

# Travail à pause. Les conducteurs professionnels

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## Truckie fell asleep and killed two

By LISA POWER  
Court Reporter

AN interstate truck driver, who had been driving his semi-trailer for more than 24 hours, killed two people when he fell asleep at the wheel, a court heard yesterday.

Michael Gordon McKenzie had driven from Victoria to Brisbane, delivered loads at depots across Sydney and was en route to Adelaide when he ran a red light and killed two motorists.

The fatigued 35-year-old had taken 16 minutes and 10 seconds to take a break at a depot in the Great Western Hwy at Girraween on the 10th of May.

Yesterday Judge Peter Hocking told Parramatta District Court that McKenzie's driving in the industry were endangering the lives of other road users.

McKenzie, before the 10th of May, was a witness, shocked after watching McKenzie's truck speeding through different lanes for at least five intersections - from 10th to 11th of May.

"It is hard to imagine a situation more dangerous to road users than a heavily articulated vehicle being driven at speed on suburban roads where the driver is struggling to remain awake," Judge Hocking said.

There is a need for a sentence to act as a deterrent to others in this industry about endangering the lives or physical safety of others.

Heavy vehicle drivers who push their driving beyond reasonable limits or as to cause danger to others and who have been found to be negligent will be severely punished if it causes death or injury.

Raymond Amadio, 45, and tourist Emily Chubb, 18, died instantly when their car exploded into flames.

McKenzie pleaded guilty to two counts of dangerous driving causing death.

He had returned to truck driving a week before the accident in an attempt to keep his back working on his former job.

McKenzie, who had suffered a work-related injury and the couple were behind in their mortgage repayments.

Yesterday Judge Hocking said the family home had been sold by the bank at a \$17,000 loss.

"This is a tragic case," the judge said.

"The prosecutor was aware that he was blurring the boundaries of safe driving and his use of

The charred wreckage of the truck and car at Girraween

**COUNTDOWN TO DEATH**

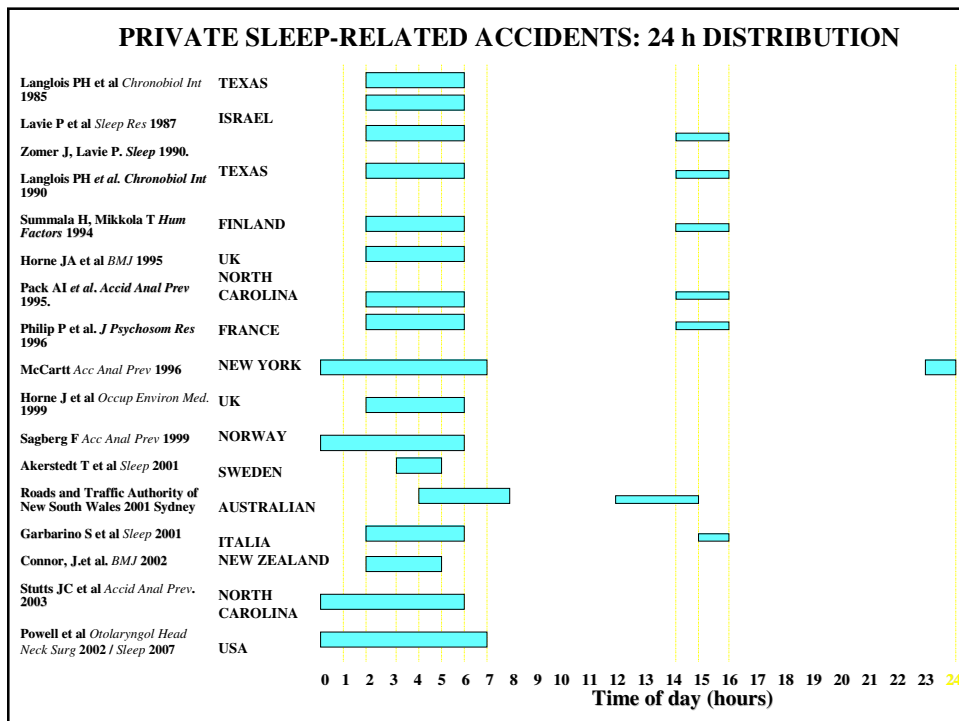
- 8pm, May 7, 1999. Leaves Brisbane after earlier driving more than 1500 km from Shepparton in Victoria.
- 8am, May 8. Arrives in Sydney.
- 1pm. Loads eight sealed tablets.
- 3pm. Unloads cargo at Werris.
- 3pm. Delivers more cargo to Blacktown, and later takes another four sealed tablets.
- 8pm. Leaves Werris with a load of steel and heads for Adelaide.
- 9:30pm. Crashes at Girraween.

