

Priorities in Occupation Health and Safety:

Fatigue

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Outline

- What is fatigue?
- Is it an issue?
- What can be done about it?
- Conclusions



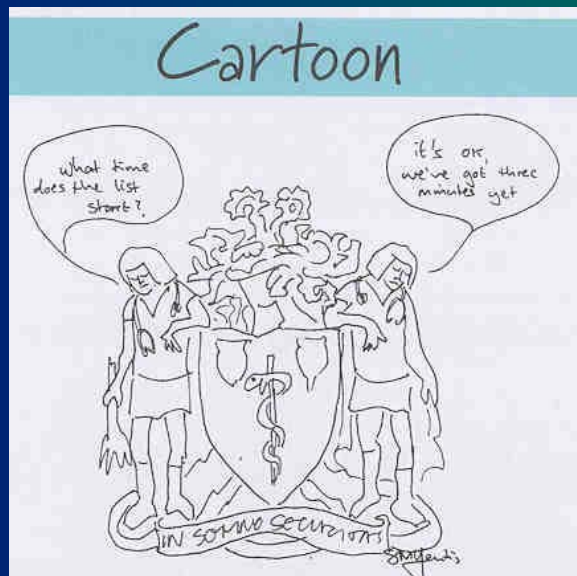
What is Fatigue?

- **Symptoms**

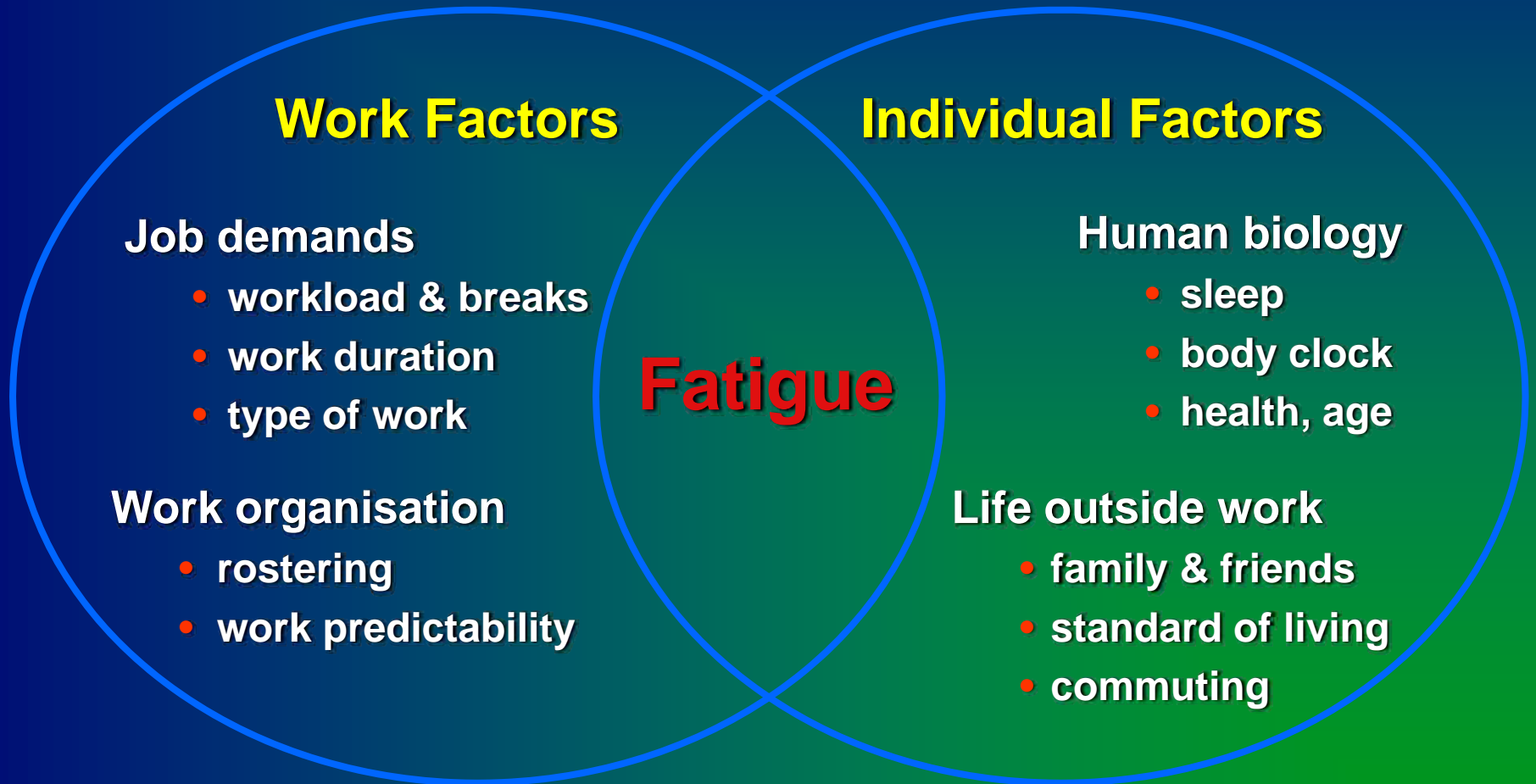
- sleepy
- apathetic
- lethargic
- irritable
- uncommunicative

