

FATIGUE MANAGEMENT

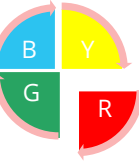
Delivered by: Sebnem Bulan-Worth





WHS and Training Compliance Solutions acknowledges Aboriginal and Torres Strait Islander people as the Traditional Custodians of the land and acknowledges and pays respect to their Elders, past and present.

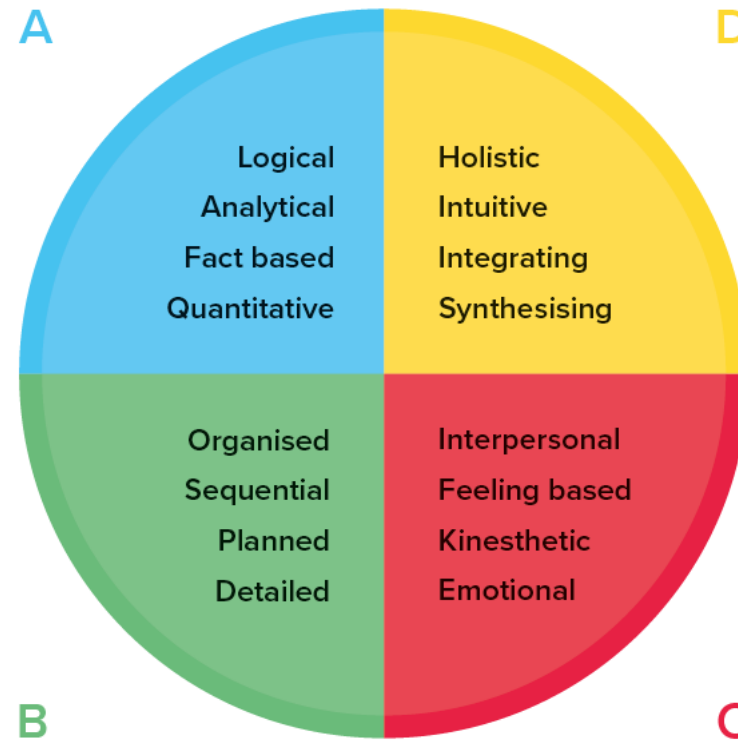
WHS and Training Compliance Solutions is committed to safe and inclusive workplaces, policies and services for people of LGBTIQ communities and their families.



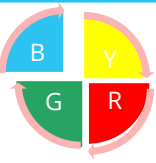
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HOUSEKEEPING



**Emergency
Procedures**



Breaks



Mobile Phones



Participation

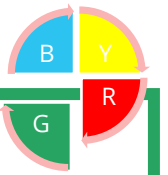
BEFORE WE START.....

DISCUSSION

What makes a great learning environment?

ACTIVITY

Ice breaker.....



LEARNING OBJECTIVES

FIRST OBJECTIVE

Identify the typical causes of fatigue

SECOND OBJECTIVE

Recognise the personal warning signs of fatigue

THIRD OBJECTIVE

Determine personal actions that may be taken to control for the effects of each of the causes of fatigue

FOURTH OBJECTIVE

Identify the typical factors which increase the risk of fatigue-related accidents and safety incidents and personal actions that can minimise their effects

FIFTH OBJECTIVE

State lifestyle choices which promote the effective long-term management of fatigue



MODULE 1

KEY AUSTRALIAN STATISTICS

- **Serious Claims**
- **Main Causes of Serious Claims**
- **Serious Claim rate**
- **Mental Health Conditions**
- **Fatality Rates**
- **Fatality Rates by States**
- **Fatality Rates by Industry**

WORK-RELATED INJURY AND ILLNESS

127800

Serious Claims

10.3

Incidence rate
(serious claims per 1,000
workers)

6.5

Frequency rate (serious claims
per 1,000,000 hours worked)