He was so distressed he refused to move his truck, telling police "I didn't want to drive again" in case I hurt someone more or something.

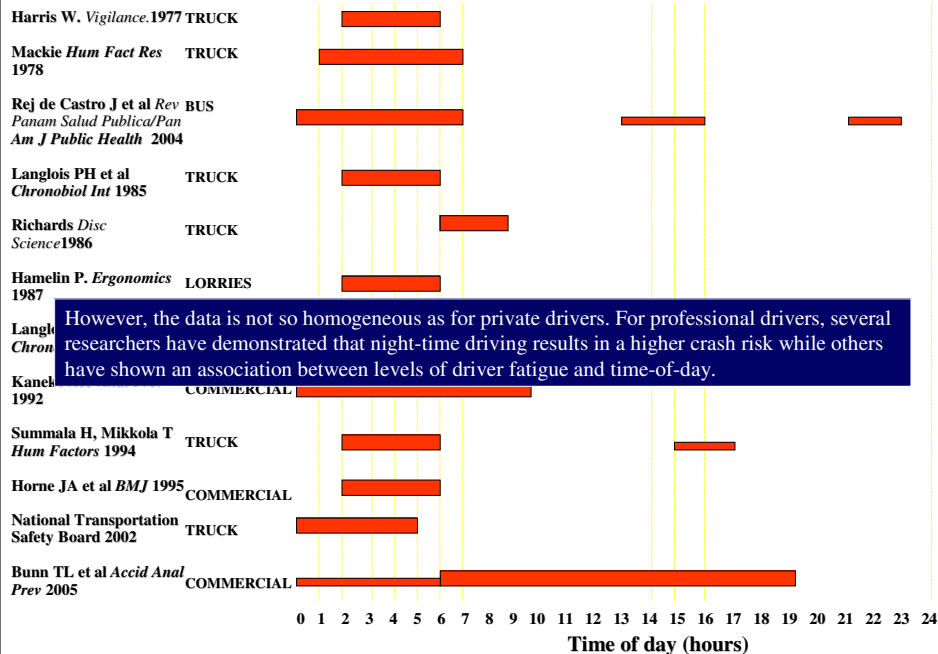
Yesterday McKenzie's wife sobbed uncontrollably and hugged her husband as Judge Hocking handed down a 2 1/2 year

## Increased road accident's risk in Professional drivers

- Superimposed to the normal, two-peak pattern (2-6 am; 2-4 pm) of sleep vulnerability are the effects of separate but interacting factors:
  1. Sleep deprivation (homeostatic process-S) and fatigue
    - Prolonged and irregular working hours (irregular driving schedules)
    - Time for rest and the amount of continuous sleep (24 h cycle) → cumulative fatigue, extending time awake and sleep debt
    - Commuting time
    - The nature of the job task (heat, noise and vibration, chemical exposure) and workload → fatigue
  2. Shift-work
    - The impact of start time of the journey on circadian shift (starting the trip at night)
    - Compressed workweek, bouts of overtime work (extended workshift)
    - Desynchronisation sleep/wake cycle (features of shift systems)



## PROFESSIONAL SLEEP-RELATED ACCIDENTS: 24 h DISTRIBUTION



However, the data is not so homogeneous as for private drivers. For professional drivers, several researchers have demonstrated that night-time driving results in a higher crash risk while others have shown an association between levels of driver fatigue and time-of-day.

## Trends in The Risk of Accidents and Injuries and Their Implications for Models of Fatigue and Performance

SIMON FOLKARD AND TORBJÖRN ÅKERSTEDT  
*Aviation, Space, and Environmental Medicine* • Vol. 75, No. 3, Section II • March 2004

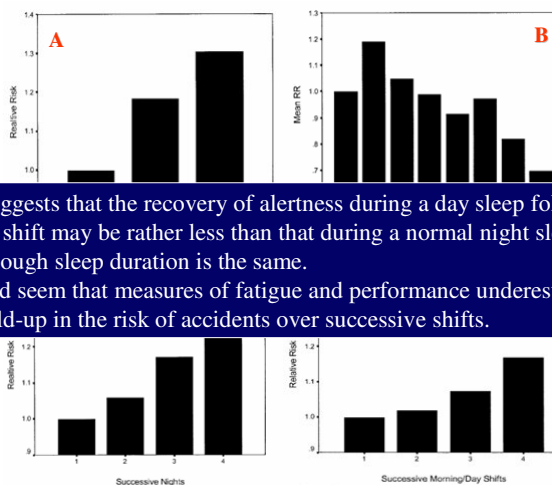


Fig. 3. The relative risk over four successive night shifts.

