

# Research Report on the Bruce Highway Heavy Vehicle Fatigue Survey and “Truckie Reviver”



## BACKGROUND

- Driver fatigue remains a road safety priority in Central Queensland as it continues to be the leading contributing factor to crashes on high-speed roads, particularly among heavy vehicles.
- The Bruce Highway Heavy Vehicle Fatigue Survey and Waverley Creek “Truckie Reviver” initiative described in this report is just one of a number initiatives led by the Road Accident Action Group (RAAG) in their efforts to “reduce road crashes involving fatigue”.
- In particular, the data generated through this exercise will complement a larger Rest Areas and Stopping Places (RASP) project being undertaken in the region to engage industry in the development and upgrade of suitably located rest areas/stopping places in the Bowen Basin.
- More information on the RASP project and RAAG can be found at: [www.raag.com.au](http://www.raag.com.au)
- The objectives of “Truckie Reviver” were threefold:
  1. To collect information from heavy vehicle drivers on their working conditions, current and regular trip patterns, rest area requirements and other road safety issues;
  2. To engage with heavy vehicle drivers in an effort to promote this site and the use of other designated rest areas, as well as provide educational information on sleep apnoea and fatigue management strategies; and
  3. To undertake a post-construction audit of the new Waverley Creek Rest Area (approximately 160km south of Mackay at St Lawrence).

## METHODOLOGY

- Given that the primary aim of the “Truckie Reviver” was to collect information on improving rest areas and fatigue management from the end users’ perspective, the initial focus was on developing a tool and recruitment methodology to capture heavy vehicle drivers’ ideas.
- Development of the brief questionnaire involved input from Transport & Main Roads (TMR), RAAG, Central Queensland University (CQU) and local industry and health professionals with expertise in the field.
- The recruitment strategy was to provide a “Truckie Reviver” facility at the new Waverley Creek Rest Area for a continuous 72 hour period, while encouraging heavy vehicle drivers to share their ideas through the questionnaire.
- The “Truckie Reviver” was originally scheduled for March 17 – 20 but was postponed due to a possible cyclone event. It was subsequently held from Sunday May 19 (12pm) to Wednesday May 22 (12pm).
- The “Truckie Reviver” facility, worked on similar principles to TMR’s Driver Reviver program, whereby heavy vehicle drivers could get free refreshments while taking a break from the driving task. In addition to usual tea, coffee and biscuits, drivers were offered cold drinks, fruit, a sausage sizzle and/or cereal.

- In terms of promotion, the initiative was widely publicised through local media, service stations and industry/trade networks, as well CB Channel 40, both prior to, and during, the event. Handmade roadside signage was strategically placed to the north and south of the site to also advertise the event.



***Photos: A snapshot of some of the handmade roadside signs promoting the event (top); and an action shot of Billy Manton (Simon National Carriers) and Robyn Ware cooking up some free snacks for the drivers (bottom).***

- Upon arrival at the site, drivers were met by volunteers who served them refreshments of their choice. Drivers were then given the opportunity to participate in the survey.

- Note - participation in the data collection exercise was purely voluntary, whereby drivers could call into the rest area and have some refreshments without participating. However, in virtually all cases, drivers were more than happy to provide their feedback in an effort to improve safety.
- Drivers who volunteered to participate were given the option to complete the questionnaire autonomously or with the assistance of one of the site volunteers. Completed questionnaires were then placed in a confidential lodgement box.
- While at the site, drivers were provided with information on the effects of fatigue and sleep apnoea, strategies to manage fatigue and a personal pillow conveying a road safety message.



**Photos: A snapshot of some drivers willingly providing their thoughts to improve road safety (top); and RAAG supporters who volunteered their time to help out at the “Truckie Reviver” (bottom).**

- The “Truckie Reviver” was coordinated by Graeme Ransley (RAAG), who lived on-site for the duration of the event. Under Graeme’s guidance, volunteers from the community, government and industry sectors manned the site around the clock in eight hour shifts.
- Finally, a risk management strategy was implemented to minimise traffic impacts, ensure access to support and emergency services, and meet all insurance and legislative requirements of government and the road authority.