8.0

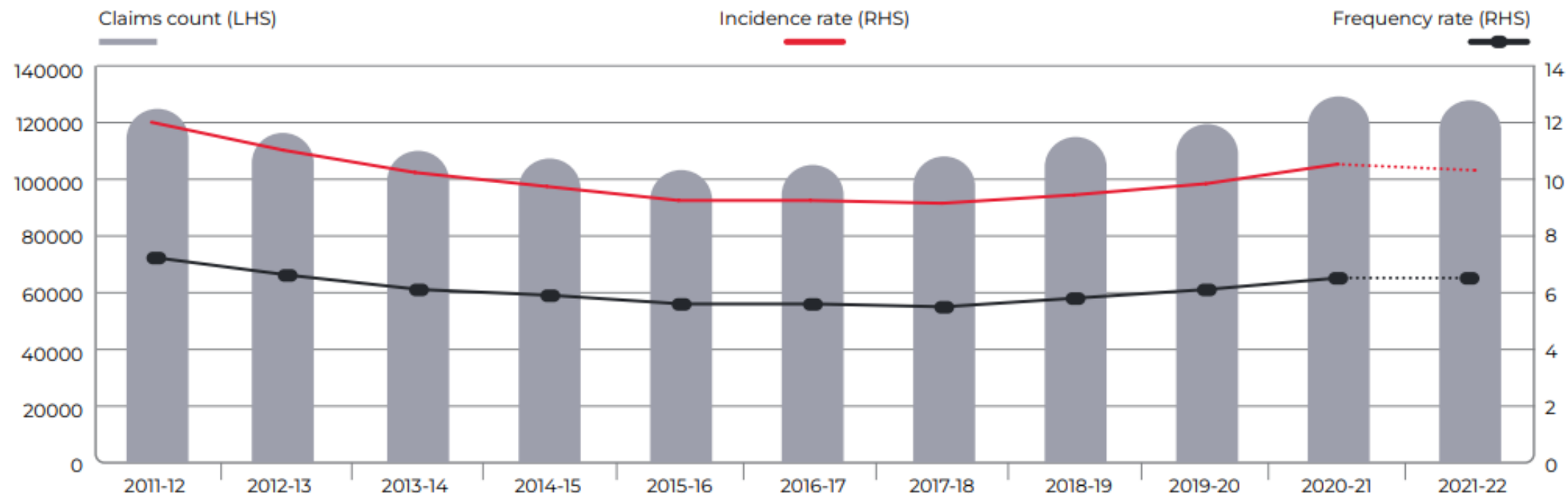
WEEKS

Median time lost

\$15,743

Median compensation
paid

Serious Claims counts and Injury rates , 2011-12 to 2021-22p

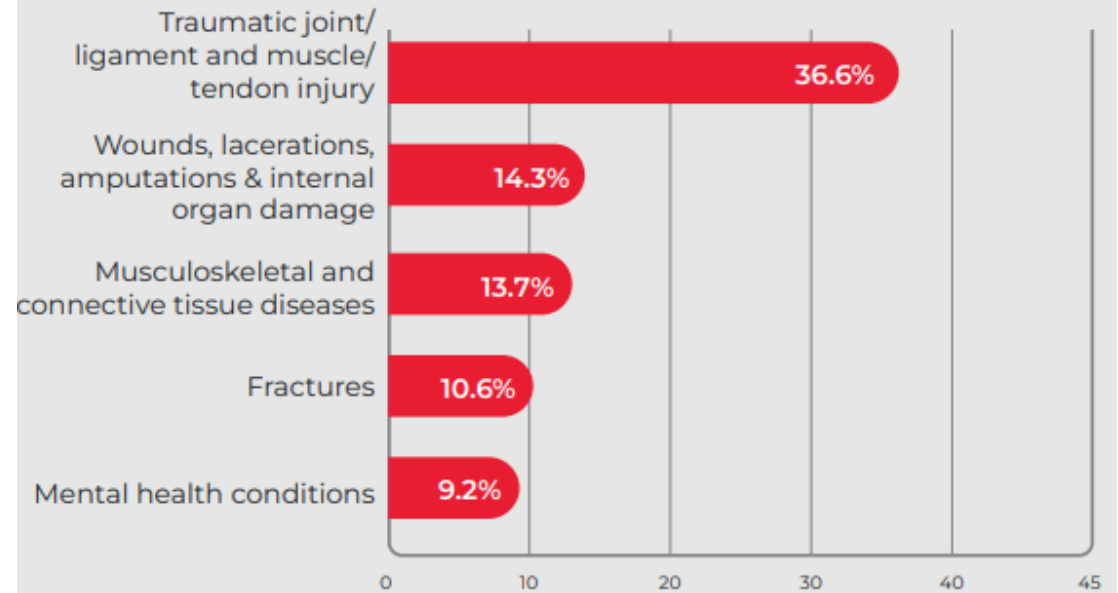


Serious Claims by Nature, 2021-22p



Diseases and conditions are accounting for an increasing proportion of serious claims over time, with their share increasing from 26.0% to 34.0% over the past 10 years.

Serious Claims by most common Nature, 2021-22p



WORK-RELATED INJURY AND ILLNESS 2021-2022

Mental Health Claims

11,700

Serious Claims

1 in 11

serious workers'
compensation claims

9.2 %

Serious Claims (%)

34.2

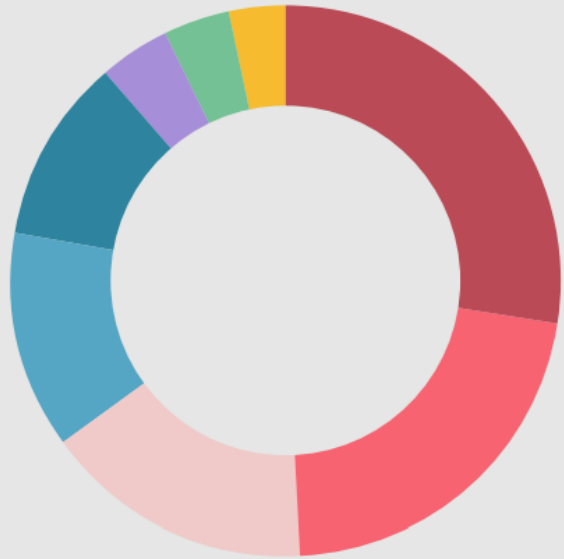
WEEKS

Median time lost

\$58,615

Median compensation paid

Serious Claims by Occupation, 2021-22p



- 27.5% Labourers
- 21.7% Community and personal service workers
- 15.8% Technicians and trades workers
- 12.8% Machinery operators and drivers
- 10.9% Professionals
- 4.3% Managers
- 3.7% Clerical and administrative workers
- 3.3% Sales workers

34,900

Labourers

27,500

Community and personal service workers

20,000

Technicians and trades workers

16,200

Machinery operators and drivers

FATALITY RATE 2020-2021



Note: Historical data are updated as additional information from finalised coroners' reports and workers' compensation claims becomes available.
The 'fatality rate' is defined as the number of traumatic injury fatalities per 100,000 workers.

