

Drug Recognition and Field Impairment Testing: Evaluation of Trials

Jackson¹ P. G.; Tunbridge² R. J.; and Rowe¹ D. J.

¹ Department of Environment Transport and the Regions, London, UK

² Transport Research Laboratory UK

Road Safety Division, Department of Environment Transport and the Regions,
2/14 Great Minster House, 76 Marsham St., SW1P 4DR, London, UK

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Abstract

It is apparent from the large number of negative breath tests and the small number of drugs driving submissions, that in the case of a negative BrAC result police officers are not considering whether a person may be impaired through drugs. This may be due to a lack of skills in identifying the signs of drug use in a driver. Drug Recognition Training (DRT) for police officers has recently been initiated. Police officers from 6 forces received training in drug impairment recognition and also in the administration of a standardised Field Impairment Test (FIT). These officers then applied their training in a real world setting for a period of 2 months. As a comparison, specially trained TRL researchers have also used these techniques at 2 city locations. Young people exiting clubs and pubs were invited to provide a saliva sample and perform the tests involved in DRT/FIT. All samples (from both the police and TRL trials) have been analysed by independent forensic laboratories.

Results show that the DRT/FIT techniques are very useful in identifying impairment and the likely drug group responsible. This paper reports the results of both sets of trials and provides a list of recommendations based on experiences of the police and the TRL team.

Introduction

The DETR's survey of the incidence of drugs in road fatalities began in October 1996, and data collection was completed in October 1999. Final results are in preparation, but early indications are that there has been a substantial increase in the incidence of illicit drugs found in drivers (3% to 18%) since a similar study (1) was conducted in the mid-1980s. Overall results from the study, based on 1138 fatalities (drivers, passengers, cyclists, riders and pedestrians) confirm that the incidence of drugs remains at a consistently high level with at least one drug (including medicinals) being detected in 24% of this sample. Medicinal drugs incidence at 6% had not changed significantly since the previous study. Alcohol incidence was 35% in the earlier study and 32% in the most recent.

Not all cases of drugs detected in the study will have involved impaired drivers, or drugs as a causative factor. Nevertheless, the very small number of drug driving prosecutions, less than 2000 in 1997, compared to the number of cases of drink driving, around 100,000, suggests that a large number of drivers who may be impaired through drugs go undetected by police.

There are two main reasons for this. First, there is currently no readily available roadside

screening device, like a breathalyser, which will detect the use of drugs. Second, police are not currently trained to detect drivers who may be impaired due to drugs. Because of the growing concern about the increase in the incidence of drugs in the driving population, the DETR, together with TRL and the co-operation of police forces across the UK, have been actively working to address these deficiencies.

The first deficiency has begun to be addressed through collaborative research involving the DETR and officers in 4 police force areas, which tested the practicality of using roadside drug-screening devices. These tests have been extensively reported previously (2) and will not be discussed further in this paper. Instead, the focus of this presentation is attempts that have been made to address the lack of police training in recognising the signs of drug use and drug-related impairment.

Roadside drug recognition

One side effect of the success that roadside breath screening and evidential breath testing has had in increasing drink drive enforcement is that since 1967 most of the skills of identifying specific driver impairment have been lost. Consequently, unless obviously impaired, a driver who passes a breathalyser is unlikely to be investigated further for possible impairment due to drugs.

Several police forces, notably Strathclyde, have shared a concern with DETR at this deficiency and have undertaken their own initiatives in this area. The United States has for some time been active in the area of drug recognition training and impairment testing at the roadside. For this reason two officers from Strathclyde police visited the USA in 1997 to look at the standardised Drug Recognition Expert (DRE) training programme in operation in California. This programme was validated in 1984 in an experiment involving officers assessing 80 volunteer drug users. The results of the study showed that DREs were over 90% accurate in determining impairment, and identifying the type of drug causing the impairment (3).

As a result of their visit the Strathclyde officers developed the general principles and techniques employed in the DRE programme into a training package suitable for use in the UK. This involves two elements, based on the American model: Drug Recognition Training (DRT) and Field Impairment Testing (FIT)

Study 1 - Police Evaluation of Drug Recognition Training and Field Impairment Testing

Drug Recognition Training

In practice, if a driver is stopped because of suspicion of impaired driving or if impairment is suspected following a routine stop, an initial screening breath alcohol test is carried out. If this proves negative and impairment is still suspected, suitably trained officers could apply their drug recognition training to assess whether the driver had taken drugs and the drug group most likely to be the cause of the impairment. The DRT programme identifies drugs according to 6 main groups:

- Cannabis
- Opiates
- CNS stimulants
- Hallucinogens
- Inhalants
- CNS depressants

Each of these drug groups produces particular signs in the user which can aid an officer to

identify the drug group which may be responsible for any identified impairment. For example, opiates would give rise to constricted pupils, whereas CNS Stimulants would produce dilated pupils. There will be some overlap between the expected roadside observations, but each drug group has its own set, which includes such features as poor co-ordination and balance, slurred speech, drowsiness, facial itching etc. These, together with observations on the time of onset and duration of these particular signs, can give specific clues to which drug(s) have been taken.

