

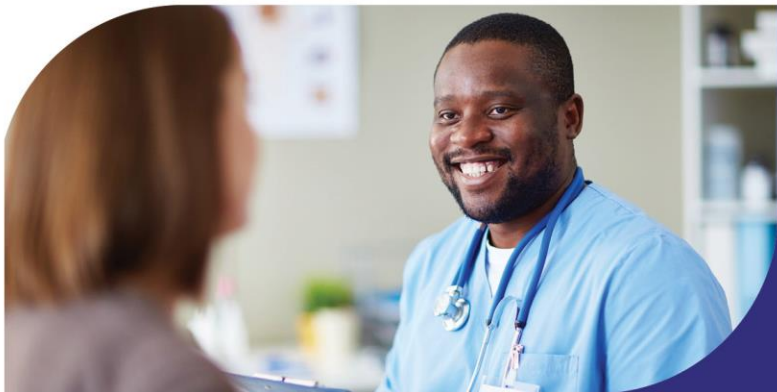



**HSA**

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Health and Safety Authority

# Managing work-related fatigue

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A vertical blue-tinted image on the left side of the slide shows a person wearing a white lab coat, a white hairnet, and safety glasses. They appear to be working in a laboratory or industrial setting, with a clock visible in the background.

# Raise awareness of fatigue in driving for work and good practice in fatigue risk management

# Fatigue....just being tired?

*“.....**a physiological state** of reduced **mental or physical performance** capability resulting from **sleep loss or extended wakefulness, circadian phase, or workload** (mental and/or physical activity) that can **impair** a [worker’s] **alertness** and **ability to .....perform safety-related duties..**”*

International Civil Aviation Organisation (2020)



# Impact of fatigue: Impaired mental performance



- Slowed reaction times
- Delayed response
- Changes in emotional state
- Less able to detect change
- Compromised risk perception



- Zigzagging in lane
- Crossing the central line
- Increased risk taking
- Falling asleep at the wheel

# Fatigue and rail accident reports

- Sandilands (2016) : Overturning of a tram
  - **Monotonous task** – “*temporary loss of awareness of driving task*”
- Reading (2015) Ruscombe (2015): Signals passed at danger
  - Driver A – **suffering ill-health (medication and fatigue)**
  - Driver B - **undiagnosed sleep disorder**
- Shap (2010): Uncontrolled freight train run-back
  - Incident at **02:04 hrs**
  - Driver on **first night shift** after five days and rest day

