

Prescribed cannabis medicines and fitness to drive



This fact sheet assists medical practitioners advising patients about driving when using cannabis medicines. Cannabis medicines are pharmaceutical-grade products, containing active cannabinoids. Information about how to prescribe cannabis medicines is available at www.health.nsw.gov.au/pharmaceutical/cannabismedicines/Pages/default.aspx.

Cannabinoids can cause impairment and affect fitness to drive. Patients prescribed a cannabis medicine may already be unfit to drive due to their health condition or treatment (e.g. impaired motor control, risk of seizures). A person's fitness to drive can be affected by impaired sensory, cognitive and motor functions, possibly resulting in a crash causing death or injury.

The Austroads and National Transport Commission's "Assessing fitness to drive" provides a comprehensive guide for medical practitioners (<https://www.ntc.gov.au/codes-and-guidelines/assessing-fitness-to-drive>).

Delta-9-tetrahydrocannabinol

Delta-9-tetrahydrocannabinol (THC), a psychoactive cannabinoid of the cannabis plant, can affect cognitive and motor skills necessary for safe driving such as attention, judgement, memory, vision and coordination. Evidence has shown:

- vaporised cannabis can increase lane weaving and impair cognitive function in a driving simulator. Combining cannabis and alcohol dramatically impairs performance¹
- exposure to cannabis can increase the crash risk of drivers by an estimated 40% (95% confidence interval that the true increase in risk is between 11%-76%).²

Unlike alcohol, a direct relationship between blood levels of THC and levels of driving impairment has not yet been established.

The risks of impairment are greatest with initiation of treatment with THC and with dose increases. Impairment tends to be dose-related with greater impairment observed at higher doses.

Patients should be advised not to drive while using a product that contains THC. The product information for registered medicines which can impair driving ability warn patients not to drive, including nabiximols (Sativex®). Health Canada and Israel's Ministry of Health also advise that patients using cannabis products containing THC should not drive.^{3,4}

Patients using cannabis should be warned not to drive or to perform hazardous tasks, such as operating heavy machinery, because impairment of mental alertness and physical coordination resulting from the use of cannabis or cannabinoids may decrease their ability to perform such tasks³

Cannabidiol and other cannabinoids

Cannabidiol, a non-psychoactive cannabinoid, can cause drowsiness, fatigue and lowered blood pressure, symptoms which are observed more often when taken with other interacting medications and at high doses. The effects of other cannabinoids have not been systematically studied.

Drug-drug interactions can cause or worsen impairment

Delta-9-tetrahydrocannabinol and cannabidiol can interact with other medications, impairing the metabolism of other drugs or causing cumulative effects such as sedation. Cannabidiol is known to affect the metabolism of certain anti-epileptic drugs by CYP 450 enzymes, elevating plasma levels of some benzodiazepines and certain other drugs.

Variability within and across individuals and products

The rate that cannabinoids are absorbed, metabolised and eliminated varies, and can affect the degree of impairment based on length of treatment, frequency of dose, ratio of cannabinoids, food consumption (specifically for oral products) and route of administration (vaporised, oral, oromucosal, transdermal). For example, greater and more rapid impairment is observed with vaporised or smoked recreational cannabis compared to oral routes of the same dose; and different oral formulations of cannabis medicines affect response. Because many of the cannabis medicines available in Australia do not have information regarding their absorption and bioavailability it can be difficult for practitioners to give reliable advice regarding an expected period of impairment.

Regulator-endorsed advice about cannabis medicines and driving

Product Information and Consumer Medicines Information sheets for registered medicines contain endorsed driving warnings. Any driving advice provided with unregistered products has not been endorsed and should be read with caution.

Nabiximols (Sativex®) and cannabidiol (Epidyolex®) are the only cannabis medicines on the Australian Register of Therapeutic Goods. The approved product information for Sativex® states that patients taking Sativex® must not drive. This advice is consistent with its registered indication (severe spasticity in patients with multiple sclerosis). Patients taking Epidyolex® are advised not to drive unless they are certain the medicine does not affect them.

Dronabinol (Marinol®) and nabilone (Cesamet®) are cannabis medicines approved in the United States. Marinol® product information in the USA advises patients not to operate vehicles until they are reasonably certain that Marinol® does not affect them adversely. Cesamet® product information in the USA advises patients not to drive.

Fitness to drive

Practitioners are responsible for assessing their patient's fitness to drive. If a patient is advised not to drive and they continue, practitioners can inform NSW Roads and Maritime Services. Detailed information is available at www.rms.nsw.gov.au/roads/licence/health/fit-to-drive.html.

Patients using impairment-inducing medication such as opioids, benzodiazepines and some anti-depressants are often warned not to drive.

Medico-legal liability

Australian medical practitioners may be exposed to medico-legal risk when prescribing unregistered medicines and may wish to seek medical indemnity advice.

Legal issues for patients

Roadside drug testing in Australia tests for THC in saliva. In NSW, it is an offence to drive

- (a) with the presence of THC in oral fluid, blood or urine; or
- (b) under the influence of THC.

There is no medical defence to these offences specified in the *Road Transport Act 2013 (NSW)* for using a prescribed cannabis medicine. There may also be insurance implications for patients who are convicted of these offences.

Assessing fitness to drive

The 2016 Austroads and National Transport Commission [report](#) recommends practitioners consider the following principles when assessing fitness to drive (in the short or long term):

- balance between potential impairment due to the drug and the patient's improvement in health on safe driving ability
- individual response of the patient to the medication
- type of licence held and the nature of the driving task
- added risks of combining multiple drugs capable of causing impairment, including alcohol
- added risks of sleep deprivation on fatigue while driving
- potential impact of changing medications or changing dosage
- cumulative effects of medications
- presence of other medical conditions that may combine to adversely affect driving ability
- other factors that may exacerbate risks such as known history of alcohol or drug misuse.

Further information

For general practitioners, community pharmacists and rural health practitioners

contact the John Hunter Hospital Pharmacy Department at HNELHD-JHHPharmacy@health.nsw.gov.au

For patients

email MOH-CannabisTrial@health.nsw.gov.au

References

- 1 Hartman, RL, Huestis, MA (2013), Cannabis effects on driving skills. *Clin Chem*;59(3):478-92.
- 2 Cameron, M (2017), Literature review of crash-based studies on the road risks associated with cannabis, *unpublished*.
- 3 Health Canada (2013). Information for Health Care Professionals: Cannabis and the cannabinoids. Retrieved from www.canada.ca/en/health-canada/services/drugs-health-products/medical-use-marijuana/information-medical-practitioners/information-health-care-professionals-cannabis-marijuana-marijuana-cannabinoids.html
- 4 Ministry of Health (Israel), 2017, Medical Grade Cannabis Clinical Guide. Retrieved from www.health.gov.il