## SURVEY RESULTS

- The results reflect the content of the questionnaire which examined: (i) Driver Characteristics and Working Conditions; (ii) Trip Characteristics and Regular Travel Patterns; and (iii) Views on Rest Areas Fatigue and Road Safety.
- It is difficult to ascertain an accurate response/participation rate. However, based on AADT data from site 80022 (south of Waverley Creek) on road section 10F (Bruce Highway – Rockhampton to St Lawrence) an estimate has been made. Given that the AADT volume at that site for heavy vehicles for the 72 hour block between Sunday 12pm and Wednesday 12pm equals 867 movements, the 271 responses represents a participation rate of 31.25 percent.
- While there were 271 respondents, not all respondents answered each item. This is reflected in the frequency analysis reported below.
- Finally, it is important to recognise that information was only collected from drivers entering the Waverley Creek site, hence the potential for ‘self-selection bias’.

### ***Driver Characteristics, Working Conditions, Trip Characteristics and Travel Patterns***

- **Gender** – Male ( $n = 261$ ) / Female ( $n = 2$ ).
- **Age** – Range = 21 to 77 years / Median = 47 years / Mean = 46.4 years.
- **Employment Status** – More than 75 percent of the sample were ‘Employed Drivers’ ( $n = 205$ ), with a further 18 percent ‘Owner Operators’ ( $n = 49$ ).
- **Residency**: The majority of the sample were Queensland-based drivers – less than 5 percent from interstate ( $n = 12$ ). This provides rationale for targeting any educational initiatives within Queensland.
- **Experience** – The sample was very experienced in their trade with a mean of 20.6 years driving heavy vehicles.
- **Sleep Patterns** – The mean number of hours sleep had by sample in the 24 hours prior to stopping at Waverley Creek was 8. This sleep was predominantly in the ‘Cab’ ( $n = 141$ ) or at ‘Home’ ( $n = 89$ ). This provides rationale for ensuring that heavy vehicle cabs are of an appropriate size and/or standard to maximise sleep quality. This theme was raised by drivers when asked on strategies to reduce driver fatigue.
- **Work/Life Balance** – More than half of the drivers work more than 60 hours per week and 83 percent of the sample ( $n = 225$ ) worked more than 50 hours per week.
- **Fatigue Management Accreditation** – The majority of the sample indicated that they work to ‘Standard Hours’ ( $n = 132$ ) or ‘Basic Fatigue Management’ ( $n = 118$ ) schemes. Of concern, 15 drivers did not know which scheme dictates their working roster.

Note – Respondents were given the option to provide their ‘company name’ but for privacy reasons, this information has not been discussed in this report. However, the majority of

respondents ( $n = 205$ ) openly provided their company details and, in some cases, were critical of employers' strategies, or lack thereof, to suitably disseminate information on fatigue management.

- **Trip Familiarity** – About 82 percent of the sample ( $n = 222$ ) indicated that they travel the Bruce Highway stretch past Waverley Creek at least 'Weekly'.
- **Tiredness** – One quarter of the sample admitted they 'Felt Tired' on the trip.
- **Reason for Stopping** – The reason for stopping information (see Table 1) provides valuable insight into what motivates heavy vehicle drivers to utilise rest areas more generally. The data below suggests that the decision to use a rest area is highly influenced by in transit by appropriately located roadside signage and functional amenities (toilets). These should obviously be primary considerations for road authorities in rest area design and promotion.

Despite travelling the route regularly, the lower proportion of drivers who planned to stop at the site also suggests there may be an opportunity for increased industry-based training around trip planning. The large proportion of respondents who stopped for coffee and/or food is, in part, a reflection of the marketing of the "Truckie Reviver" event.

**Table 1: Summary of respondents' reason for stopping at the Waverley Creek site**

Reason for Stopping	Frequency	Proportion of Sample
<b>Saw roadside signs and decided to stop</b>	<b>120</b>	<b>44.3%</b>
Needed a coffee and/of food	78	28.8%
<b>Needed a toilet break</b>	<b>69</b>	<b>25.5%</b>
<b>Planned to stop at Waverley Creek</b>	<b>67</b>	<b>24.7%</b>
Other (to complete survey or check load etc.)	36	13.3%
Time of day or distance travelled (meet logbook requirements)	35	12.9%
Needed a sleep/nap	16	5.9%
Needed a walk	16	5.9%
Designated rest break by company	2	0.7%

### **Views on Rest Areas, Fatigue and Road Safety**

- **Rest Stop Selection** – Nearly 90 percent of the sample indicated they have the autonomy to select their own rest stop locations and breaks. This finding suggests that any educational initiatives around trip planning and/or site promotion need to be targeted at the driver level.
- **Difficulty Finding Rest Areas** – More than 80 percent of the sample indicated that they have trouble finding rest areas to comply with the heavy vehicle fatigue regulations. This finding provides further support for the ongoing RASP project to identify and create more rest area opportunities in Central Queensland.

