



# Medical Marijuana. Implications for Driving and the Workplace

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FAFOEM

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Sydney  
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[www.racpcongress.com.au](http://www.racpcongress.com.au)

# Medical Cannabis Driving and Occupation

MJA article:

*Compassion and evidence in prescribing cannabinoids: a perspective from the Royal Australasian College of Physicians*

*“The RACP advises that any patients taking medicinal cannabinoids should not drive”*

Jennifer H Martin, Yvonne Bonomo and Adrian DB Reynolds Med J Aust 2018; 208 (3): 107-109. || doi: 10.5694/mja17.01004



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Australia's largest cannabis event, the Hemp Health & Innovation (HHI) Expo & Symposium is heading back to Sydney 12 & 13 May 2018! Now in its third year, HHI Expo sees thousands of Sydneysiders descend upon Rosehill Gardens seeking information and awareness around all the crucial benefits

the hemp and cannabis plants offer: hemp food, medicinal products, fabrics & textiles, clothing, beauty products, building materials, health products, gardening and hydroponic equipment and more.

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### LATEST



**HHI Hemp Health & Innovation Expo 2018**  
April 09, 2018

### DECriminalise Now NSW Australia



Petition

### THE BEST OF



**Tony Bower Medical-cannabis producer again locked up**  
April 03, 2018

**WHO Rules CBD Should Not Be a Scheduled Drug**  
December 19, 2017



**Dr Cristina Sanchez PhD**  
video interview ...

medicalmarijuana.com.au

9<sup>th</sup> April 2018

- *“if there is a danger to driving under the influence of cannabis (and there is no proof that I am aware of) the danger would be in the immediate 30 mins after consuming.”*
- *“Further studies contracted by the dept of transport in the USA have reported cannabis is much safer than alcohol and just slightly more dangerous than normal driving.”*

# Medical Cannabis & Driving Issues

- What is the relationship between Cannabis and impairment?  
Is it the same as with alcohol?
- How long after taking the medication should you drive/work?
- What will happen with Mobile Drug Testing? Or with  
Workplace drug testing?
- Is there a “safe” level of THC for driving?

