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national cannabis
prevention and
information centre

cannabis
+
driving
fast facts

Cannabis and driving skills

Most people agree that using cannabis has a negative impact on driving skills and increases the risk of motor vehicle crashes (MVCs). However some cannabis users believe that the drug does not affect their driving skills. In fact, among Australian detainees who reported DUI, 70% believed that their driving was never affected by cannabis. Also, some people say that they intentionally drive more slowly or carefully if they have recently used cannabis or claim that their risk of MVCs is reduced. Over the years a great deal of research has been conducted on cannabis and driving – including:

- » laboratory studies (testing the effects of cannabis on skills required to drive),

- » driving simulator studies (using recent technology to accurately replicate driving incidents)
- » field studies (testing culpability in actual road accidents)

It has been found that cannabis use can increase the chance of a MVC by up to 300% and that it slows reaction time and the ability to make decisions.

Driving under the influence is usually associated with alcohol, but driving under the influence of cannabis (DUI) is also common.



Is it getting more common and who is most at risk?

Although DUIC is common among cannabis users, especially among heavy users, in the general population the prevalence of DUIC is low. It seems that more Australians understand the risks associated with driving under the influence of cannabis and since a survey was conducted in 2007, DUIC rates have dropped by approximately 0.7%. Australians actually report among the lowest rates of DUIC compared to countries which have carried out roadside surveys (involving blood, urine or saliva testing) including Denmark, the Netherlands, the United Kingdom and the US.

When high risk groups are considered though, the rates of DUIC are much higher. A survey of Australians in police detention in 2008 found that one in five (19%)

reported DUIC in the past year. Finally, a survey conducted among recent cannabis users in New South Wales found that as many as 78% reported an occasion of DUIC in the past year, with 27% reporting DUIC at least weekly.

Does it matter?

While some cannabis users still don't believe their driving is affected, laboratory studies have identified several cannabis-related impairments on driving skills, including:

- » Slower rates of tracking objects
- » Poorer attention span (selective and divided attention) and reaction time
- » Worsened hand-eye coordination
- » Affected executive functioning including concentration and time estimation



How impaired someone is after using cannabis depends on how much they use, i.e. the more they use, the more their driving skills are negatively affected. Also, driving skills can be affected for up to five or more hours after using the drug. The rate of getting THC (delta-9-tetrahydrocannabinol, the psychoactive ingredient of cannabis) out of your system is highly variable so no certain “safe” window can be ascertained.

In addition, if you drink alcohol as well as use cannabis, your driving skills will be even more affected.

Driving simulator studies have identified several ways in which using cannabis increases the risk of MVCs, including:

- » Worsened steering (users are worse at car-following and lane-positioning)
- » Increased physical effort and discomfort
- » Increased speed variability and decreased reaction times

Despite these studies showing that cannabis users did tend to drive more slowly, the negative impact on their driving skills still increased the risk of a MVC. Anyone who is not fully aware of their surroundings and is not at their optimal state of alertness while driving is at risk of causing or being involved in a MVC. Consequences can be fatal and long-lasting for the cannabis-affected driver and others.

Risks associated with cannabis and driving

Field studies have also found that DUI increases the risk of MVCs. In fact, when a lot of cannabis is used, the risk of MVCs is almost seven-fold compared to those using a small amount or not using at all. In comparison to the well-known dangers of driving under the influence of alcohol, a blood concentration of cannabis at 7-10ng/ml is said to be equivalent to a blood alcohol concentration of 0.05%.

Australian studies have shown that the rates of cannabis use among drivers *injured* in a MVC ranges from 7.1% – 15.2%. The rates of cannabis use among drivers *killed* in MVCs ranges from 11% – 13.5%.

Drug testing and driving

Cannabis can be detected in people's urine, blood, saliva, hair, and sweat. On the roadside, the easiest and cheapest method of detection is used – saliva testing (or oral fluid testing). A sample of saliva is taken by specially trained police officers by placing a collection device in the mouth and results take about five minutes. The test is used to detect the presence of THC. If the saliva test is positive, further samples of saliva or urine may be taken or blood tests taken by trained medical staff. These second samples must be verified in a laboratory before a person can be charged. For more information on the process and penalties please see your state or territory's road services website.



THC can be detected in oral fluids for up to several hours after consumption so you should not drive if you have recently consumed cannabis. The amount of time taken until you are safe to drive will depend on the amount and strength of cannabis consumed and other factors such as your body type and metabolism, and whether you also used alcohol or other drugs.

Saliva testing is conducted to deter people from drug driving; however it will only be effective in this if it is thought to be credible and if it is properly enforced. In Australia, saliva testing for cannabis is still in its early days. In terms of law enforcement, roadside saliva testing can legally be conducted in every state and territory of Australia in some form, and the location and timing of testing units is said to be random. Despite the widespread enforcement, many individuals are unaware of this kind of testing or believe there is a very low chance of being tested. As funding for roadside drug testing increases, as with random alcohol breath testing, this will change.

Summary

From laboratory studies, driving simulator studies and field research, we know that cannabis impairs driving performance and increases the risk of fatal and non-fatal motor vehicle crashes. Despite this clear evidence, many people are still not convinced that using cannabis would

negatively affect their driving. This is the case even among frequent smokers and detainees who reported driving after using cannabis. Regardless of people's perceptions regarding the effects of using cannabis, roadside saliva testing for cannabis and other drugs is operational throughout Australia. Given the nation-wide coverage of roadside saliva testing, it is important that cannabis users do not drive their vehicle after using cannabis.



**the cannabis information and
helpline number is**

1800 30 40 50

the ncpic website is

www.ncpic.org.au

**for more detailed information and
references please see ‘Cannabis
and driving: The evidence’ at**

www.ncpic.org.au/driving