



Welcome to  
**ALLIANCE  
EMPOWERMENT  
PROGRAM**

**Risk Factor Crash Course**

**Drowsy Driving**

2016



Alliance  
**Empowerment  
Program**

Welcome to  
**ALLIANCE  
EMPOWERMENT  
PROGRAM**

1. **Helmet use**
2. **Drunk driving**
3. **Speeding**
4. **Seatbelts**
5. **Child Restraints**
6. **Drowsy/Fatigue Driving**

Find all on [www. roadsafetyngos.org/empowerment-program](http://www.roadsafetyngos.org/empowerment-program)



**Evaluation and questions**

**go to**

**[www. roadsafetyngos.org/empowerment-program/](http://www.roadsafetyngos.org/empowerment-program/)**

2016

# DROWSY DRIVING



- The 'silent killer' on the roads





# DROWSY DRIVING



## EDUCATION SAVES LIVES !

### Introduction

Welcome to the Webinar series

My name is Martin Jenkins I am the founder of the AKILLA® Drowsy Driving Educational Campaign, set up in 2005, to establish a solid base to educate drivers about the dangers of drowsy driving.

We hope that you find this Webinar useful in establishing a formal drowsy driving education programme to prevent serious injury, death and trauma on your roads.

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# PRESENTATION TOPICS

We plan to introduce the following topics in this Webinar

- The Silent Killer
- Drowsy driving is a main crash cause
- Important distinction between 'sleepiness' and 'fatigue'
- Sleep deprivation the primary killer and micro-sleeps
- Drowsy Driving risk factors and the importance of sleep
- Drowsy driving warning signs and impact on the driver
- What you can do to stay awake and the myths
- When and where do drowsy driving crashes occur
- Rumble strips, median barriers and Road Side Stopping Places
- Impairment technology for vehicles
- AKILLA® drowsy driving educational website and resources
- Drowsy Driver Awareness Day



# THE SILENT KILLER !

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- ❑ Sadly, in most developing Countries in the World there is no drowsy driving education, despite the fact that drowsy driving is a major cause of fatalities.
- ❑ We need **your help**, to work together to ‘**expose the silent killer**’ by getting our drowsy driving educational message out there - as the World is currently losing many mums, dads, brothers, sisters, aunties, uncles, cousins, grandparents and pets unnecessarily.
- ❑ Everyone needs to be educated on the *dangers of drowsy driving* to avoid the pain, suffering and grief that goes with a crash. Drowsy driving crashes are *predictable, identifiable and preventable*.
- ❑ Even a small amount of education on drowsy driving can make a huge difference !



# DROWSY DRIVING IS A MAIN CRASH CAUSE



- ❑ Internationally drowsy driving is regarded as 'second equal' to drink driving as a crash cause. Actually, the rate of drowsy driving is often higher depending on the drowsy driving risk factors present (eg; high temperatures)
- ❑ The AAA Foundation for Traffic Safety (U.S.) estimates that 21% of motor vehicle crashes involved driver fatigue.
- ❑ ROSPA (U.K.) estimates that sleep related crashes may be a contributing factor in up to 20% of road crashes and up to 25% of fatal and serious crashes.
- ❑ Drowsy driving official statistics are often underreported, due to poor data collection/recording and a lack of expertise in investigating drowsy driving crashes. Many drowsy driving crashes are incorrectly reported as speeding crashes, as there is typically no braking or deceleration.



# IMPORTANT DISTINCTION BETWEEN “SLEEPINESS” AND “FATIGUE”

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## *Wake-up*

- Before 1985 the driving literature around the world made little mention of “*sleepiness*”, and instead focused on the prevention of “*fatigue*” (in the clinical sense. ie; due to mental & physical exertion)



# SLEEP DEPRIVATION - THE PRIMARY KILLER

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## Lack of Sleep

- Internationally crash data shows that most tiredness related crashes are caused by “**sleep deprivation**”.
- “**Sleep deprivation**” could be due to the loss of one night’s sleep, cumulative sleep loss, result from poor quality sleep, or an untreated sleep medical disorder (eg; Sleep Apnoea)



# MICRO-SLEEPS

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- ❑ A “micro-sleep”, is a brief sleep episode typically lasting between 3 - 10 seconds.
- ❑ In a three second micro-sleep your vehicle travels 83 metres when travelling at 100 km/hr, almost the length of a football field !
- ❑ Drivers “micro-sleep” when they are “sleep deprived”.