Fig. 4. The relative risk over four successive morning/day shifts.

the trend in relative risk across the three shifts increased in a linear fashion across these three shifts, morning, afternoon and night when peaks.

This suggests that the recovery of alertness during a day sleep following a night shift may be rather less than that during a normal night sleep even though sleep duration is the same.

It would seem that measures of fatigue and performance underestimate the build-up in the risk of accidents over successive shifts.

In (C) we can observe increased higher risk over successive night shifts relative to that over successive morning/day shifts (D).

During the night shift (in B) we can notice that there was a slight increase in accident risk between three and four A.M. when performance and alertness are thought to be at their lowest.



PERGAMON

Accident Analysis and Prevention 35 (2003) 613–617

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www.elsevier.com/locate/aap

Short communication

# Sleep debt, sleepiness and accidents among males in the general population and male professional drivers

Ned Carter<sup>a,\*</sup>, Jan Ulfberg<sup>a,b</sup>, Birgitta Nyström<sup>b</sup>, Christer Edling<sup>a</sup>

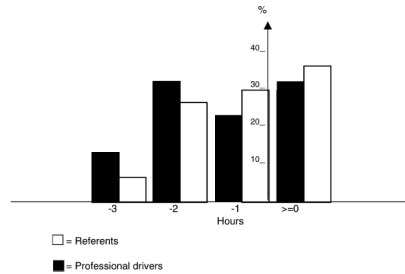


Fig. 1. Proportion reporting sleep debt among professional drivers ( $N = 1034$ ) and male referents ( $N = 1865$ ) from the general population.

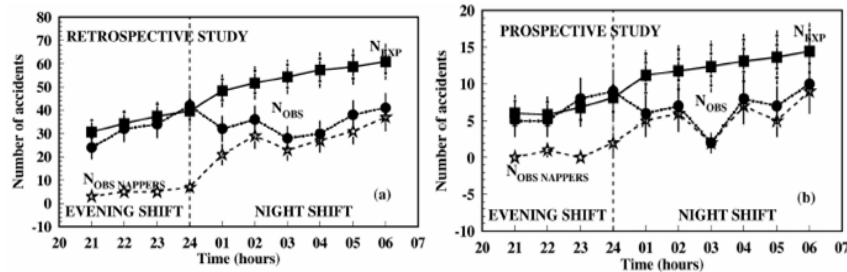
- **Professional drivers reported proportionally more sleep debt than private drivers**
- Among the **professional drivers**, 36.6% reported accidents in at least one situation versus 32.5% of the males in the population ( $P = 0.03$ ). Both the lorry and bus drivers **reported more accidents in total compared with the referents**.
- Reports of traffic accidents were comparable for lorry and bus drivers, 14 and 14.5%, respectively. **Professional drivers reported more accidents in leisure situations than did referents, 13.8% versus 8.6% ( $P < 0.0001$ ).**

## SLEEP, SLEEP RESTRICTION, AND PERFORMANCE

### Professional Shift-Work Drivers who Adopt Prophylactic Naps can Reduce the Risk of Car Accidents During Night Work

Sergio Garbarino, MD<sup>1,2</sup>, Barbara Mascialino, PhD, MSC<sup>1</sup>, Maria Antonietta Perco, PhD, MSC<sup>1</sup>, Sandro Squarisi, PhD, MSC<sup>1</sup>, Fabrizio De Carli, PhD, MSC<sup>1</sup>, Lino Nobili, MD<sup>1</sup>, Manolo Beeke, MD<sup>1</sup>, Gianni Cuomo, MD<sup>2</sup>, Franco Ferrello, MD<sup>1</sup>