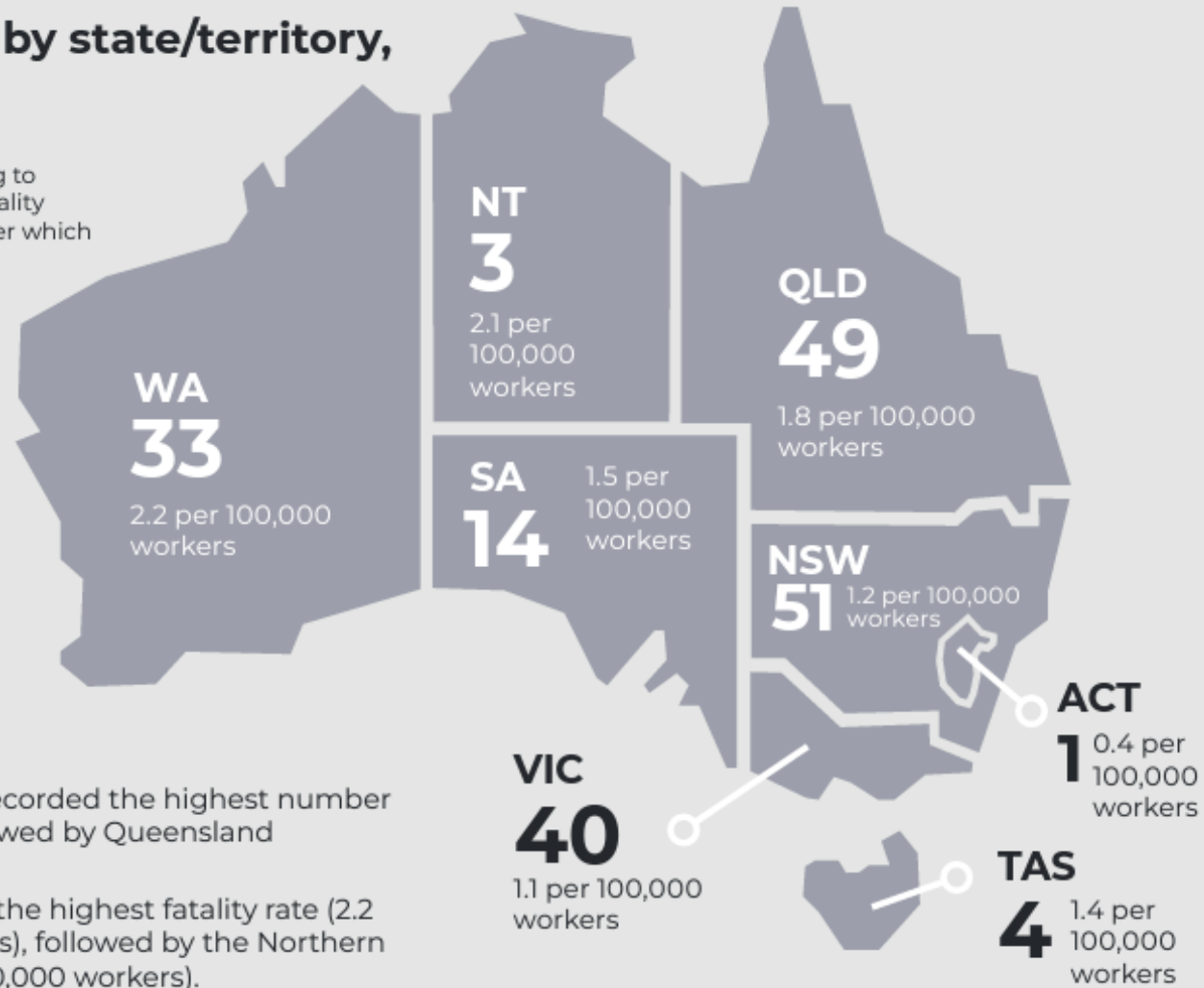
Worker Fatalities by state/territory, 2022*

* fatalities are presented according to the state or territory where the fatality occurred, not the jurisdiction under which the fatality fell.

Australian total:

195

1.4 per 100,000 workers



In 2022, New South Wales recorded the highest number of fatalities (51 workers) followed by Queensland (49 workers).