- **Priority Road Sections for Rest Areas** – When asked to identify and prioritise road sections where “more rest areas are needed”, the results partly reflected exposure. However, while the most travelled section was the Bruce Highway (south of Mackay), the highest priority for more rest areas was the Bruce Highway (north of Mackay), particularly between Mackay and Proserpine (see *Table 2*). When probed about this issue, the development of Gibson’s Creek was mooted as a possible rest area site by some drivers.

Interestingly, road sections with significantly less ‘self-reported’ exposure also ranked as priorities suggesting that when drivers travel these routes they are reminded of the lack of facilities.

**Table 2: Priorities for more rest areas by road section**

Road Section	Priority 1	Priority 2	Priority 3	Total
<b>Bruce Highway (Rocky – Waverley Ck)</b>	<b>83</b>	<b>29</b>	<b>26</b>	<b>138</b>
<b>Bruce Highway (Waverley Ck - Mackay)</b>	<b>64</b>	<b>44</b>	<b>29</b>	<b>137</b>
<b>Bruce Highway (Mackay-Proserpine)</b>	<b>99</b>	<b>31</b>	<b>30</b>	<b>160 (59% of sample)</b>
<b>Bruce Highway (Proserpine - Bowen)</b>	<b>76</b>	<b>28</b>	<b>17</b>	<b>121</b>
Peak Downs Highway	48	27	12	87
Gregory Highway	32	14	11	57
Capricorn Highway	35	13	12	60
Fitzroy Development Road (Dingo - Nebo)	53	16	6	75
Suttor Development Road (Nebo - Mt Coolan)	31	9	8	48
Bowen Development Road (Bowen - Collinsville)	33	6	6	45

- **Drivers’ Views on Making the System Safer** – In addition to suggestions regarding future site selection for rest areas and stopping places, respondents were encouraged to provide ideas on how to improve rest areas and road safety in general.

Through qualitative analysis, a number of themes were identified. These themes have been clustered according to the internally recognised ‘Safe System’ model which calls for shared responsibility and increased coordination across the four elements of the transport system (see *Matrix overleaf*).

## SAFE ROAD USERS

- Increased industry accountability and improved methods for disseminating information on fatigue management (induction or workplace training as opposed to written materials)
- Enforcement and fines for light vehicles/caravans parking in areas designated for heavy vehicles.
- Educate motorists re: safe overtaking of heavy vehicles and pull-off requirements when faced with oncoming over-dimensional vehicles
- Lobby other jurisdictions to bring in the new logbook prototype (less emphasis on spelling/punctuation)
- Increased flexibility re: logbooks when 15-30 minutes from destination
- Driver Reviver sites designed for trucks
- Fatigue regulations for light vehicles...*"I can hop out of the rig and then into my car and I am not breaking the law"*
- Licensing requirements for general motorists towing caravan/boats
- Zero BAC for all drivers, not just heavy drivers
- Ban all trucks travelling between 12-5am (penalty = loss of licence)

## SAFE VEHICLES

- All trucks travelling more than 3 hours from their base should be equipped with full size (>36 inch) sleeper bunks – concerns that many sleepers do not meet the minimum standards
- Trial GPS and Intelligent Systems as alternatives to the written logbooks
- Ban fog lights and enforce
- LED lights displaying width on pilot vehicles

## SAFE ROADS AND ROADSIDES

- More rest areas! - Particularly north of Mackay, preferably one stop between each town
- Rest areas need to be away from the roadside – impacts on sleep quality
- Rest areas need to have (in order of importance) toilets, showers, shaded areas, bins, sound barriers and wind shelters
- More consideration needs to go into access and exit points (appropriate width, length, angle, etc.) and internal design to maximise capacity
- Segregation of trucks and caravans/light vehicles!
- Segregation of refrigerated and non-refrigerated vehicles at major sites
- Explore potential to use stockpile and informal sites with minor upgrades (don't need to be sealed)
- Improved lighting and delineation (cat eyes) in rest areas to guide heavy vehicles
- Improved signage/systems to warn of upcoming rest areas (3-2-1 guidepost reflectors), including less informal sites
- Improved road conditions and shoulders (four lane national highway)
- "Trucks Only" pavement marking where appropriate – not shared zones!
- More overtaking/passing lanes on flat, rather than hills
- Rest areas need to accommodate over-dimensional vehicles
- Truck-friendly Driver Reviver sites