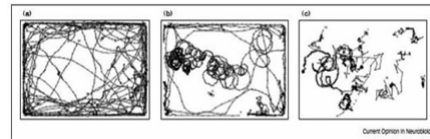
SLEEP 2004;27(7):1296-1302



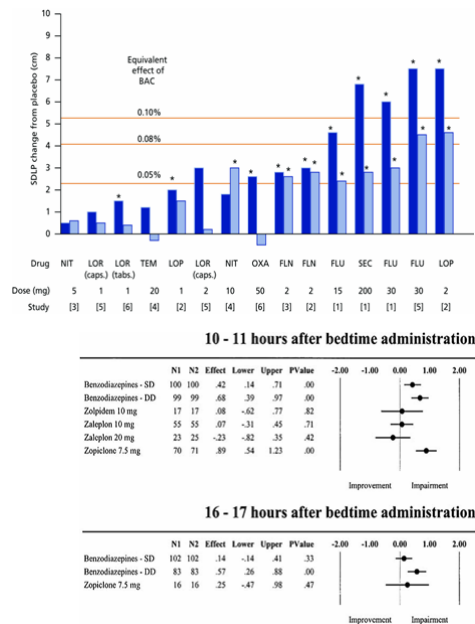
- a) **The retrospective study, R, showed a mean decrease of 38% of the observed accidents (NOBS) during the night shift with respect to the expected ones (NEXP,  $\chi^2 = 49.8$ ,  $P < .001$ ).**
- b) **The prospective study, P, showed a mean decrease of 48% of the observed accidents (NOBS) during the night shift with respect to the expected ones (NEXP,  $\chi^2 = 14.5$ ,  $P < .05$ ).**



← Driver on cocaine

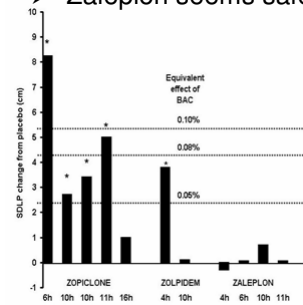


Fruit flies on cocaine



## Hypnotic Drugs

- 4-fold increment in traffic accident risk when using zopiclone.<sup>1</sup>
- Bizarre accidents after zolpidem misuse / abuse.<sup>2</sup>
- Zaleplon seems safe.<sup>3</sup>



1. Barbone et al. Lancet 1998, 352:1331-1336
2. Verster et al. Current Drug Safety 2007, 2:220-226
3. Verster et al. J Clin Psychopharmacology 2002, 22:576-583



### Key Points-Australian Perspective

- Big land mass with small population
- Reducing sleepy driving
  - Promoting healthy sleep
  - Promoting a healthy “workplace”
  - Combination of awareness and regulation/recommendations
    - This in turn increases awareness





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**Medicine and the Law**

**Fatal distraction: a case series of fatal fall-asleep road accidents and their medicolegal outcomes**

Anup V Desai, Elizabeth Ellis, John R Wheatley and Ronald R Grunstein

MJA 2003; 178 (8): 396-399

Introduction — Cases — Case A: Undertreated OSA and undiagnosed periodic limb movement disorder in a commercial driver — Case B: Undiagnosed mild OSA and upper airway resistance syndrome in a non-commercial driver — Case C: "Sleep attack" in a non-commercial driver — Case D: Undiagnosed OSA in a commercial driver — Case E: Undiagnosed idiopathic hypersomnolence in a commercial driver — Case F: Undiagnosed OSA in a commercial driver — Case G: Untreated OSA in a commercial driver — Discussion — Competing interests — Acknowledgements — References — Author details

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# Role of Public Foundations/ Lobby Groups

## Parents Against Tired Truckers



**Jeff Izer**  
May 27, 1976 - Oct 10, 1993  
**Angie Dubuc**  
May 14, 1977 - Oct 10, 1993  
Maine



**Dawn Marie Welding**  
Jan 31, 1978 - Oct 10, 1993  
Maine



**Katie Leighton**  
May 29, 1979 - Oct 10, 1993  
Maine

## Fall asleep accidents – identifying and managing the high risk patient

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- Is your patient very sleepy?
  - Sleep attacks
  - Near miss or actual fall asleep incidents?
  - ESS>16
- Identify and treat the cause
  - Acute or chronic sleep loss
  - Severe OSA (RDI>40)
  - Drugs
  - Narcolepsy and other rarities





## Summary - Australian Transport Drivers

- **Sleep deprivation and night shift work were common**
- **Prevalence of OSA: 55-60% ( $RDI \geq 5$ )**
- **Prevalence of OSAS: 16% ( $RDI \geq 5$ ,  $ESS > 10$ )**
- **Prevalence of EDS: 24%**
  - related to OSA, lifestyle and work factors