

Inquiry into the Sleep Health and Wellbeing of Australia

Recommendations regards reducing the impact of sleep health on drowsy driving

Drowsy driving is a major cause of road crashes that has not been systematically addressed.

Drowsiness (the key cause of fatigue related road crashes) is the underlying cause of 20-30% of road crashes at a cost of > \$3 billion/annum in Australia. [1] [2, 3] Key factors causing drowsiness include driving at night (2-6am), inadequate prior sleep (particularly less than 5 hours sleep in the last 24 hours), shift work and obstructive sleep apnoea. [4-6] These factors can all result in road crash risk that is greater than the risk of driving at a BAC of 0.05-0.08% that is illegal for driving.

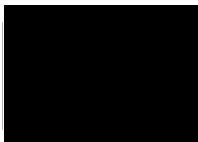
The risk of drowsy driving crashes is increased by prolonged driving (as occurs in the transportation industry) and is high in young drivers in association with risk taking behaviour. [7, 8]

Drowsiness also exacerbates the other key causes of crashes, increasing the risk when combined with alcohol (as commonly occurs when drinking and then driving at night) and increases the likelihood of driver distraction. [9, 10]

Educational campaigns should emphasise minimising these risks: having at least six hours of sleep before driving; avoid driving at night, particularly after 1am; avoid any alcohol if at risk drowsiness; stop driving if aware of signs of sleepiness such as blurred vision or heavy eyelids and have a sleep and or caffeine; seek medical advice re sleep disorders if aware of regular drowsiness while driving. High risk groups such as young drivers, shift workers and transport industry should be specifically targeted in educational campaigns. [11]

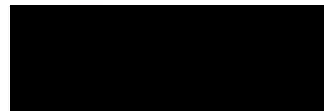
Australia is a world leader in research and commercial development of alertness monitoring and detection technology, which can detect drowsiness in real time. [12-14] Further research is required to understand how to affectively implement this technology in order to reduce crashes through alerting drivers and using the data to identify high risk situations and adjust schedules and implement interventions when drowsiness is detected. [15]

Road side testing for alcohol and drugs in conjunction with legislation and educational campaigns has dramatically reduced road crashes from these causes, however until recently we have not had a method to test for drowsiness at the road side. New alertness measurement technologies have been shown to accurately detect drowsy driving during road side testing proof of concept studies, lead in Australia. Field trials are required to confirm their accuracy and assess the feasibility of such testing in real life in conjunction with development of legislation to better enable prosecution for driving while drowsy in order to change driver behaviour and reduce drowsiness related road crashes.



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