## SAFE SPEEDS

- Safety concerns re: speed limiters on trucks
- Improved methods for managing speeds at roadworks – communication to vehicles through radio
- Highly visible enforcement on Peak Downs Highway to deter speeding

## Observations from the Post-Construction Audit of the Waverley Creek Rest Area

- The final objective of the “Truckie Reviver” initiative was to conduct a post-construction audit of the new rest area facility.
- Please note – this process did not constitute a formal road safety audit, rather a collection of practical suggestions from drivers and visitors to the site.
- From a drivers’ perspective, nearly all the respondents rated the new Waverley Creek facility as ‘Excellent’ ( $n = 176$ ) or ‘Good’ ( $n = 72$ ). Suggestions for improvement at the site are discussed below.
- **Delineation** – Drivers expressed concerns regarding visibility at night and called for increased lighting at the southern end of the facility to illuminate parking capacity and the desired vehicle path. Installation of reflective raised pavement markers (RRPMs), commonly known as cat eyes, could also assist in guiding heavy vehicles safely through the site.



*Photos: The snapshots above provide a contrast as to how the delineation could be improved through additional lighting at the southern end of the facility.*

- **Signage and Line-marking** – Drivers expressed concerns regarding light vehicles parking in the area designated for heavy vehicles. To reduce confusion, it was recommended to remove the “shared zone” sign from the heavy vehicle area and explore the possibility of a “TRUCKS ONLY” pavement marking at the entry point as an alternative to the current directional signage.
- **Pavement** – No pavement deficiencies identified.
- **Facilities** – Drivers stressed the importance of rest areas having functional facilities, particularly toilets, available at all times. Shower facilities for truck drivers at the site would be a welcome addition.

### Next Steps

- This document provides an overview of the “Truckie Reviver” initiative and useful information from a large sample of heavy vehicle drivers ( $n = 271$ ) on priority road sections for more rest areas, industry needs regarding the facilities and design of rest areas and stopping places, as well as other road safety ideas.
- The information generated through this exercise will inform RAAG, transport authorities and industry as to what steps individual parties could take to mitigate fatigue-related road trauma involving heavy vehicles in Central Queensland.
- It also provides valuable data (from the users’ perspective) to support the progression of the larger RASP project and other cross-agency funding applications.

## **Acknowledgements**

- The “Truckie Reviver” project was only made possible through the shared commitment to road safety of a number of community, industry, media and government stakeholders. Special thanks is given to:
  - Bushman’s Bread
  - Woolworths Mackay
  - Single Transport Services
  - Mackay Sugar
  - Crokers Fuel
  - Mackay Wholesale Meats
  - Simon National Carriers
  - Learn2Ride Mackay
  - RAAG supporters and volunteers
  - State Emergency Service – Mackay
  - State Emergency Service – St Lawrence
  - Mackay Regional Council
  - Isaac Regional Council
  - Department of Transport & Main Roads
  - Queensland Police Service
  - Queensland Health

## **Attachments**

- **Promotional Flier – Waverley Creek “Truckie Reviver”**
- **2013 HV Driver Rest Area Survey**
- **Fatigue & Road Crashes – Fatigue Management Brochure**



ABN 92438138283

## Waverley Creek “Truckie Reviver”

Survey

**Sunday midday, May 19<sup>th</sup> Wednesday 22nd May 72 hours!**

[Manned by RAAG Volunteers, help us to help you, talk about the truckie reviver on Channel 40]

***Drop in for: Free BBQ Snags, Fresh Fruit and cold drink,  
or free tea, coffee, biscuits***

***And a free embroidered good quality fatigue pillow***

### **WHY?**

We want companies to be aware of and use this fantastic \$5.5M facility  
[14 x B Double capacity]

We need to know what is good or not so good at Waverley Creek in planning for  
the next HV Rest Area north of Mackay

We need to know where you feel the next HV Rest area should be north of Mackay

Waverley Creek is designed to block out headlights and road noise from the  
highway, so truckies can get real rest, we want your views, does it work?

