



**Alcohol**  
and *cannabis*:



**a very bad  
combination**

**Éduc**  **alcool**

Moderation is always  
in good taste.

In Quebec, cannabis use is not unusual. About 11% of all Quebecers age 15 and older say they have used cannabis – marijuana or hashish – in the last 12 months, and 43% say they have used the drug at least once in their lives (Statistics Canada, 2018).

For some, cannabis is even a substitute for alcohol. In fact, studies done in jurisdictions where medical cannabis has been legalized show that, with regard to the general population, greater access to marijuana coincides with a decline in alcohol sales. That decline can be as much as 12.4% in monthly sales of beer and wine (Baggio, 2018). Of course, it is difficult to determine what percentage of the population uses both cannabis and alcohol at the same time, but whatever the case, a warning against combining the two is in order.

## *An enhancing synergy*

When taken together, the effects of both products are enhanced, increasing the depressant effects of both cannabis and alcohol. Judgement, reaction time and coordination are obviously affected, making it absolutely inadvisable to drive. (Robbe, 1998).

## *Order matters*

Interestingly, it appears that the body handles the two substances differently, depending on which one is consumed first. A few studies have explored this, but their scientific validity is questionable because of the small sample sizes. Results must therefore be interpreted with caution.

### **Alcohol first**



When alcohol is consumed before cannabis, it increases the level of THC (tetrahydrocannabinol, the psychoactive molecule in cannabis) in the blood, compared to when the same amount of cannabis is consumed without alcohol (Hartman, 2016). This means the effects of the cannabis can be more intense if you drink alcohol first. The impact can take you by surprise, particularly if you are using an amount of cannabis you thought you were accustomed to.

Not only does alcohol raise the level of THC higher than usual, but the cannabis molecules are also absorbed by the blood more quickly when you drink alcohol first (Lukas, 2001). Drinking alcohol makes the blood vessels dilate, including those in the lungs and digestive system. So, with each inhalation (or passage through the digestive system, if cannabis is ingested orally), a greater amount of THC enters the bloodstream.

### **Cannabis first**



The opposite occurs when cannabis is consumed before alcohol (Lukas, 1992). When cannabis is taken first, less alcohol is absorbed by the blood vessels than would be absorbed if no cannabis had been consumed. That is because cannabis affects gastrointestinal motility, slowing the movement of food through the digestive system and thereby limiting the amount of alcohol absorbed through the walls of the digestive tract.



## ***There are always risks***

No matter the order in which you consume them, there is always an element of risk when you combine alcohol and cannabis. Notably, cannabis affects the part of the brain stem that controls basic functions, such as nausea and vomiting, and this can make the alcohol-cannabis mix particularly dangerous—even fatal.

When a person drinks too much and is at risk for alcohol poisoning, the body's natural response is to vomit. However, a small amount of cannabis can sometimes suppress the sensation of nausea, and by extension, the vomit reflex (Parker, 2011); this could mean an increased risk of alcohol poisoning. However, the antiemetic properties of cannabis (i.e. its ability to control nausea and vomiting) have been demonstrated only among people undergoing chemotherapy. There have been no studies to date examining specifically whether the same effect might be seen among healthy people drinking alcohol.

## ***And when you don't smoke it...***

Research on the consumption of cannabis and alcohol generally involves marijuana that is smoked. With the legalization of cannabis in Canada, other derivatives (e.g. hashish, oil, wax, etc.) and other methods of ingesting it (e.g. capsules, edibles, vaporizers, etc.) are becoming more common and more easily accessible. It is still too early to determine exactly how alcohol might interact with these other forms of cannabis consumption.

## ***Alcohol, cannabis and driving***

Wright and Terry (2002) report that regular cannabis smokers feel some of the impairing effects of alcohol less intensely than occasional smokers do, even when they have not consumed any cannabis. This is explained by a form of cross-habituation between the two substances. In other words, people who consume enough cannabis to develop a tolerance to it can also develop a tolerance to some of the effects of alcohol. However, while such people may have an increased tolerance and may not feel as intoxicated when they drink, certain faculties critical for driving are nonetheless affected.

When it comes to driving, all it takes is 40 mg of alcohol per 100 ml of blood (a blood alcohol content of 0.04) and a single joint to feel the effects equivalent to a blood alcohol content of over 0.08 (Robbe, 1998), i.e. the legal limit for driving. That's because of the combination of alcohol and cannabis.

As for cannabis, it is illegal to drive with even the slightest trace of it in your blood, whether or not you have been drinking. The legal limit for cannabis is zero.



# In short

- It is a very bad idea to combine alcohol and cannabis.
- Alcohol and cannabis are absorbed differently, depending on the order in which they are consumed.
- A small amount of cannabis has an antiemetic effect. Since it is not clear how this effect manifests when alcohol is being consumed, it is better to play it safe.
- Cannabis affects certain critical faculties and greatly amplifies the effects of alcohol. You cannot have any cannabis in your blood if you're driving: the legal limit is zero.

## And in conclusion

Éduc'alcool recommends against combining alcohol and cannabis, since the effects can be unpredictable, even for experienced users. If it should happen that you consume alcohol and cannabis together, it is important to reduce your usual amount of both substances as much as possible.

When it comes to drinking, moderation is always in good taste. When it comes to cannabis, moderation is in even better taste. And when the two are combined, moderation is in the best taste of all.

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