
The Effects of Dexamphetamine on Driving Performance

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The number of road fatalities related to the presence of amphetamines in drivers has been relatively constant over the past 10 years. However, there remains much uncertainty as to the extent that these drugs induce driving impairment, and whether any such impairments translate to an increase in road fatalities. The aim of the study was to examine the acute effects of 0.42mg/kg Dexamphetamine tablets on driving performance, and to establish which driving abilities become impaired following dexamphetamine administration. A repeated measures counter-balanced, double blind, placebo controlled design was employed. Twenty healthy volunteers completed two treatment conditions: i) 0.42mg/kg Dexamphetamine tablet, and ii) placebo tablet. Performance was assessed using a driving simulator task. Blood and saliva samples were obtained prior to the driving tasks and immediately after task completion (120 and 170 minutes post drug administration respectively). Blood dexamphetamine levels were between 83.16 ng/ml and 98.42 ng/ml at Time 1 and 2 respectively. Results indicated that overall driving ability was impaired following dexamphetamine administration during the day but not night time scenario task. Specifically, 'incorrect signalling', 'failing to stop at a red traffic light' and 'slow reaction time' were not strongly affected by dexamphetamine. Driving impairments observed during the day time driving tasks are consistent with and appear to be due to the perceptual narrowing or tunnel vision that is associated with dexamphetamine consumption.