[We also want truckies to use the facility, not be over- run by RV]

### **Sponsors:**

- Food and fruit by Woolworths Supermarkets Mackay
- Meat by Mackay Wholesale Meats
- Fuel by Crokers Fuel
- Bushman’s Bread
- Singles Transport
- Mackay Sugar
- MIRSA

We all thank: SES St Lawrence for their assistance  
The volunteers  
TMR for their help

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Secretary/ Road Safety Coordinator: Graeme Ransley - 0428522557 Chairman: Chris Bonanno Ph - 0408775788

This is a confidential and anonymous survey for TRUCK DRIVERS ONLY.

The Road Accident Action Group is seeking your views on driver fatigue, how to encourage HV drivers to take breaks and ways to improve local rest areas. Please place your completed survey in the box provided.

<p><b>A couple of questions about you to start ...</b></p> <p>1. Age in years: _____</p> <p>2. Gender: Male    Female    <i>(please circle)</i></p> <p>3. (a) Which best describes you?    <i>(please tick)</i>  <input type="checkbox"/> Owner Operator    <input type="checkbox"/> Employed Driver  <input type="checkbox"/> Other <i>(please specify)</i> _____</p> <p>(b) Work conditions: <i>(please tick)</i>  <input type="checkbox"/> Contract per kilometre    <input type="checkbox"/> Hourly rate  <input type="checkbox"/> Other <i>(please specify)</i> _____</p> <p>(c) How many years have you been driving heavy vehicles? <i>(please specify)</i> _____ years</p> <p>(d) Company name: <i>(optional)</i> _____</p> <p>4. Place of residence (where you usually live)      _____  <i>(please write place name and / or postcode)</i></p> <p>5. (a) How many hours <u>sleep</u> have you had in the past 24 hours? <i>(please specify)</i> _____ hours</p> <p>(b) Where did you last sleep?  <input type="checkbox"/> Home    <input type="checkbox"/> Motel    <input type="checkbox"/> Donga  <input type="checkbox"/> Cab    <input type="checkbox"/> Other _____</p> <p>(c) How many naps have you had in the past 24 hrs      Number of naps _____      How long do you power nap? _____ hrs _____ mins      Total hours _____ hrs</p> <p>6. How many hours have you spent <u>driving and working</u> in the past 24 hours? _____ hours</p> <p>7. How many hours a week do you spend driving / working? <i>(please tick)</i>  <input type="checkbox"/> 20 – 40 hours    <input type="checkbox"/> 40 – 50 hours  <input type="checkbox"/> 50 – 60 hours    <input type="checkbox"/> More than 60 hours</p> <p>8. What fatigue Management accreditation are you operating under? <i>(please tick)</i>  <input type="checkbox"/> Standard hours    <input type="checkbox"/> Basic (BFM accreditation)  <input type="checkbox"/> Advanced (AFM accreditation)  <input type="checkbox"/> Unsure</p> <p>9. Does your company or employer have a program in place for new and existing staff that covers <i>(please tick company programs)</i>  <input type="checkbox"/> Health    <input type="checkbox"/> Stress    <input type="checkbox"/> Fatigue  <input type="checkbox"/> Drugs    <input type="checkbox"/> Alcohol</p>	<p><b>Now a few questions about today's trip and your regular travel patterns ...</b></p> <p>10. Reason for today's trip:    <i>(please tick)</i>  <input type="checkbox"/> Line-haul general  <input type="checkbox"/> Line-haul freezer  <input type="checkbox"/> Hauling cattle  <input type="checkbox"/> Over-dimensional  <input type="checkbox"/> Other <i>(please specify)</i> _____</p> <p>11. Configuration of your rig: <i>(please circle)</i>      Body truck / Semi / B Double      B Triple / Float / Body &amp; dog</p> <p>12. (a) Where did you start your trip today?      _____  <i>(please write place name and / or postcode)</i></p> <p>(b) What time did you start? _____</p> <p>(c) Where are you heading to on this trip?      _____  <i>(please write place name and / or postcode)</i></p> <p>13. (a) Where was your last stop prior to here?      _____  <i>(please write place name and / or postcode)</i></p> <p>(b) How long did you stop for? _____ hours</p> <p>14. What time of day do you normally rest?      _____  <i>(please list regular times you rest or take breaks)</i></p> <p>15. How often do you travel on this stretch of road?  <input type="checkbox"/> First time on this road  <input type="checkbox"/> A few times a year  <input type="checkbox"/> Monthly  <input type="checkbox"/> Weekly  <input type="checkbox"/> Daily</p> <p>16. How many times a year do you travel these routes      Bruce Highway (Rockhampton to Mackay) _____      Bruce Highway (Mackay to Proserpine) _____      Bruce Highway (Proserpine to Bowen) _____      Peak Downs Highway _____      Gregory Highway _____      Capricorn Highway _____</p>
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## Fatigue & Road Crashes