# **“MICRO-SLEEPS”**

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**YOUR EYES DO NOT HAVE TO BE SHUT  
FOR  
ASLEEP !**

**YOUR MIND TO BE**



**Micro-sleeps Kill !**

# DROWSY DRIVING RISK FACTORS

## EXAMPLES

□ Time of day



□ Physical & / or mental exertion



□ Alcohol



□ Food



□ Medications

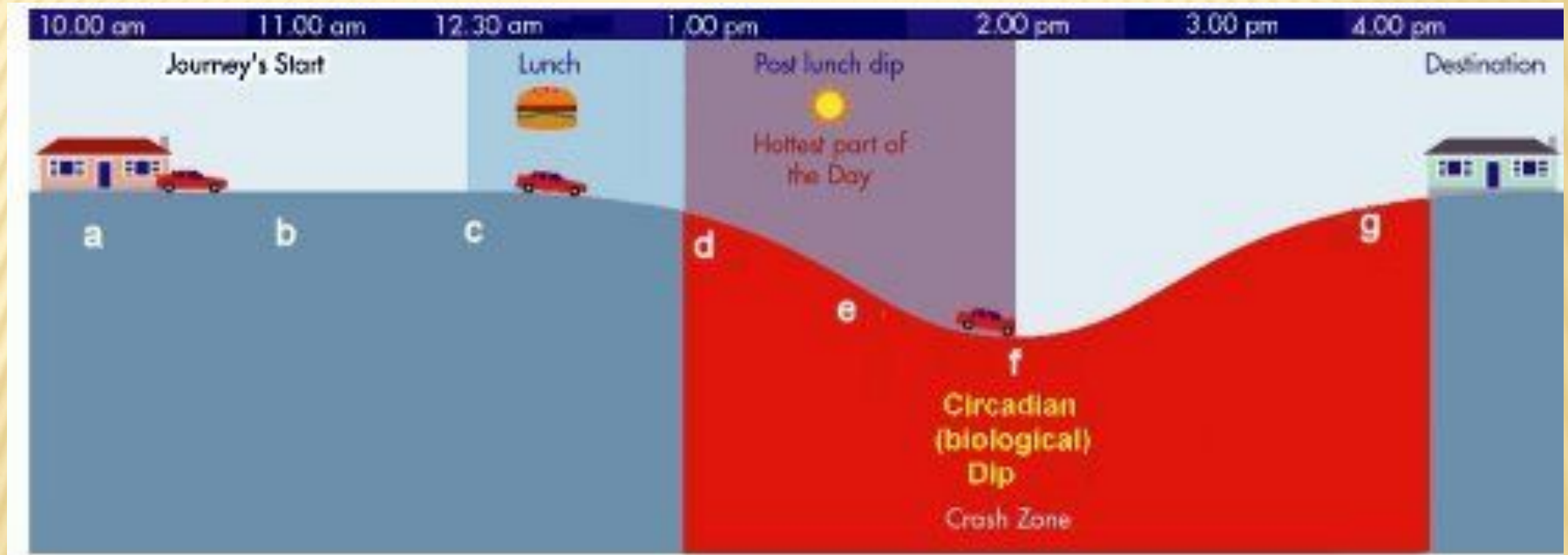


□ Temperature



# RISK FACTORS COMBINE +++

EG; POST LUNCH + HIGH TEMPERATURES+ BIOLOGICAL DIP



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# SLEEP IS VITAL

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- Determination , Tenacity , Willpower , Skill, Education, Intelligence, .....



□ **have no impact on reducing your need for sleep !**

- Sleep is an *involuntary* action. You need sleep just like you need food and water.
- The only way to deal with **sleep deprivation** is by sleeping.
- Get a good night's sleep before you drive (preferably 8 hours) regardless of the length of the trip.



