Caffeine can reduce driver error: study

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September 30, 2015, 6:10 pm

A Defence fatigue study has found caffeine gum can reduce driver error in sleep deprived people.

Caffeine intake significantly reduces driver errors, but only marginally reduces drowsiness.

That's the findings of a Defence fatigue study on sleep-deprived people and the effects of caffeinated chewing gum on their drowsiness and driving performance.

The study, part of wider research aimed at giving a "cognitive" edge to soldiers particularly when in Army vehicles, was presented to the Australian Psychological Society conference on the Gold Coast on Wednesday.

Participants were kept awake for 50 hours and during that period were required to drive on 15 occasions in a simulated vehicle for 40 minutes each time.

Half were given caffeinated gum and the rest a placebo of the same gum with no caffeine.

Defence scientist, psychologist Dr Eugene Aidman, told AAP the product, called military energy gum, is available on Amazon.

Gum was used to administer the caffeine as it takes only 10 minutes

to be absorbed by the brain and lasts for 90 minutes.

Drinking coffee takes 30-90 minutes to be absorbed for an unpredictable amount of time.

"With the placebo group, we replicated the textbook, the expected relationship between the drowsiness and driving errors," Dr Aidman said.

"As their drowsiness goes up, the driving errors goes up - in fact our placebo group crashed a lot."

But the "massive surprise" was that this relationship disappeared in the caffeine group.

Even when registering relatively high levels of drowsiness, they were able to maintain the quality of their driving.

"Their driving errors were as low at the highest end of their drowsiness as they were at the relatively low ones."

All participants were monitored for drowsiness every 60 seconds when they were driving, while lane keeping and speed variability measures were used to assess their performance.

The researchers say the findings also have implications for organisations outside Defence, such as emergency services and long-haul transport.

The international collaborative study also involved UniSA Sleep Research Centre, Walter Reed Army Institute of Research (US) and Monash University Accident Research Centre.