Dr. Dale Hanson

Fatigue is a common and serious source of death on our roads, causing between 20 to 30% of road deaths. Notably, 40 to 50% of single vehicle semi-trailer crashes are caused by fatigue.

Rural drivers are particularly at risk. The risk of dying in a road crash is 13.5 times higher on rural roads than urban roads.

If you have been awake for 17 hours your driving ability is similar to a blood alcohol concentration of 0.05, after 24 hours it's similar to 0.15.

Driving during normal sleep time or when you have been deprived of sleep is particularly dangerous. Your risk of crashing is four times higher when you drive between 10pm and dawn.

30% of Fatal Fatigue road crashes occur during public or school holidays.

A number of drivers are particularly at risk

- Young male drivers: 75% of fatigued drivers single vehicle crash were male, while 35% were aged between 17 and 24 years .
- Rural drivers
- Shift workers
- Commercial drivers
- People with medical conditions (eg sleep apnoea, prescribed and non prescribed medication)

It is estimated that 24% of middle-aged men, 28% of truck drivers and 8% of middle-aged women have sleep apnoea. People with sleep apnea have 7 times the risk of being involved in a road crash than people who don't have sleep apnoea. Unfortunately, only 10% of people with sleep apnoea are diagnosed.

Decide to be safe; don't become another statistic

- Ensure that you get a good nights sleep before traveling
- Avoid driving at high risk times (your normal sleep time)
- Take frequent breaks (a rest stop every 2 hours is recommended)
- Share the driving
- If you feel tired find a suitable place to stop and have a short nap (even 10 to 20 minutes will prevent some fatigue). Allow time to recover from your sleep before you continue.
- Seek advice from your doctor if you regularly feel sleepy
- Be aware of the effect of any medication you are taking. If an any doubt seek the advice of your doctor or pharmacist

Make the safe choice.

Other road users are depending on you.

Your family needs you.

Make sure you arrive home safely, not in a coffin.

Dr Dale Hanson

Associate Professor, School of Public Health, Tropical Medicine and Rehabilitation Sciences, James Cook University

### Source:

Centre for Accident Research and Road Safety - Queensland: *The state of the road – Fatigue*

[http://www.police.qld.gov.au/Resources/Internet/news%20and%20alerts/campaigns/fatalfive/documents/fatigue\\_fs.pdf](http://www.police.qld.gov.au/Resources/Internet/news%20and%20alerts/campaigns/fatalfive/documents/fatigue_fs.pdf)

## Managing fatigue - Naps

Managing fatigue in transport industries requires a comprehensive approach covering education and training, hours of service regulations, scheduling practices, countermeasures, design and technology and research. It remains the case, however, **that the only treatment for sleep deprivation is sleeping** and that "**napping strategies**" are potentially one of the most powerful countermeasures for Australian heavy vehicle drivers. <sup>(2)</sup>

Naps are defined as any sleep that is less than four hours in duration. Most naps have a duration of between 20 minutes and two hours. Napping is a normal part of the human sleep-wake cycle and is the most important countermeasure for drivers driving at night, particularly between midnight and dawn. <sup>(2)</sup>

Naps should not be seen as a weakness as it is good fatigue management. Naps can be very effective in providing short-term relief, but they are only a temporary measure and not a substitute for continuous sleep. <sup>(3)</sup>

The effectiveness of naps will depend on the time of day they are taken and how fatigued the driver is. Naps are most effective if taken before a driver is fatigued. However, if experiencing overwhelming sleepiness, stop and obtain adequate sleep as soon as practical. <sup>(3)</sup>

Drivers who suffer sleep disorders will benefit by napping strategies, but they also need treatment for their sleep disorder. Unlike many other road safety accident factors, sleepiness is identifiable, predictable, and preventable. The adverse effects of major medical sleep disorders, such as sleep apnoea can be reversed by appropriate treatment, and countermeasures such as "napping strategies". <sup>(2)</sup>

**Truckers News:** Wed Jan 30<sup>th</sup> 2013

### **Sleep Apnoea rife amongst truckies, court told**

ABOUT half of Australia's long-haul truck drivers suffer from sleep apnoea, a condition that puts some at risk of falling asleep at the wheel, the NSW Coroner's Court has heard.

