



Impacts of recreational drug use on driving

A literature review examines the available information about driver impairment due to recreational drug use, and the resultant risks to road users.

The research, conducted by WSP Research, will be used by the New Zealand Government to inform options for roadside testing of driver for drug use. The study was limited to three illicit drugs that are commonly tested for in jurisdictions that already conduct roadside testing:

- cannabis
- methamphetamine
- MDMA (ecstasy).

The study also contains a brief discussion of the literature on the deterrence effect that roadside drug testing has on drivers, to inform the discussion on impairment risk.

RISKS OF DRUGGED DRIVING

The review found evidence that all three drugs have a negative impact on the driving of people using them. This may be an acute impact due to recent ingestion of the drug, or more long-term impact from being a regular user of the drug. All three drugs also form more dangerous combinations when used with alcohol and other drugs, than on their own.

In simulated driving situations, the drugs were found to impact on a wide range of behaviours, with the affected behaviours varying dependent on the drug. The following table sets out the specific risk-increasing impacts detailed in the literature.

IMPACTS ON SIMULATED DRIVING

CANNABIS/SYNTHETIC CANNABIS	METHAMPHETAMINE	ECSTASY
<ul style="list-style-type: none"> Increased reckless driving Slower driving, larger headways More signalling errors Impaired control of speed, headway and lateral position Decreased car control as task demand increases Decreased performance on road tracking tasks Decreased psychomotor skills, reaction time, visual functions, attention and encoding 	<ul style="list-style-type: none"> Release the brakes inappropriately when stopping, Drive too fast for the traffic conditions Travel slower on the freeway in an emergency Impaired control of lateral position Execute right turn against movements with a smaller gap More aggressive driving 	<ul style="list-style-type: none"> Higher urban speed Acceptance of smaller gaps More simulated crashes More signalling errors More skidding, More inappropriate braking, Less safe following distances More aggressive driving

Other potential impacts were increased caution by cannabis users, if they attempt to mitigate their impairment while driving, for example by not overtaking or slowing down; and fatigue for ecstasy and methamphetamine users, as these drugs are both stimulants and can cause people to become exhausted.

When it came to crashes involving fatalities or serious injuries, alcohol was the riskiest substance for drivers to have ingested. This was followed by the stimulant drugs, with cannabis representing a moderate risk when taken on its own.

Another emerging threat identified through the literature was synthetic cannabis. Synthetic cannabis should not be confused with plant-derived cannabis. Its impacts, although similar to those of natural cannabis, are generally more severe, with its use recently being linked to numerous deaths, including on the road. It is not yet clear to what extent the potentially diverse chemicals used to manufacture synthetic cannabis are able to be picked up by a saliva test, and hence what scope there is for detecting and deterring its use by drivers.

DETERRENCE A USEFUL TOOL

The review showed that measures to deter people from driving after drug ingestion are crucial tools for combatting the harmful impacts that drugged driving can have on road safety.

Deterrence measures should include both general operations, to deter the practice at a societal level, and targeted operations aimed at groups known to be at high risk of offending.

To be effective at a societal level, the deterrence operations need to be backed up by appropriately supportive public education about the risks of driving while under the influence of drugs.

The researchers recommend that the results of being caught while driving under the influence of drugs should be perceived by the public as swift, certain and severe, but also fair.

Due to the extra risks associated with combinations of drugs with alcohol, the researchers also recommend that the government considers introducing drug testing for those drivers who have tested positive for alcohol. This would not need to be only for drivers at the legal limit for alcohol, as any combination of alcohol and drugs has the potential to significantly increase the driving-related risk.



RR 664 – Risks of driving when affected by cannabis, MDMA (ecstasy) and methamphetamine and the deterrence of such behaviour – a literature review, NZ Transport Agency research report
Available at www.nzta.govt.nz/resources/research/reports/664