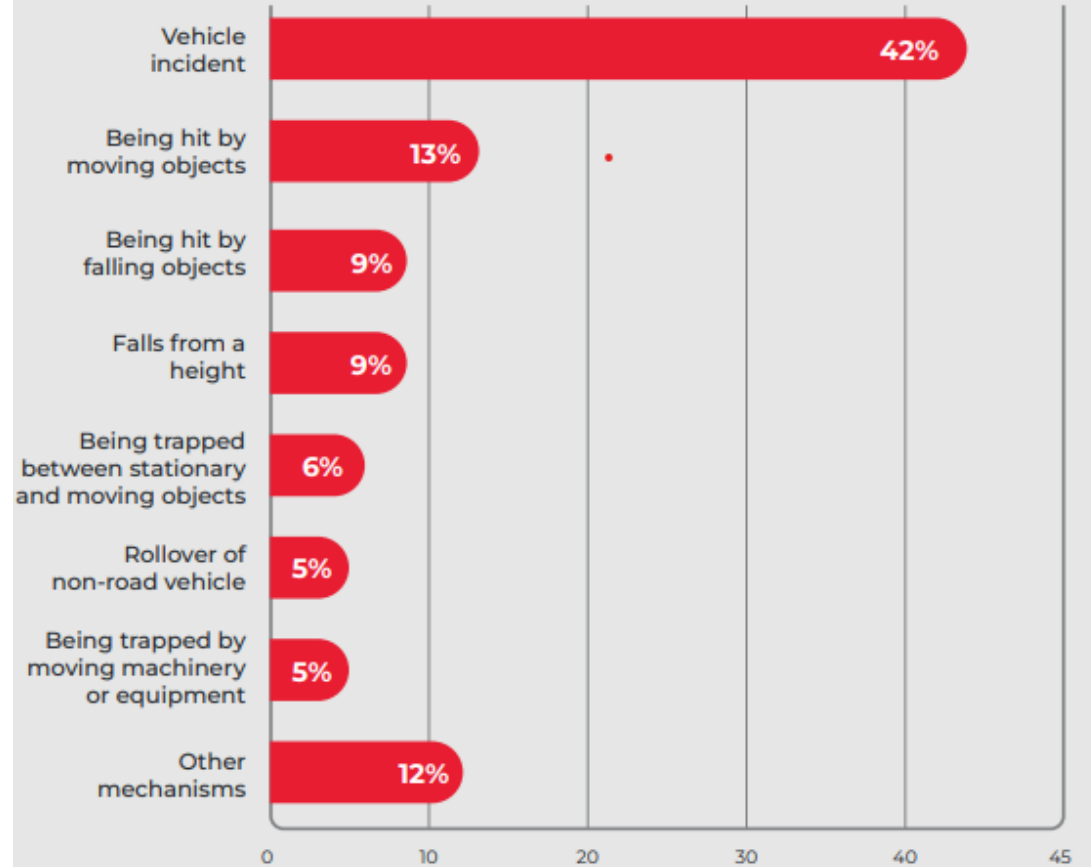
Western Australia recorded the highest fatality rate (2.2 fatalities per 100,000 workers), followed by the Northern Territory (2.1 fatalities per 100,000 workers).

Worker Fatalities by Occupation, 2022

Occupation	Fatalities (count)	Fatalities (rate)
Machinery operators and drivers	74	8.4
Labourers	34	2.9
Managers	32	1.8
Technicians and trades workers	28	1.5
Professionals	16	0.5
Community and personal service workers	9	0.6
Clerical and administrative workers	2	0.1
Sales workers	0	0

In 2022, Machinery Operators and Drivers accounted for the highest proportion of worker fatalities (38%). They also recorded the highest fatality rate at 8.4 fatalities per 100,000 workers. This is much higher than the other occupations, which recorded fatality rates less than 3 fatalities per 100,000 workers.

Worker Fatalities by most common Mechanism of incident, 2022



COST OF INJURIES



HUMAN COST

- Quality of life,
- Relationships with their family
- Finances and
- Physical and psychological



ECONOMIC COST

- 2.2 million FTE productivity loss, and
- \$37.6 billion in costs were incurred by the health system.



ORGANISATIONAL COST

- Medical and hospital cost
- First Aid expenses
- Transportation costs
- Pensions, worker compensation cost, and
- Rehabilitation costs.

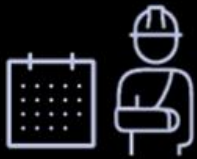


LEGAL COST

Potential legal costs may vary across each jurisdiction and are dependent on the actions of the Regulator.

