis (23.1% women vs. 24.8% men).

Prescription pain relievers to get high

- » 16.2% reported using prescription pain relievers to get high on the same occasion as cannabis (21.6% women vs. 12.3% men).

Hallucinogens

- » 13.4% reported using hallucinogens on the same occasion as cannabis (11.3% women vs. 15% men).

MDMA

- » 12.0% reported using MDMA on the same occasion as cannabis (12.3% women vs. 11.7% men).

Heroin

- » 10.2% reported using heroin on the same occasion as cannabis (14.1% women vs. 7.7% men)¹.

CONCLUSION

Data from the ICPS show that over 60% of people who used cannabis in the past 12 months used other substances at the same time. While there are different rates and patterns of use in men and women for most of the other drugs, there are virtually no significant differences in such use. One exception may be the use of synthetic cannabis¹, with a significantly greater proportion of men compared to women reporting concurrent use. It is important to continue to examine patterns of both concurrent and simultaneous use of cannabis and other substances by sex and/or gender as sex and gender-related factors affect physical, social and behavioral aspects of health, including comorbidity of substance use and mental health disorders.

KEY MESSAGES

1. 61.5% of the respondents used other substances on the same occasion with cannabis in the past 12 months.
2. The most commonly used substances on the same occasion with cannabis in the past 12 months were tobacco cigarettes followed by e-cigarettes/vaped nicotine, amphetamines, synthetic cannabis, cocaine, prescription pain relievers to get high, hallucinogens, MDMA, and heroin.
3. A significantly greater proportion of men compared to women reported using synthetic cannabis¹, on the same occasion as cannabis.
4. No significant differences were observed in the proportion of women and men who reported using tobacco cigarettes, e-cigarettes/vaped nicotine, cocaine, amphetamines, prescription pain relievers to get high, hallucinogens, MDMA or heroin¹ on the same occasion as cannabis.

¹Due to the small number of respondents in these categories, these estimates, and their differences should be interpreted with caution.

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➤ www.sexgendercannabishub.ca

➤ www.cewh.ca

✉ cewh@cw.bc.ca

f t @ @cewhca