# Fatigue and driving risk factors



**Poor sleep**



**Monotonous  
task**



**Body clock/  
Time of day**

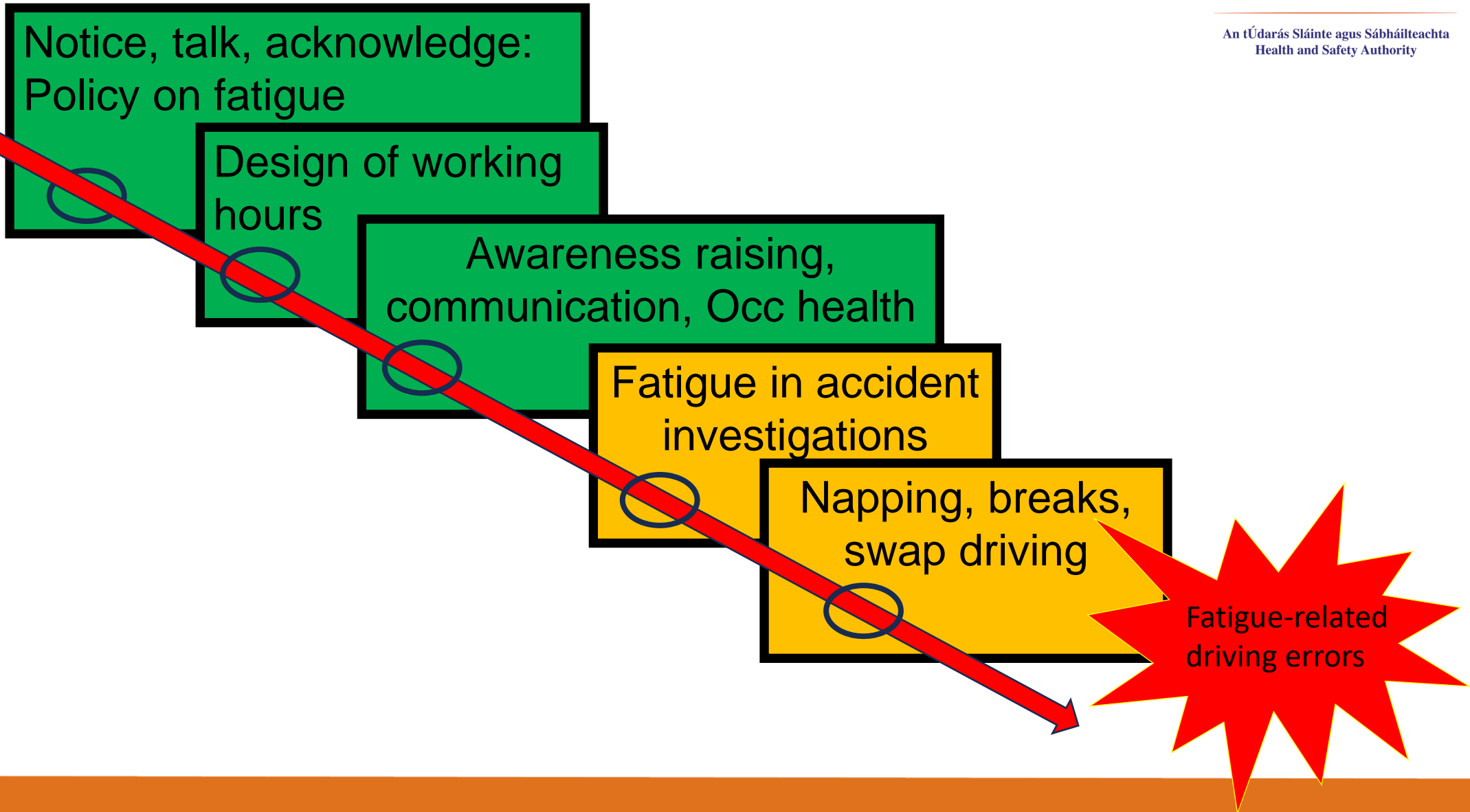


**Individual  
characteristics**



**Time on task  
Working hours**

# Managing fatigue risk



# Fatigue influencing factors – design of working hours

- Time of day (particularly work/shift start time)
- Length of shift
- Number of consecutive shifts
- Rest breaks within and between shifts
- Direction and speed of rotation of duties
- Nature of task (workload and environment)



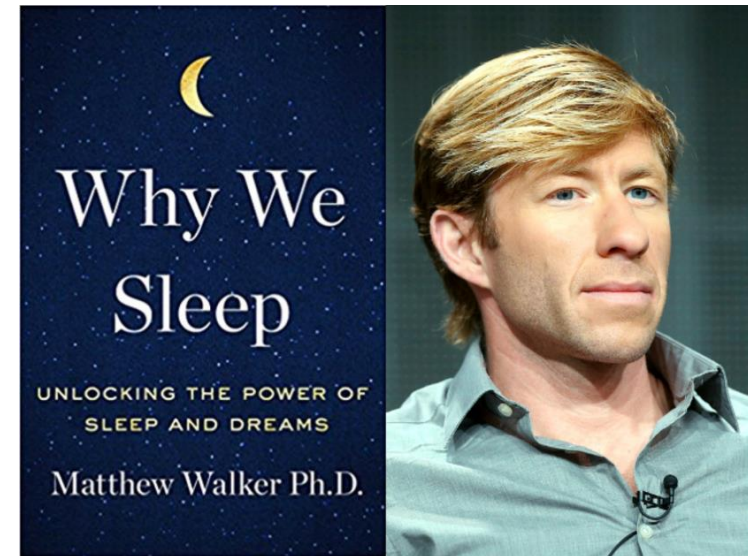
Key factors that impact on the opportunity for good quality sleep



# Awareness raising: The importance of sleep for health

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# Good fatigue risk management

- ✓ Reduced operational risk
- ✓ Improved decision making (on and off the road)
- ✓ Better health outcomes
- ✓ Improved communications > positive safety culture
- ✓ Provides management with data - fatigue reports/investigation
- ✓ Assurance of compliance with relevant health and safety regulations



# Key Messages

- Fatigue negatively impacts driving performance
- Risk factors - poor sleep, monotonous task, time of day, time on task, individual factors
- Fatigue Risk Assessment
  - Notice, talk, acknowledge fatigue
  - Organisational and individual commitment
  - Raise awareness - design of working hours, importance of sleep
  - Mitigation e.g. napping, breaks