- **Performance impairment**

- alertness
- attention
- reaction time
- short-term memory
- cognitive processing (speed, flexibility)
- uncontrolled microsleeps



Causes of Fatigue



Is Fatigue an Issue?

- **1998 survey of NZ anaesthetists (70% response)**
 - 86% can recall a fatigue-related error in clinical practice
 - 32% in the last 6 months
- **1998 survey of locomotive engineers (71% response)**
 - 32% often/always nod off in the cab while moving by the end of night shift > 10 h (2%, day shift < 10 h)
- **2000 two derailments and a head-on train collision attributed to engineers falling asleep on the night shift (TAIC)**



Driver Fatigue

- **USA**

- #1 truck safety issue
- contributes to 30-40% of heavy truck crashes
- probable cause of 31% fatal-to-driver crashes

- **Australia 1989-1992**

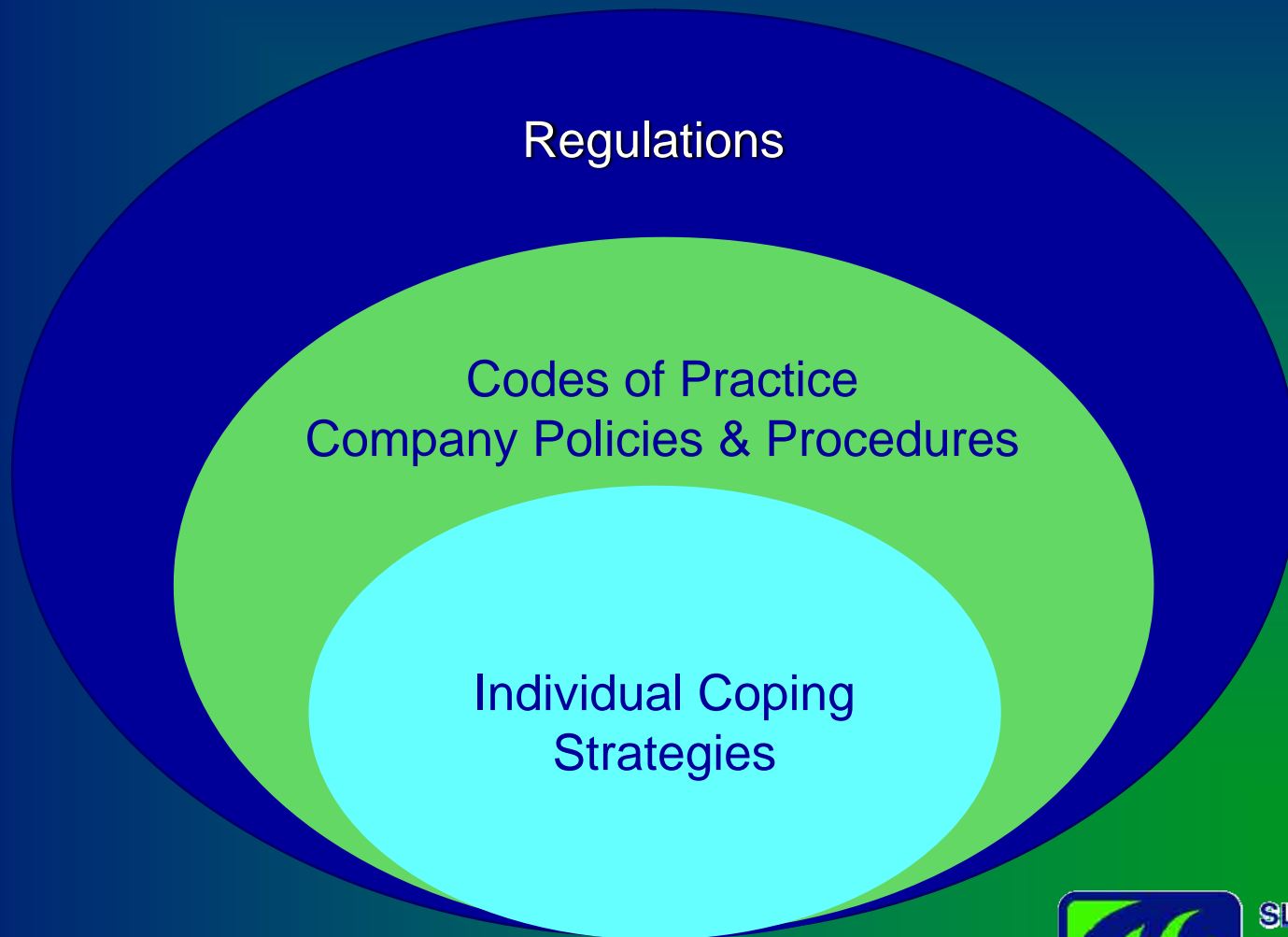
- 33% workplace deaths on public roads
- 26% commuting