# DROWSY DRIVING WARNING SIGNS !

- ❑ Experiencing 'micro-sleeping' or your eyes close for a moment
- ❑ Difficulty keeping your eyes open
- ❑ Inability to stop yawning
- ❑ Daydreaming, wandering or disconnected thoughts



# DROWSY DRIVING WARNING SIGNS !

- ❑ No memory of the last few kilometres driven
- ❑ Difficulty keeping your head up
- ❑ Missed road signs
- ❑ Drifting over the centreline or side of the road





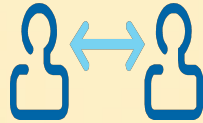
# IMPACT ON THE DRIVER

- Impaired judgement
- Loss of alertness
- Impaired co-ordination
- Slowed reaction time
- Decreased attention (the more sleep deprived the driver becomes the more inattentive they become !)



# WHAT CAN YOU DO ? “WHEN ON THE ROAD”

- Swap drivers



- Power nap

- Pull over in a safe place, move to the passengers seat and take a 15 minute Power nap. Not more than 20 minutes. Wait 10 minutes to ensure fully awake. Use a timer to time the Power nap.



- Phone family or friend to collect you

- Phone for a taxi, take public transport home or book into nearby accommodation to sleep.



□ **A 15 minute Power nap could save your life !**

# COFFEE CAUTION



- ❖ Coffee has little or no impact on regular coffee drinkers.
- ❖ Coffee takes between 15-30 minutes to enter the bloodstream
- ❖ At least two strong cups of coffee (150mg of caffeine) are needed to be of any value.
- ❖ The strengths and grades of coffee vary
- ❖ The effects of coffee wear off after a short time
- ❖ Coffee does not prevent micro-sleeping



# POWERNAP + COFFEE

- Having two strong cups of coffee followed by a Power Nap before a journey back home, following early morning shift work has been shown to have been successful in keeping a driver awake.
- By the time the coffee 'kicks in' the driver wakes up.

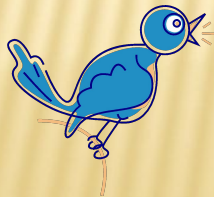
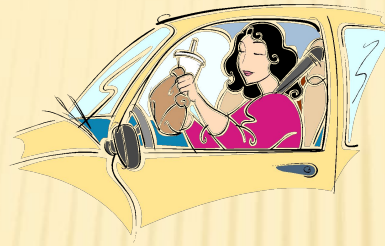


# MYTHS



What does not work for a sleep deprived driver

- Opening the window
- Listening to the radio
- Turning up the air-conditioning
- Stopping and going for a walk
- Singing



# OTHER MYTHS

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- A break every two hours will make you more awake
- Drowsy driving crashes only happen on long trips
- I know exactly when I am going to fall asleep
- I am a safe driver so it does not matter if I am sleepy



# OTHER MYTHS

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- The older your get the fewer hours of sleep you need
- I can't take naps
- I would never fall asleep while driving

# WHEN DO DROWSY DRIVING CRASHES OCCUR?

- ❑ Drowsy driving crashes can occur at any time of the day. However, there are three common times. Namely;
  - ❑ First thing in the morning ('sleep inertia', e.g.; driver not fully awake before travelling to work')
  - ❑ Mid afternoon (biological down-time /nap time)
  - ❑ The hours that one is normally sleeping
- ❑ Drowsy driving crashes typically occur at times when a driver is likely to be more sleep deprived (e.g.; end of the week, before a holiday, end of the year, returning from a holiday, returning from an air flight..)

# WHERE DO DROWSY DRIVING CRASHES OCCUR ?

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- ❑ Drowsy driving crashes can occur anywhere.
- ❑ Drowsy driving crashes occur on both short and long trips.
- ❑ They are common in straight, monotonous sections of road
- ❑ They often happen close to home “Get Home-it is”. ie; the last stage of the journey.
- ❑ They are common in built up areas (but are often incorrectly reported as inattention crashes – eg; nose to tail)



# ANN'S CAR

REMAINS OF HER 3 YEAR OLD MITSUBISHI MIRAGE, AS A RESULT OF A DROWSY DRIVING CRASH DURING A **12 MINUTE TRIP** BACK HOME FOLLOWING SHIFT WORK.



