

**Doctors For Life**  
INTERNATIONAL



## **MEDIA RELEASE**

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**SA's future, should cannabis be legalised:**

**Cannabis related fatal road accidents**

**increased 4 fold in USA states**

**that have legalised pot.**

## **Comment on the National Road Traffic Act**

**93 of 1996**



**“Sound science in the medical profession”**

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## **To whom it may concern**

### **Reason for this presentation**

This presentation has been compiled by *Doctors for Life International* out of concern regarding ramifications arising from the legalisation of Cannabis. The concern is founded on the scientific and medical fact that most drugs active in the central nervous system, including cannabis, have an impairment potential and therefore pose a road safety threat. It is essential that regulations are drafted, and parameters placed before the legislature for deliberation, to avoid a spike in intoxication-related traffic incidents and ensure that our roads remain safe.

### **DISCUSSION:**

#### **Drug levels and their effects on different tissue types:**

Cannabis blood drug levels in occasional users and chronic users (Toennes et al., 2008) showed an initial cannabis half-life of 30 minutes. The half-life of Cannabis has a complex overlay of different clearance rates, but after 8 hours, the clearance is considerably slower, particularly in heavy users of Cannabis.

Cannabis is absorbed from the lungs. It is redistributed and diluted into the entire blood pool. Simultaneously all other elimination routes start working. Kidney elimination is the fastest initial elimination route and is blood level dependant. Such elimination decreases. Liver and other routes become more important. Because heavy usage damages the liver, elimination slows and consequently drug levels are considerably higher after eight hours in heavy users than in casual, intermittent users.

Brain levels of cannabis are 2-3 times higher than blood levels (Heustis et al., 1992). This is due to accumulation in fat. The brain fatty substance is

responsible for insulation around the nerve cell fibres as myelin sheaths. It may then have a profound effect on brain function. This means that blood levels may approximate, but do not accurately reflect brain levels. These levels may therefore still be high enough to cause impairment whilst the blood levels may seem safe.

When cannabis damages the liver, elimination will inevitably become slower and this affects elimination negatively, including in the brain. For most drugs that redistribute to fat, elimination is slow due to the relative lack of blood flow to fat. This accumulation is not limited to the fat in the brain but occurs in the entire body.

The effect in each patient is drug level dependant. The higher the levels, the more effect it has.

### **Effects of legalisation of cannabis in other countries**

In an address delivered (February 2022) before the Virginia General Assembly, by Prof Bertha Madras (MD), Professor of Psychobiology, Department of Psychiatry, Harvard Medical School she stated that in states where cannabis is legal, an increase in traffic deaths was observed. **Her literature review found that cannabis is the most identified drug in deadly vehicle accidents**, and it **doubles** drivers' chances of being involved in an accident. The reason is that cannabis impairs judgement and many other skills needed for safe driving, e. g., **alertness, concentration, coordination, and reaction time**. cannabis makes it difficult to judge distances and to react timeously

The table below identifies fatalities related to cannabis in Colorado from 2006 to 2019. It can be found at 7 ROCKY MTN. HIGH-INTENSITY DRUG TRAFFICKING AREA STRATEGIC INTEL. UNIT, THE LEGALIZATION OF MARIJUANA IN COLORADO: THE IMPACT 10 (2020).

Traffic Deaths Related to Marijuana Where an OPERATOR Tested Positive for Marijuana			
Crash Year	Total Statewide Fatalities	Fatalities with Operators Testing Positive for Marijuana	Percentage Total Fatalities
2006	535	37	6.9%
2007	554	39	7.0%
2008	548	43	7.9%
2009	465	47	10.1%
2010	450	49	10.9%
2011	447	63	14.1%
2012	472	78	16.5%
2013	481	71	14.8%
2014	488	94	19.3%
2015	547	115	21.0%
2016	608	149	24.5%
2017	648	162	25.0%
2018	632	144	23.0%
2019	596	149	25.0%

• Of the 149 marijuana-related traffic deaths: 101 were drivers, twenty-two were pedestrians, twenty were passengers, and six were bicyclists

**NOTE:** In 2019, 66% of operators' blood was tested after being involved in a fatal crash.

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