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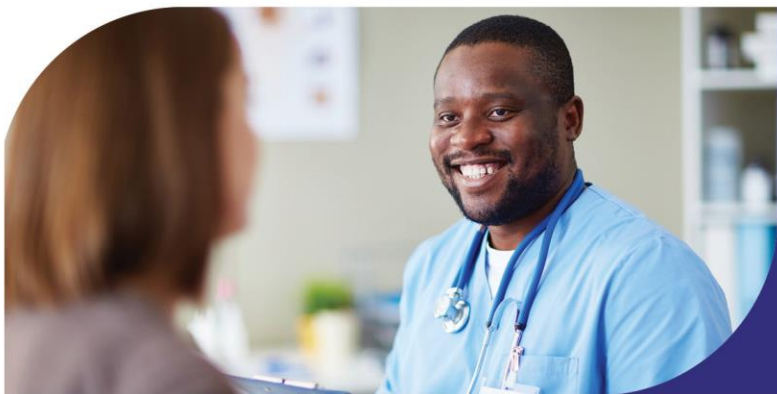
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Go raibh maith agaibh  
Thank you

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# Guidance



Guidance for  
Employers and  
Employees on  
**Night and  
Shift Work**



The Royal Society for the Prevention of Accidents

## Road Safety Factsheet

July 2020

### Road Accidents Factsheet

Thousands of road accidents each year. It is estimated that driver fatigue is responsible for up to one quarter of fatal and serious accidents. Driver fatigue can result in death or serious injury as they may not brake or swerve to avoid or reduce the risk of an accident (such as safe driving). It also reduces vigilance, and impairs decision-making. Impaired activities (such as driving) is impaired. Impaired alertness. The quality of decision-making is impaired. Impaired alertness. The quality of decision-making is impaired.

... and so make a conscious decision about those who persist in driving underestimating the risks. Some drivers choose to ignore the risks (irresponsible driving).

... motorways

... (or having even one alcoholic drink)

... long shifts, especially night shifts

... The study investigated the relationship between fatigue and crash risk. The study, being the first of its kind, was part of the Crash Causation Survey, in order to determine the driver had had recently. This information was used to determine if those involved in crashes caused by their own fatigue were this is not the case had. The key findings were that those who had less and less sleep, when compared to those who had slept for between 7 and 8 hours, those who had slept for between 4 or 4 hours or less had 11.5x the collision risk.

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## Driver Fatigue The facts

STOP.  
HAVE A COFFEE.  
TAKE A NAP.

VISION  
ZERO



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Managing fatigue using a fatigue risk management plan (FRMP)



# Resources

Driving for Better Business (2023) <https://www.drivingforbetterbusiness.com/case-studies/>

Energy Institute (2014) *Managing fatigue using a fatigue risk management plan*, London.

Health and Safety Authority (2012) Guidance for Employers and Employees on Night and Shift Work  
[https://www.hsa.ie/eng/publications\\_and\\_forms/publications/healthcare\\_sector/night\\_and\\_shift\\_work\\_2012.pdf](https://www.hsa.ie/eng/publications_and_forms/publications/healthcare_sector/night_and_shift_work_2012.pdf)

International Civil Aviation Organization (2020) Doc 9966 Manual for the Oversight of Fatigue Management Approaches, Second edition.

National Driver Licence Service (NDLS) Obstructive Sleep Apnoea Syndrome and Driving  
[10422 Obstructive Sleep Apnoea Syndrome and Driving DL \(hi-res screen\).pdf \(ndls.ie\)](https://www.ndls.ie/10422-Obstructive-Sleep-Apnoea-Syndrome-and-Driving-DL-(hi-res-screen).pdf)

Road Safety Authority (RSA) Driver Fatigue: The Facts [https://www.rsa.ie/docs/default-source/road-safety/r4.1-research-reports/driver-fatigue/rsa\\_driver\\_tiredness\\_web.pdf?Status=Master&sfvrsn=d06f6662\\_7](https://www.rsa.ie/docs/default-source/road-safety/r4.1-research-reports/driver-fatigue/rsa_driver_tiredness_web.pdf?Status=Master&sfvrsn=d06f6662_7)

Road Safety Authority (RSA) Medicines and Driving [163440 RSA Medicine Leaflet.indd \(ndls.ie\)](https://www.rsa.ie/163440-RSA-Medicine-Leaflet.indd)

Royal Society for Prevention of Accidents (2020) Driver Fatigue and Road Accidents Factsheet  
<https://www.rospa.com/media/documents/road-safety/driver-fatigue-factsheet.pdf>

Walker, M. (2017) *Why we sleep: the new science of sleep and dreams*.