# RUMBLE STRIPS, MEDIAN BARRIERS & ROADSIDE STOPPING PLACES (RSP'S)

- ❑ Rumble strips at the side of the road or on the centre line of the road have been shown to be effective in reducing the number of drowsy driving crashes (particularly so when vehicles run off the side of the road)
- ❑ Median Barriers on the centreline of the road can dramatically reduce the number of drowsy driving head on crashes. They are effective in drowsy driving blackspots.
- ❑ Road Side Stopping Places are *specifically designed areas* for drivers and passengers to take a break and /or a Power nap in a designated safe off road location. They are particularly useful for *journey planning, both domestic and commercial vehicles.*



# IMPAIRMENT TECHNOLOGY FOR VEHICLES

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- ❑ All of the expensive luxury car brands are currently developing or have developed technology to detect an impaired driver. However, the technology is expensive and has been incorporated into the new luxury cars.
- ❑ Unfortunately older, non luxury cars on the road do not have such technology and therefore the technology may not be available for some time.
- ❑ Technology that is attached to the dashboard which detects a drowsy drivers' eye retina changes while driving can be effective, but it is expensive.



# EDUCATIONAL WEB-SITE

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**AKILLA®** Drowsy Driving Educational Campaign official website. Please visit ,

[www.akilla.co.nz](http://www.akilla.co.nz)

There you will find *educational information* and *real life* drowsy driving crash stories.

Questions very welcome at [akilla@paradise.net.nz](mailto:akilla@paradise.net.nz)



# DROWSY DRIVING CRASH SCENE

STATE HIGHWAY 1, HUNTERVILLE, NEW ZEALAND





# DROWSY DRIVING EDUCATION

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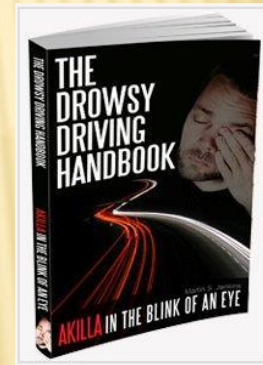
## ‘The Drowsy Driving Handbook’

AKILLA® “In the blink of an eye”.

(52 colour pages)

*The World’s first handbook on;*

- What the causes of drowsy driving are
- What the best ways are to avoid drowsy driving
- What you must do to stay alive



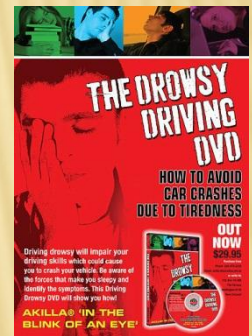
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# DROWSY DRIVING EDUCATION

## ‘The Drowsy Driving DVD’ (11mins)

The latest educational DVD on how to avoid crashes due to tiredness



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# EXAMPLE OF WHERE SLEEP DEPRIVATION PLAYED A FATAL ROLE

## SELBY TRAIN DISASTER (U.K.)

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‘SLEEP DEPRIVED CAR DRIVER FELL ASLEEP CRASHING INTO A TRAIN THAT CRASHED INTO ANOTHER TRAIN’





# EXAMPLE OF WHERE SLEEP DEPRIVATION PLAYED A FATAL ROLE

# SPACE SHUTTLE CHALLENGER





# FREIGHTER (JAPAN)

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‘SKIPPER FELL ASLEEP AT THE HELM’



# WHAT WE HAVE COVERED

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- ❑ We need to work together to expose the 'silent killer' on the roads.
- ❑ Statistics support Drowsy Driving as a major crash cause
- ❑ Important to distinguish between 'sleepiness' and 'fatigue'
- ❑ Sleep deprivation can lead to micro-sleeps
- ❑ Drowsy Driving risk factors and that sleep is vital
- ❑ Drowsy driving warning signs and how a driver can be impacted.
- ❑ What you can do to avoid drowsy driving and the common myths
- ❑ When and where do drowsy driving crashes occur
- ❑ Rumble strips, median barriers and Road Side Stopping Places
- ❑ Impairment technology only for new luxury vehicles
- ❑ AKILLA® drowsy driving educational website, book and DVD.
- ❑ Establish a Drowsy Driver Awareness Day