Economical Cost

Between 2008 and 2018, there were:



623,663
work-related injuries or illnesses on average each year

If these incidents didn't occur, then Australia would have avoided:



A productivity loss of 2.2 million FTEs



Health expenditure costs of \$37.6 billion

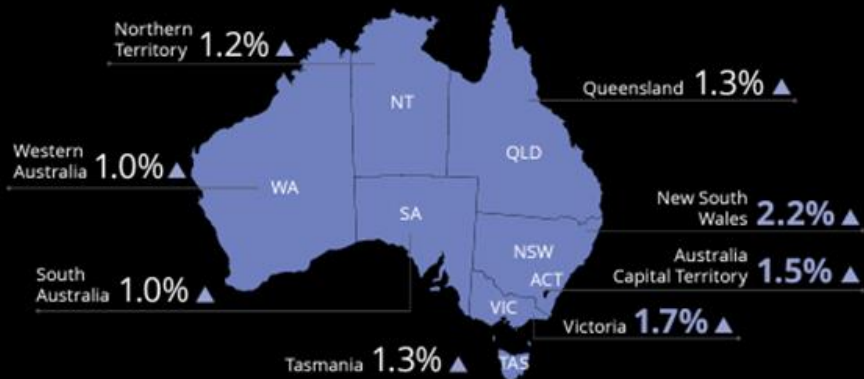


Other employer overheads of \$49.5 billion

By avoiding productivity losses and costs from work-related injuries or illnesses, Australia's economy would have been:



Annual economic impact (%) from reducing work-related injuries or illnesses by state or territory, 2008-18



Fewer work-related injuries or illnesses would accelerate our transition to a knowledge based economy.



130,400 (70%) FTEs of these roles are concentrated across skilled roles.



Organisational Cost

Injuries to people: Medical and hospital cost, first aid, transportation, pensions, worker compensation cost.

Property damage: Equipment replacement, loss of use and occupancy, insurance costs.

Rehabilitation: Providers, coordination, transports, training.



Investigation: Cost of investigation, cost of processing reports

Production loss: damaged products, loss of skill and experience, lowered productivity, idle time of employees, hours spent in cleaning up the accident area, time spent repairing damaged equipment.

Intangibles: Psychological effects on workforce, lowered employee morale, damaged career prospects, increased labour conflict, unfavourable public relations, loss of goodwill.

Miscellaneous: Difference between losses and amount recovered, rental of equipment to replace damaged equipment, wages for replacement employees

DISCUSSION

Pejr Business Aviation Pty Ltd 's supervisor instructed the worker to move to a different hotel during a stopover in Los Angeles to maximize rest time, which the worker refused, citing interference with her duties of picking up supplies for the next flight.

On a stopover in Los Angeles in the US in November 2021, her supervisor – the chief pilot – informed her the crew was moving to a different hotel because noisy construction work in their current accommodation would prevent them from sleeping properly before the next flight.

The worker was picking up supplies for the next flight and told the supervisor she would not have time to change hotels because this would interfere with the supplies task.

She stayed by herself at the original hotel and throughout the next day picked up fresh food items and meals for the next flight's passengers.

She was then dismissed. Applied to FWC for an unfair dismissal.

Do you think an employee has the right to apply for unfair dismissal? What are your thoughts?

Outcome:

Davoren v Pejr Business Aviation Pty Ltd [2023] FWC 239 (25 January 2023)

Commissioner Ryan ruled that the supervisor's direction was unreasonable, considering the worker's duties and the volume of items she needed to coordinate for the flight. He also rejected the employer's contention that the worker breached its rest time policies.

The worker's dismissal was deemed "harsh, unjust and unreasonable," and while reinstatement was deemed inappropriate due to the irretrievable breakdown of the relationship with her supervisor, the case was listed for a compensation hearing..

The supervisor's plan to maximize employees' sleep and prevent fatigue resulted in the worker being unfairly dismissed for defying the instructions to move hotels during a stopover in Los Angeles.