# Cannabis & Driving?

*U.S. National Institute of Health*

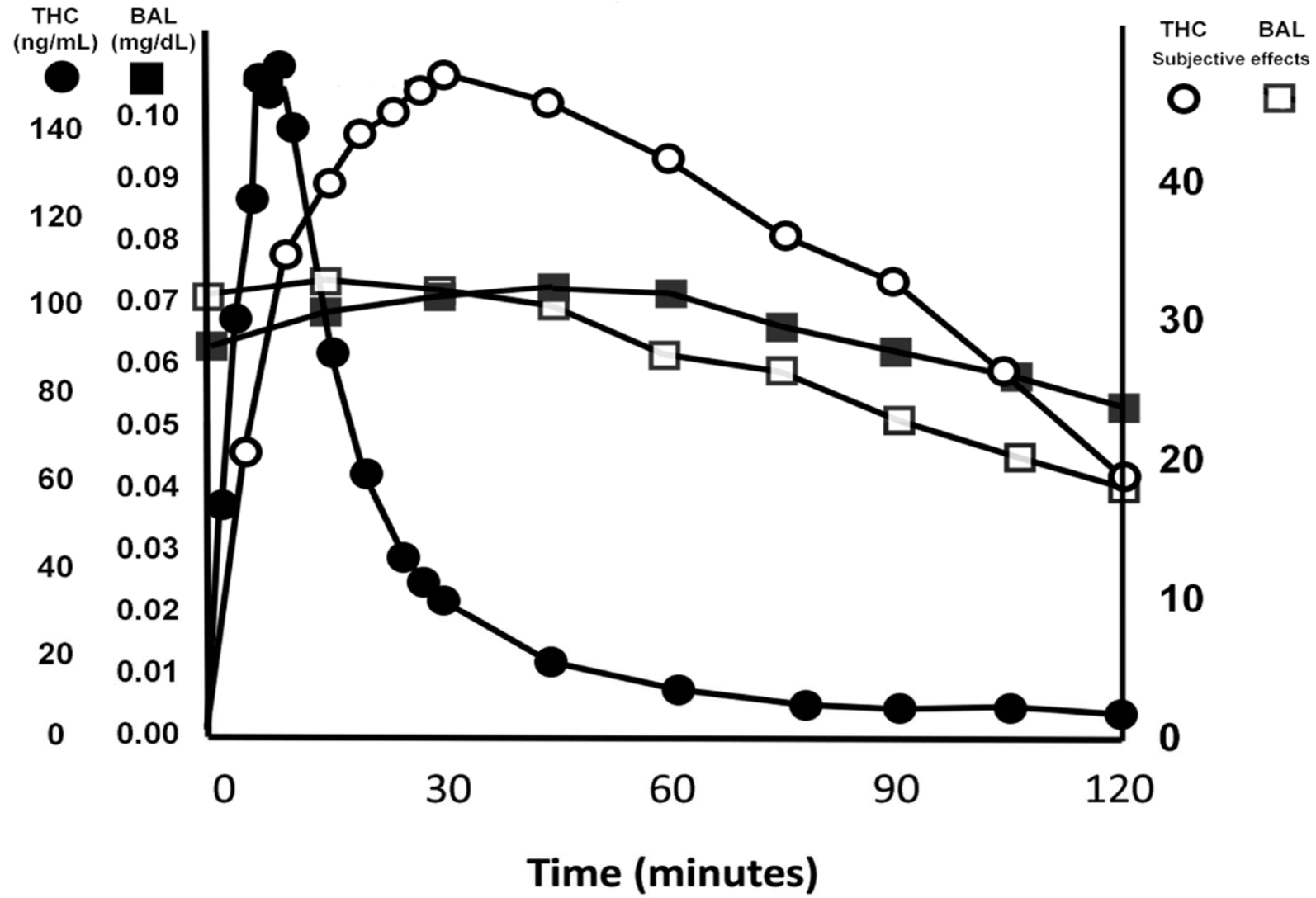
*“THE EFFECT OF CANNABIS COMPARED WITH ALCOHOL ON  
DRIVING”*

R. Andrew Sewell, MD, James Poling, PhD, and Mehmet Sofuoglu, MD, PhD *Am J Addict.* 2009 ; 18(3): 185–193.  
doi:10.1080/10550490902786934

- Cognitive Studies
- Experimental research
- Epidemiological Studies

Sewell et al

(Smoked Marijuana)



## NIH - Cognitive Studies.

- "...a meta-analysis of 60 studies concluded that marijuana causes impairment in every performance area that can reasonably be connected with safe driving of a vehicle, such as tracking, motor coordination, visual functions, and particularly complex tasks that require divided attention".
- Also affects on attentiveness, vigilance, perception of time and speed, and use of acquired knowledge



# NIH – Experimental Studies

- Results not as strong as expected given the cognitive studies.
- It may be that marijuana users also compensate by driving more carefully
- Chronic users seem less affected (? Physiological Tolerance or learned behaviour)
- Combined with alcohol causes exponential increase in impairment even at low levels.

# NIH – Epidemiological Studies

- Mainly case control and culpability studies with sometimes conflicting results.
- The weight of evidence demonstrates the relationship between marijuana and road accidents.
- Studies have also been able to develop dose (or level of serum THC) response relationships leading to possible setting of serum THC limits for driving.

# ACOEM Guidance Statement: *Marijuana in the Workplace - 2015*

## Impairment and THC Plasma Levels

| Establishing     | Impairment      |                 |
|------------------|-----------------|-----------------|
| THC Plasma Level | Casual User     | Chronic User    |
| 0 – 2 ng/ml      | No Impairment   | No Impairment   |
| *2 – 5 ng/ml     | Likely impaired | May be impaired |
| *5+ ng/ml        | Likely impaired | Likely impaired |

# Regulated Serum THC Levels and Driving

## Canada (proposed):

- 2 ng/ml – 5 ng/ml “Summary Offence”
- > 5ng/ml – More serious offence similar to DD