Field Impairment Testing

Once a driver is under suspicion of being impaired, but alcohol has been eliminated, a trained officer would immediately adopt drug recognition observations as above. However, at present, the law in the UK requires the police to show that a driver is unfit through drink or drugs. In this context “unfit to drive” means “ability impaired”. In other words the police have to prove impairment (Section 4, Road Traffic Act 1988). As some of the roadside observations of drug taking do not relate directly to impairment, but are merely signs of drug ingestion e.g. Facial itching, a separate examination for impairment is necessary.

The training programme suggested by Strathclyde Police uses specific techniques derived from the American Standardised Field Sobriety Test (SFST). These are:

- Romberg Balance Test: the suspect is required to stand with feet together, eyes closed and head tilted back and estimate when 30 seconds has elapsed.
- Walk and turn test - suspect tries to walk 8 steps heel to toe in a straight line, turn and walk 8 steps back heel to toe.
- One-leg stand - suspect stands with hands by their side, with the standing leg straight and toes pointing forward. The other leg is raised into the air, then held in position for a set period of time. The exercise is repeated with the other leg raised.
- Finger to nose test - the suspect tilts head back then touches nose with alternate index fingers as instructed by the officer. This is repeated three times with each index finger.
- Pupillary examination - suspect’s pupils are examined for dilation/constriction and response to light and dark.

The first 4 tests are divided attention tests. In addition to measuring the individual’s ability to balance and co-ordinate body movements, they require them to remember instructions and perform more than one task at once. These tests form a standardised series to be carried out in suitable circumstances at the roadside, or by a police doctor at the police station.

Method

Following training of trainers at the Scottish Police College and the training of selected officers and police surgeons in 6 police forces, an evaluation of DRT and FIT techniques was conducted over a 5 week period during July and August 1999. The evaluation involved police using their normal powers to stop vehicles for the detection of persons who may be impaired to drive. If a driver was suspected to be impaired and after alcohol impairment had been eliminated, DRT was applied and the driver was asked to volunteer to undertake a FIT test. Positive outcomes resulted in arrest.

Results

Table 1 summarises the results of the field trials. A total of 109 tests were conducted by

police. Of these, 39 drivers failed the FIT which led to 36 being arrested on suspicion of driving whilst impaired through drugs. (The remaining three failed for other reasons, such as a medical condition, old age, obesity). Following examination of the 36 persons by a police surgeon, 24 provided a sample for analysis, of which 21 proved positive for one or more drug. This represents a positive rate of 19% (roadside breath alcohol testing produces a positive/refused rate of 12%). The most common drugs detected were cannabis, opiates and CNS stimulants.

Table 1: Results of FIT Trials

Stage of the process	n	%
FIT Tests performed	109	
Number of drivers who failed FIT	39	36
Number of drivers arrested	36	33
Samples sent for analysis	24	22
Positive for drugs	21	19

Table 2 below shows, for the 24 samples taken, the drug group suspected by the officer and compares this with the drug detected by subsequent forensic analysis. This shows that the correlation between the drug the officer suspected and the forensic analysis was generally very good, particularly in the case of CNS stimulants. However, the important point was that the officer recognised impairment rather than identifying the specific drug group.

Feedback from the police officers who were employing the techniques indicated the following:

1. The walk and turn test provided the most information on impairment.
2. As a result of the training officers were more aware of the importance of divided attention as a measure of impairment, and consequently were able to spot problems in this area during the course of their conversations with a suspect.
3. The FIT tests gave officers confidence in identifying drug related impairment and in combination with DRT provide weight of evidence.

Table 2: Results of DRT Trials

Drug suspected by officer	n	Drug detected by subsequent analysis	Success rate (Officers' suspicions confirmed by analysis) %
Cannabis	11	7	64
Opiates	6	4	67
CNS depressants	2	1	50
CNS stimulants	5	5	100

Study 2 - TRL Comparison trials

The purpose of these trials was to assess the DRT and FIT techniques in a situation that:

- (a) maximised the likelihood that volunteers may have consumed drugs;
- (b) allowed an assessment of the FIT procedures in a non-prejudicial environment; and
- (c) allowed an assessment of the latest versions of available saliva screening techniques.