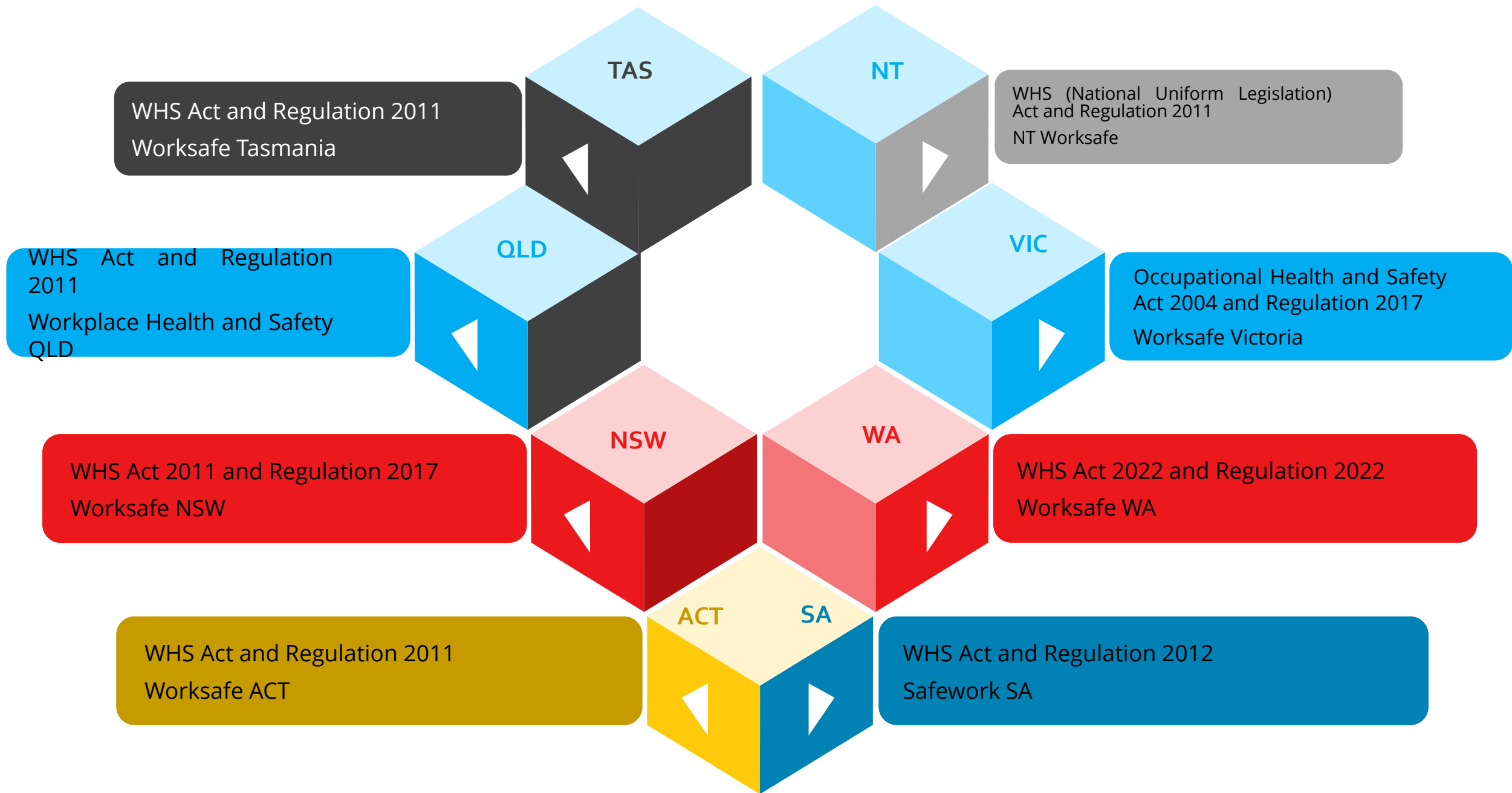
The worker argued that complying with the supervisor's instructions would have compromised her health and safety, as it would have interfered with her duties and caused fatigue.