# 5 KEY DROWSY DRIVING MESSAGES

- ❑ Get a good night's sleep before you drive (preferably 8 hours) regardless of the length of the trip.
- ❑ Plan your journey, and where you are going to take breaks
- ❑ Don't drive at times that you are normally sleeping
- ❑ Have a break from driving at least every 2 hours to ward off mental and/or physical exhaustion.
- ❑ If you experience any signs of drowsy driving, take action immediately. eg; swap drivers, Power Nap, phone for a taxi/friend, take public transport or stay in accommodation for the night.
- ❑ Following a long haul flight, do not drive to a destination (but sleep overnight in accommodation)



# EXAMPLE OF DROWSY DRIVING ADVERTISMENT



**Going on Holiday?**  
**DON'T FALL ASLEEP**  
**AT THE WHEEL**

**Feeling Drowsy? - Stop to Survive!**

- Pull over in a safe place - as far off the road as possible.
- Park in a well lit area and lock doors.
- Windows slightly down for air, turn parking lights on.
- Take a 15 - 20 minute 'power nap'.
- Walk for a few minutes to be sure that you are completely awake before driving again.

**Myths**

- Winding down the window for fresh air, stretching your legs, turning up the radio and 'other tricks' are almost useless when trying to stay awake.

**Travel Tips - Stay Awake Arrive Alive**

- Don't deprive yourself of sleep - get a good 8 hours sleep the night before the trip and avoid driving during your normal sleeping times (this may include mid-afternoon!).
- Don't drink alcohol when sleepy.

**SLEEP DEPRIVATION**  
**IS AKILLA™**

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New Zealand Sleep Safety Ltd

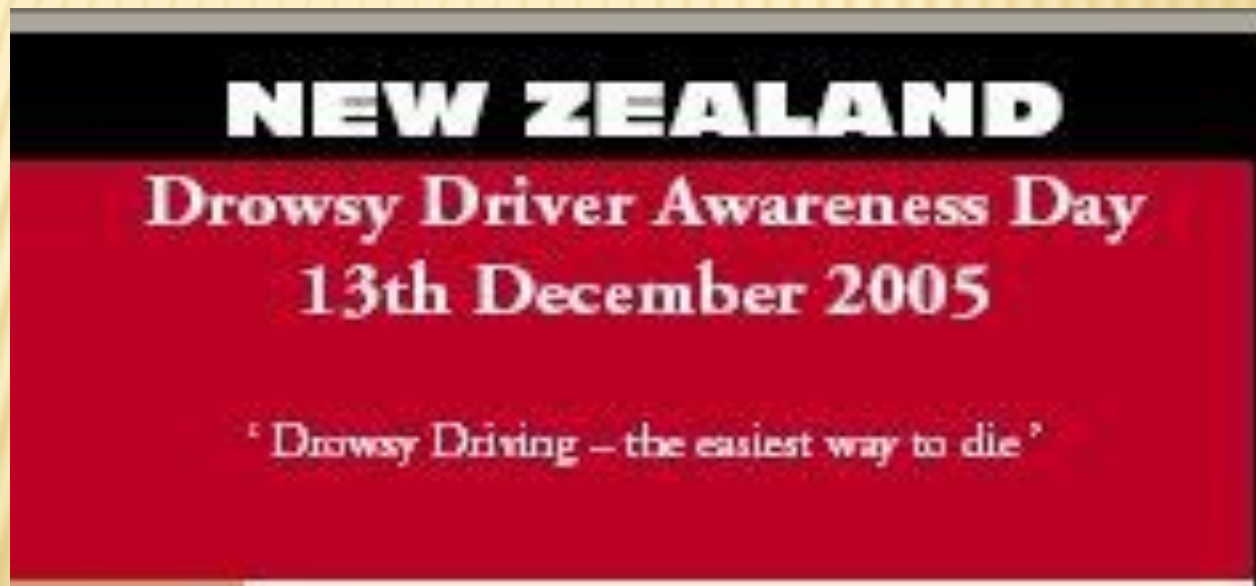
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# GREATER AWARENESS

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Establish a drowsy driver awareness day

Inaugural Drowsy Driver Awareness Day  
(ANNOUNCED AT NZ PARLIAMENT 2005)





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Program**

# Thank you

For more information visit [www. roadsafetyngos.org/empowerment-program](http://www.roadsafetyngos.org/empowerment-program)