## U.S. - Washington and Colorado:

- > 5ng/ml

# Oral THC Medication

- After oral administration\*, Dronabinol has an onset of action of approximately 0.5 to 1 hrs
- Peak effect at 2 to 4 hours.
- Duration of action for psychoactive effects is 4 to 6 hours

5 mg – mean serum levels of 2.96 (SD 1.81)ng/ml

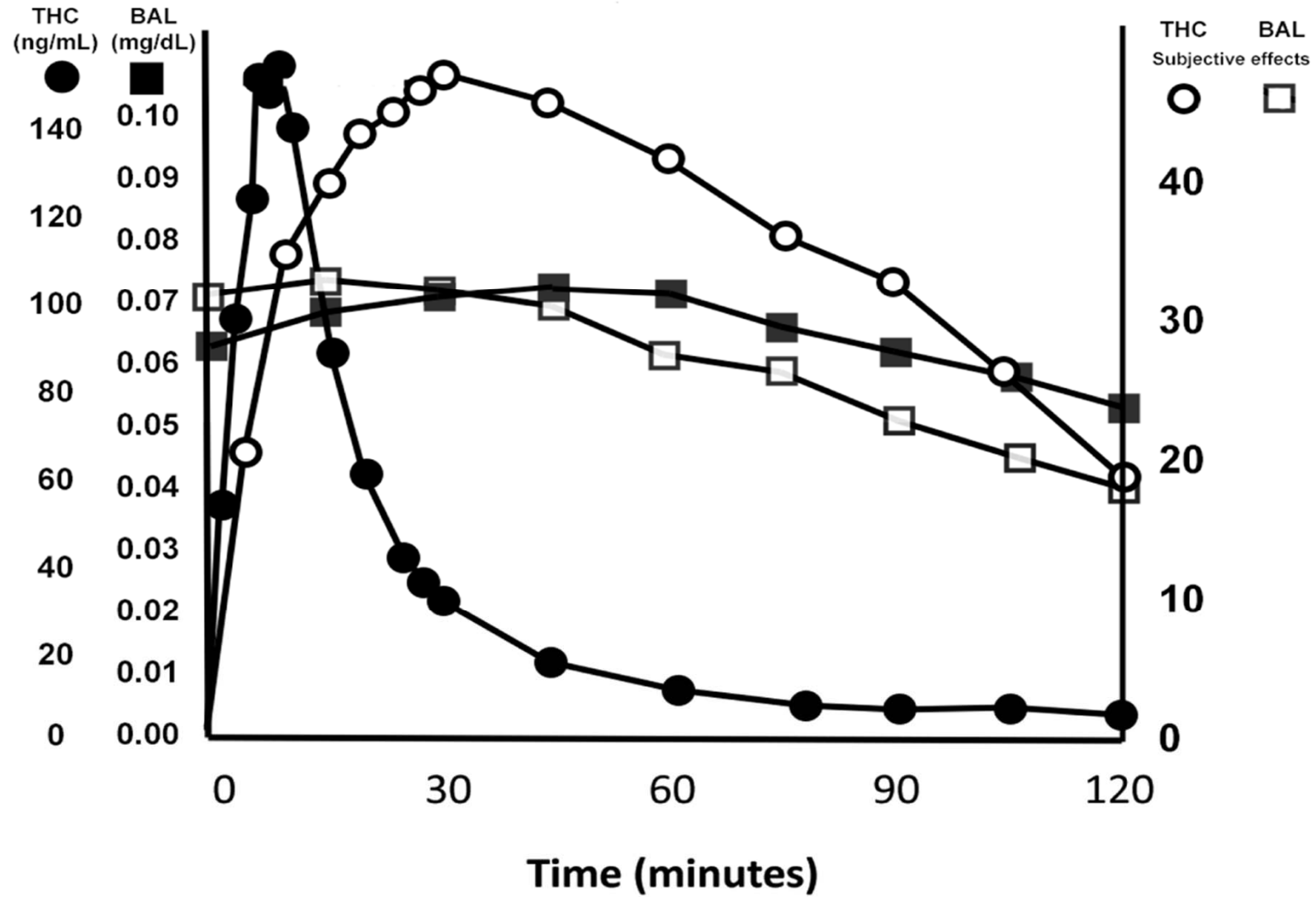
10 mg – mean serum levels of 7.9 (SD 4.54)ng/ml