- **1998 Survey of Locomotive Engineers**

- 4% often/always fall asleep driving home after night shifts > 10 h



What Can Be Done About It?



ATC Proposed Rule

A fatigue management scheme shall take account of:

- (1) the rest period available prior to commencing duty
- (2) typical traffic for the shifts to be worked
- (3) the availability of rest, refreshment, and meal breaks
- (4) the availability of relief staff
- (5) circadian rhythms
- (6) short-term and accumulated sleep deficit
- (7) the shift rotation system in use



Fatigue Management for Commercial Vehicle Drivers

Operating Standards for Work and Rest in the Western Australian Road Transport Industry

- **Basic principles and guidance on developing the FMS (factors to take into account, control measures, operational procedures)**
 - **Trip scheduling**
 - **Rostering of drivers**
 - **Readiness for duty**
 - **Driver health**
 - **Workplace conditions**
 - **Training and education**
 - **Responsibilities**
 - **Management of incidents**



AMA National Code of Practice

Hours of work, shiftwork and rostering for hospital doctors

- Risk assessment audit (7-day period)
 - Voluntary diary of work/rest
- Risk assessment score sheet, risk rating
- Guidance on risk control
 - Design principles for schedules
 - Information, supervision, consultation, & training
 - Facilities and services
 - Monitoring and review
- Incident reporting and investigation
- Record keeping



Company Policies, Procedures

- **Monitoring workforce status, work demands**
- **Education / training**
 - **operational staff and management**
- **Roster design and management**
- **Identifying and managing staff having fatigue-related problems**
- **Incident/accident investigation**
- **Creating a fatigue management culture**



Individual Coping Strategies

- **Strategies to use at home**
 - practical strategies to improve sleep
 - currently no practical strategies to reset the body clock
 - responsibility to report fit for work
 - improved quality of life away from work
- **Strategies to use at work**
 - temporary improvements in performance and alertness
 - getting the job done safely
 - getting home safely
- **Understanding company policies and procedures**



Conclusions

- **Workplace fatigue is a significant safety issue**
- **Evolution to chronic health problems is poorly understood**
- **Causes of fatigue are fairly well understood**
- **Need for a comprehensive approach**
- **Fatigue management tools are becoming available - validation is needed**
- **Resource issues for small companies**

