

## **Toxicology Section – 2003**

## K23 Impaired Drivers in the Canton Bern (Switzerland) With Benzodiazepine Detections

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The learning objective of this presentation is to demonstrate that several benzodiazepines alone are causing a safety problem on the roads of Bern in comparison to people who overuse/abuse alcohol or illicit drugs.

The vast majority of DUI problems continue to come from the overuse/abuse of alcohol alone. Cannabis alone, or combined with alcohol, is the second commonest problem and it is growing. Misusers/abusers of opiates, cocaine, and amphetamines constitute the next group. This laboratory many DUI of drug cases in which benzodiazepines alone are causing driving impairment.

Methods: in this part of Switzerland protocols and procedures have been developed to aid the police initially to recognize the possibility that a person is DUI of drugs (Police report of suspected inability to drive safely) and then, to initiate a chain of events to ensure that secure forensic evidence is acquired. For DUI of drug cases the next step is the medical examination. The MD takes two blood and one urine sample and fills in the report of medical examination. In the laboratory the urine screening is performed by EMIT or in special cases by GC-MS. Alcohol is determined in the blood sample by head-space GC-FID. The quantitative determination of drugs in the blood samples is performed by GC-ECD (benzodiazepines), GC/MS (opiates, THC, THC - COOH, cocaine, EME, BE), GC-NPD, or HPLC-DAD (basic drugs). The results are reported to the legal authorities.

Using DUI cases to provide a "snapshot" of the more general drug abuse scene drug misuse/abuse is often a matter of street "fashion" with drugs of misuse changing according to whim. This is particularly true of the benzodiazepines, which are seldom misused alone. Rather they are almost invariably misused by people who misuse/abuse other drugs or alcohol. DUI cases of people who abuse benzodiazepines in combination with heroin or methadone to survive from one opiate dose to the next is observed; Cocaine or amphetamine users to get down from their high; "Self-medicators" – they use benzodiazepines to calm their anxieties. The benzodiazepines may or may not be legitimately prescribed. "Self-medicators" may combine benzodiazepines with alcohol, despite specific warnings not to do so.

DUI, Benzodiazepines, Switzerland