Tmax - 1 to 2.5 hrs

\* NDA Product Description Marinol®

Sewell et al

(Smoked Marijuana)





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<http://www.cannabis-medications.com/weedmaps-menu.html>

# Australia - Roadside Drug Testing

Home About the centre **Staying safe** Campaigns Statistics Speeding Research Contact us


NSW Centre for Road Safety > Staying safe > Alcohol and other drugs > Drugs and driving

## Drugs and driving

Listen

### Mobile Drug Testing

Our Mobile Drug Testing TV advertisement warns drivers that NSW Police can test them for drugs anytime or anywhere, there's no escaping it. Read a [transcript](#).



Mobile Drug Testing. There's no escaping it.

- ▶ Fatigue
- ▼ Alcohol and other drugs
  - ▶ Alcohol and driving
  - ▶ Drugs and driving
    - ▶ Illegal drugs
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- ▶ Bicycle riders
- ▶ Drivers
- ▶ Heavy vehicles
- ▶ Motorcyclists
- ▶ Pedestrians



# Mobile Drug Testing - NSW

- Detects (mostly) THC directly deposited in Oral Cavity
- Limited diffusion of THC from blood into oral fluid

3 step procedure:

1. MDT Test Stick
2. Screening in Mobile Van or Police Station
3. Laboratory



NSW Road Safety Website 2016 - ***“Cannabis can typically be detected in saliva by a drug stick test for up to 12 hours after use.”***

(Image permission of Pathtech Australia)

# Mobile Drug Testing & Medical Cannabis?

- Oral THC -Unlikely to be detected with oral administration. Dependent on dose, time taken, form of medication.
- Nabiximols sub lingual spray would likely be detected. Tinctures etc. not known.
- Synthetic cannabinoids e.g. nabilone unlikely
- Medical CBD highly unlikely to be detected.

# NSW Road Transport Act 2013

## Sect 111

*“A person must not, while there is present in his or her oral fluid, blood or urine any prescribed illicit drug:”*

...drive etc.

(No exception for Medicinal THC)

What advice should be given?

# Cannabidiol (CBD)

- Impairment is not as clear as with THC
- “non psychotropic” constituent of Cannabis
- Anti psychotic, anti anxiolytic, anti emetic, anti inflammatory and possible analgesic.
- Pure CBD medications unlikely to be seen in adults but use is expanding.

# CBD and Impairment

A Meta analysis in 2011 reported relatively few side effects and that CBD was well tolerated even at very high doses. Inhibition of hepatic drug metabolism is described.

***“Based on recent advances in cannabinoid administration in humans, controlled CBD may be safe in humans and animals. However, further studies are needed to clarify these reported in vitro and in vivo side effects.”***

\*M Bergamaschi et al. Current Drug Safety, 2011, 6, 237-249 | *Safety and Side Effects of Cannabidiol, a Cannabis sativa Constituent*

# Driving and Medical Marijuana Summary

- Medical THC preparations are likely to impair.
- Pure CBD less likely but more research is needed.
- According to the legislation it's illegal to drive with any THC in the system.
- But unlikely to be detected on MDT
- Users (of medicinal cannabis) should not drive or carry out any other safety critical tasks.
- Giving advice regarding time of driving from last dose is fraught with uncertainty.

# Occupational Implications

- Impairment has Fitness for Duty Considerations
- The medical conditions for which the medical cannabis is prescribed also need to be assessed for Fitness for Duty.
- Disability/Discrimination
- Reasonable accommodation may need to be made
- AOD Policies adjusted
- Consider the impact on any workplace AOD testing programs

# **Workplace Drug testing & Medicinal Cannabis**

- Medicinal THC is likely to be detected in urine testing programs much less likely in Oral Fluid testing.
- CBD unlikely to be detected in either.