Method

A team of TRL researchers attended the Police Training College and were trained in the Drug

Recognition techniques and administration of the Field Impairment Tests. Sites in the vicinity of pubs and clubs which police intelligence indicated would be sources of drug users were selected in two towns, Northampton and Brighton. The study took place between 10pm and 3am on Friday and Saturday nights in June and July 1999. At each site a team of 2 researchers, accompanied by a 'minder', set up their equipment in a large van parked in a pedestrianised area of the town, close to one of the clubs and on the route between the clubs and public transport termini. In order to avoid unwanted attention, the tests were administered in the van rather than out on the streets. Consequently, for practical reasons the walk and turn test was omitted. However, in all other respects the tests employed were identical to those used by the police. Researchers were instructed to look out for people exiting the clubs who were not obviously impaired, and to exclude anyone obviously impaired due to alcohol. Potential participants were approached and invited to volunteer for the study and to provide a saliva sample for drug screening analysis. If the subject agreed the researcher administered a breath test using a Lion Alcolmeter SD400. If BAC <80 mg/l the subject was considered suitable for participation and the researcher administered a questionnaire and DRT.

The researcher recorded on the questionnaire their conclusions regarding the subject's impairment due to drugs and then administered the Field Impairment Tests. The subject was then tested for the presence of drugs using the Cozart Rapiscan saliva test. Finally, they were asked what drugs (illicit and medicinal) they had used in the last 12 hours.

Results

A total of 70 individuals took part in the comparative study, 35 in Northampton, 35 in Brighton. Across the two sites the sample comprised 54 males and 16 females. Of the 70 participants 23 were suspected by the researchers of being under the influence of drugs. Table 3 shows the results of the researchers' suspicions, the Cozart Rapiscan analysis and the results of subsequent forensic laboratory analysis of the same sample.

Table 3: Comparison of researcher suspicions, Rapiscan and laboratory analysis.

Drug suspected	n	Rapiscan - number positive					Laboratory analysis- number positive						
		Ca	Op	Am	Co	Bz	Ca	Op	M	Am	Co	Bz	
Cannabis	7			3				1			3		
Opiates	3			3				2	1		3		
stimulants	3			1	1						1	1	
depressants	0												
multiple	2		2	2	1			2	2		1		
unknown	8	1	1	2			1	1			4		2
no drug	47			2	1						1		
all	70	1	3	13	3	0	1	6	3	13	1		2

As table 3 suggests, the Drug Recognition techniques were successful in identifying individuals exhibiting signs of being under the influence of drugs, but less successful in determining the drug group responsible for these signs. This was possibly due to the relative inexperience of the researchers in using these techniques or, in some cases, the presence of more than one drug, resulting in combination effects. Table 3 also shows that there were some discrepancies between the analysis of saliva using the Cozart Rapiscan device and the forensic laboratory results. This was primarily due to differences in the cut-off levels employed by each method.

The majority of individuals who took part in the research were in the 18-35 age range, had all been stopped whilst exiting night-clubs, 54 out of the 70 reported having taken illegal drugs at some time in their lives and some confessed to having smoked cannabis at some time on that

day. Consequently we were surprised to find that, on analysing the results only 1 sample was positive for cannabis. It subsequently transpired that the antibody being used to detect cannabis in the Cozart device was testing for the inactive metabolite THC-COOH, and not the active ingredient Δ^9 -THC. THC-COOH is not detectable in saliva. We understand that the manufacturers are addressing this problem through the use of an alternative antibody.

Discussion

These two studies have provided useful data on the practicality of roadside techniques for assessing driver impairment and the cause of this impairment. Results and feedback from the police trials suggested that the techniques were worthwhile and greatly enhanced the ability of an officer to recognise impairment. During the evaluation, the techniques proved effective in detecting a drugs driver. Drivers were generally content to voluntarily undergo a FIT test.

A key element of DRT and FIT is the training of police surgeons. During the evaluation the doctors welcomed the training, as most of them had never received any training in drug impairment recognition. Where a FIT test was not conducted at roadside, the police surgeon would use all or some of the tests as part of their examination at the police station. In the absence of an effective roadside screening device for drugs or an effective impairment device, DRT and FIT represent easily applied techniques which police can use to detect persons impaired through drugs. These techniques could be beneficial to officers other than those engaged in road policing. For example, custody officers and drugs unit officers could find DRT and FIT useful in their work. The tests enable the officer to make an informed decision as to whether the individual is impaired.

The TRL interviewers were asked for their opinions on the effectiveness of the various tests used in the FIT study. Some of the FIT tests were considered too sensitive (e.g. the majority of subjects failed the one-leg stand test), while others (Romberg, finger-to-nose) were failed by only a few people, not all of whom were drug users. Again, it is probable that this was due to a combination of the researchers' lack of experience in employing the tests, coupled with subjects' relaxed attitude to completing them (there were no negative consequences of failure). There was some concern that on several of the FIT tests there was no definitive guidance on what constituted a pass. However, it was explained that in the real world it is an individual's performance across the full range of tests that enables an officer to determine whether or not (s)he is impaired.

As a result of the success of these trials the techniques have now been recommended to Chief Police Officers to be developed into a nationally available training package for police officers and surgeons. This development work is now in progress.

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