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Drugs and medicines

Thematic File Road Safety N°4

(2nd edition, 2019)



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Executive summary

Drugs and certain medicines influence the behaviour and perception of the user. Therefore driving under the influence of drugs and psychoactive medicines is generally seen as a danger to traffic safety. Not only does the quantity or type of substance influence driving behaviour, but also the way or circumstances in which the substance is ingested. (Illicit) drug use for example is the misuse of a psychoactive substance without medical observation. Medication is (usually) part of a medical treatment and sometimes the use of medicine is even needed to correct (or restore) the patient's driving ability.

Prevalence

Regarding the selfdeclared behaviour, on percent of the Belgian declared in 2017 having driven under the influence in the past month, according the the National Road Unsafty Survey. Moreover we observed in the ESRA project (2015) that this behaviour is found 4 times more in men than women, and mainly beyond the 35-54 years old. The DRUID project¹ offers the most accurate and extensive information regarding psychoactive substances in European traffic. In the DRUID road-side survey, approximately 50 000 drivers of cars and vans in 13 EU countries were tested for 23 psychoactive substances (2007-2009). The results showed that on average 7.43% of drivers tested positive for one or more psychoactive substances. As only a very limited number of medicines were tested, this number is probably an underestimation. Alcohol use (3.48%; BAC \geq 0.1 g/l) scored highest followed by (illicit) drugs (1.89%) and psychoactive medicines (1.38%). Cannabis (1.32%) was the most commonly used drug, while benzodiazepines² (0.90%) were the most commonly used medicines. Medicinal opiates³ and Z-drugs⁴ were found most often in Northern European countries. Illicit drugs, alcohol and benzodiazepines were more common among Southern European drivers. Among Eastern European drivers the use of psychoactive substances was low in comparison to the rest of Europe. In Western Europe the use of all psychoactive substances was around European average.. Illicit drug use was mostly detected among young male drivers. In contrast, the use of medicine was relatively common among female drivers, and increasing with age (Houwing et al., 2011ab).

Risk / victims

In the DRUID hospital study seriously injured and killed drivers were tested on the presence of psychoactive substances. Mainly alcohol or a combination of alcohol with drugs/medicines was detected among these drivers; illicit drugs and psychoactive medicines were clearly less common than alcohol. Also among the seriously injured or killed drivers, illicit drugs and alcohol were primarily found in young male drivers. Psychoactive medicines were mainly detected among female and older drivers (Isalberti et al., 2011).The relative risk of an accidents resulting in serious injury or death varies greatly depending on the specific substance. In case of cannabis this relative risk is slightly increased and in case of cocaine, illegal opiates, benzodiazepines, Z-drugs and medical opiates medium increased. The relative risk of a serious accident is highly increased for amphetamines and combined use of different types of drugs and/or psychoactive medicines and extremely increased in case of high alcohol concentrations (BAC \geq 1.2 g/l) or a combination of alcohol with drugs and/or medicines (Hels et al., 2011). In a 2017 literature review, analysing 14 scientific researches about driving under the influence, all these increased risks were confirmed.

Measures

Measures against illicit drugs and driving mainly focus on enforcement and legislations and in case of psychoactive medicines mainly on sensitization and education of patients, physicians and pharmacists. The following measures are discussed in this report: (1) legal approach with regard to driving under the influence of illicit drugs, (2) absolute limits for illicit drug use in traffic, (3) detection and enforcement with respect to illicit drug use in traffic, (4) knowledge and attitudes with regard to drug use in traffic, (5) information about driving under the influence instead of absolute limits, (6) uniform risk classification of medicines, (7) software for physicians and pharmacists and (8) monitoring of the problem situation.

¹ Driving under the Influence of Drugs, Alcohol and Medicines

² Sedative; tranquilizer; soporiphic; anti-anxiety; examples of well-known brands: Valium, Lexotan, Loramet, Temesta, Rohypnol, Xanax.

³ Strong painkiller (e.g. morphine) but also heroine substitute (e.g. methadon) or ingredient in cough syrup (e.g. codene).

⁴ Soporiphic; examples of well-known brands: Stilnoct, Zolpidem, Imovane.

Belgian legislation and key figures

This report gives an overview of the current Belgian legislation with regard to drug and medicine use in traffic. Furthermore the most important Belgian data on driving under the influence of drugs and medicines is briefly presented. In Belgium alcohol is also the most common psychoactive substance in traffic (2.2-2.5%; BAC \geq 0.5 g/l), closely followed by benzodiazepines (2.3%). The DRUID road side survey showed that medicine use in Belgian traffic (3.0%) is well above the European average (1.4%). However, drug use (0.6%) lies under the European average (1.9%). With respect to age, sex and time of detection the Belgian patterns correspond to the European picture. Just like alcohol, illicit drugs were more often found at night-time while psychoactive medicines were found more often during the day.

According to our estimate, each year approximately 3600 drivers which were hospitalized after an accident test positive for one or more psychoactive substances. Most of them test positive for alcohol (ca. 1960 alcohol only and, another 540 for a combination of alcohol and other psychoactive substances). Approximately 440 of the hospitalized drivers test positive for one of the illicit drugs, 560 drivers for one of the psychoactive medicines and around 100 drivers for a combination of different illicit drugs and/or medicines. We assume that this is an underestimation of the actual number of annual traffic victims who test positive for psychoactive substances because the hospital records which served as the basis for this calculation are in themselves already a slight underestimation of the total number of road casualties.

Need for further research

Based on the results of this study and the current state of scientific research BRSI calls for further research in the following areas:

- Continuous monitoring of the problem situation in order to be able to evaluate the effects of measures; with additional attention to the combined use of drugs/medicines with alcohol.
- Further follow-ups of experiences abroad (e.g. legal regulations in other countries).
- Expanding the research on psychoactive medicines in traffic.