The revelation came at an inquest into the death of a 27 year old man, who died after a head-on collision with a B-double at Ulmarra on the NSW north coast in February 2010.

It emerged the driver of the truck had fallen asleep at the wheel and veered onto the wrong side of the road, causing the collision.

The driver was convicted of negligent driving occasioning death but given a suspended sentence after an independent medical specialist found that he suffered from sleep apnoea, which repeatedly disturbs a person's sleep and can lead to extreme drowsiness.

On Wednesday NSW Coroner Mary Jerram heard from two leading sleep illness experts, both of whom had undertaken research which shows that 50 per cent of long-haul truck drivers suffered from the condition.

"As a group, they tend to exhibit many of the risk factors associated with sleep apnoea, in that they are middle-aged males who are often overweight and obese," said Sydney University Professor Ron Grunstein. His study of 1000 truck drivers last year found 46 per cent suffered moderate to severe sleep apnoea, double that of the broader community. (1)

A fellow sleep illness expert, Dr Anup Desai, said in his experience there were serious problems with the medical checks given to truck drivers.

"There's a huge gap [in the assessment process] where people assessing these drivers are aware of sleep apnoea, but it doesn't seem to be transferring into actual sleep assessments," Dr Desai said.

He said this was partly a problem with the assessors but also the reluctance of truck drivers to be assessed in fear that they will be taken off the road.

"There's a culture of fear to some extent that leads to a reluctance in going for assessment. It isn't warranted because most physicians try to keep people on the road as long as they're being treated. While there was a very high prevalence of sleep apnoea among drivers, it did not mean that they were all unsafe".

"There's evidence that they can still be good drivers - the important thing is to make an assessment about whether they are at risk of falling asleep while driving," Dr Desai said.

#### **Effects of Caffeine and Nicotine on Sleep (4)**

Caffeine affects sleep, particularly when taken at bedtime. The most prominent effects are a delay in achieving sound sleep; less total sleep time with increases in the light sleep stages at the expense of the later deep ones and REM sleep.

Brain electrical studies (EEG) have shown that sleep is of a lesser quality in the 3 to 4 hours following ingestion of caffeinated coffee, which corresponds to the time required for the liver to metabolise caffeine.

Like caffeine, nicotine is also associated with sleep disturbance. People who wake up during their regular sleep in order to smoke a cigarette are most affected. This is because decreasing levels of nicotine in the brain during sleep results in nicotine craving and indicates a profound dependence on this compound.

#### **References:**

(1) Anup Desai, Jim Newcombe, DeWyn Bartlett, David Joffe, Ron Grunstein. Sleep Apnea and Driving in NSW Transport Drivers. [arsnpe.acrs.org.au/pdf/RS000018.pdf](http://arsnpe.acrs.org.au/pdf/RS000018.pdf)

(2) Dr Philip Swann, VicRoads. Heavy Vehicle Driver Health and Sleep Disorders. Austroads Publication No. AP-148/00

(3) National Transport Commission. Guidelines for Managing Heavy Vehicle Driver Fatigue. August 2007. See also: Guidelines for Using Napping to Prevent Commercial Vehicle Driver Fatigue (2006) from the NTC website at [www.ntc.gov.au](http://www.ntc.gov.au).

(4) Benjamin Boutrel, PhD; George F. Koob, PhD. Department of Neuropharmacology, The Scripps Research Institute. What Keeps Us Awake: the Neuropharmacology of Stimulants and Wakefulness-Promoting Medications.



## **Fatigue & Road Crashes**

written for heavy vehicle drivers

to help identify  
some causes and what you can do  
to help manage fatigue  
and prevent road crashes



If you think this pamphlet has helped you, please tell us.

Address: PO Box 6835 MC Mackay, Queensland, 4741  
Email: [raagmackay@live.com.au](mailto:raagmackay@live.com.au) Web: [www.raag.com.au](http://www.raag.com.au)  
Secretary/ Road Safety Coordinator: Graeme Ransley - 0428522557  
Chairman: Chris Bonanno Ph - 0408775788