MODULE 2

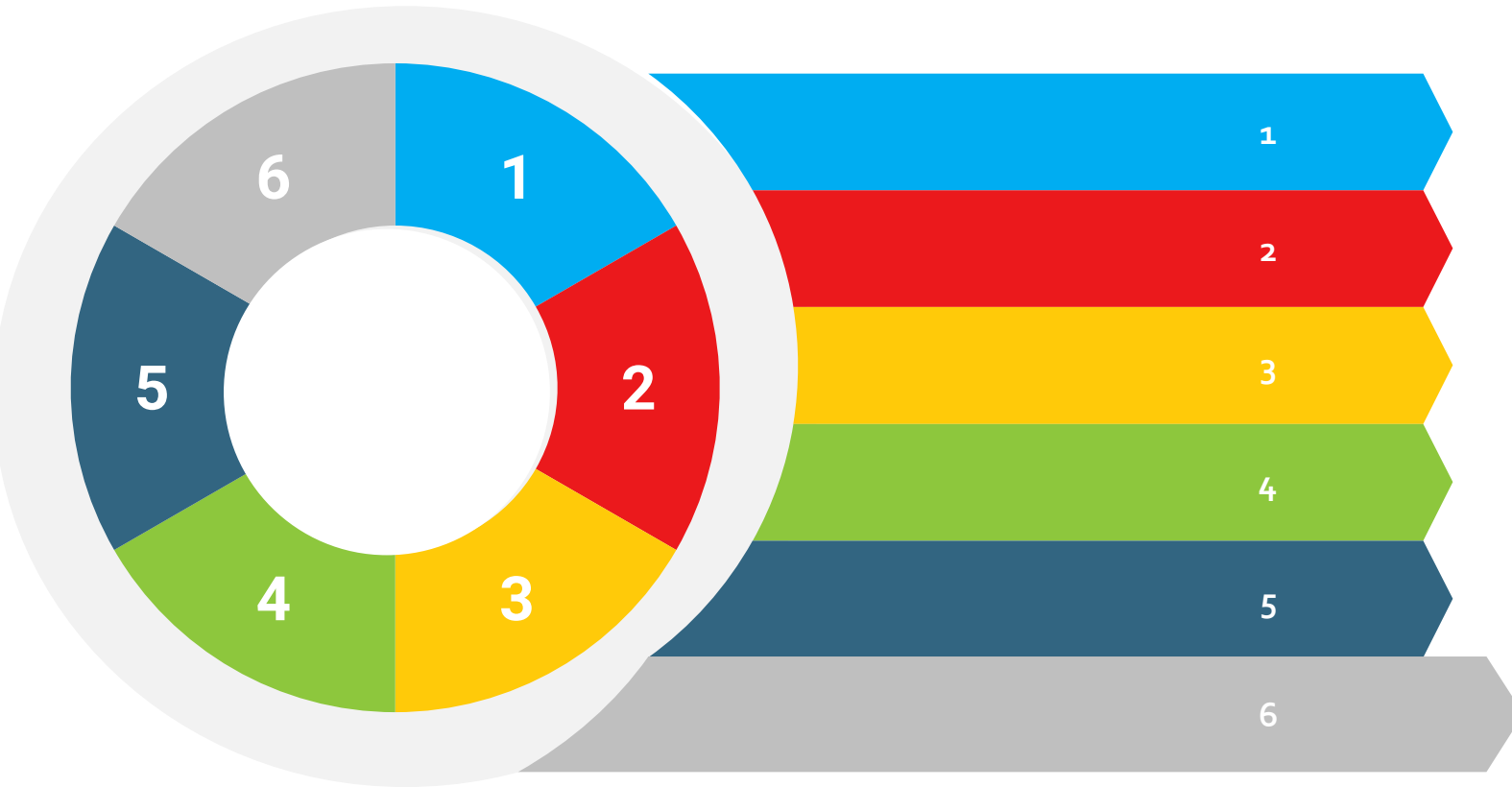
FATIGUE Management

Legal Responsibilities

Australian WHS/OHS LAWS

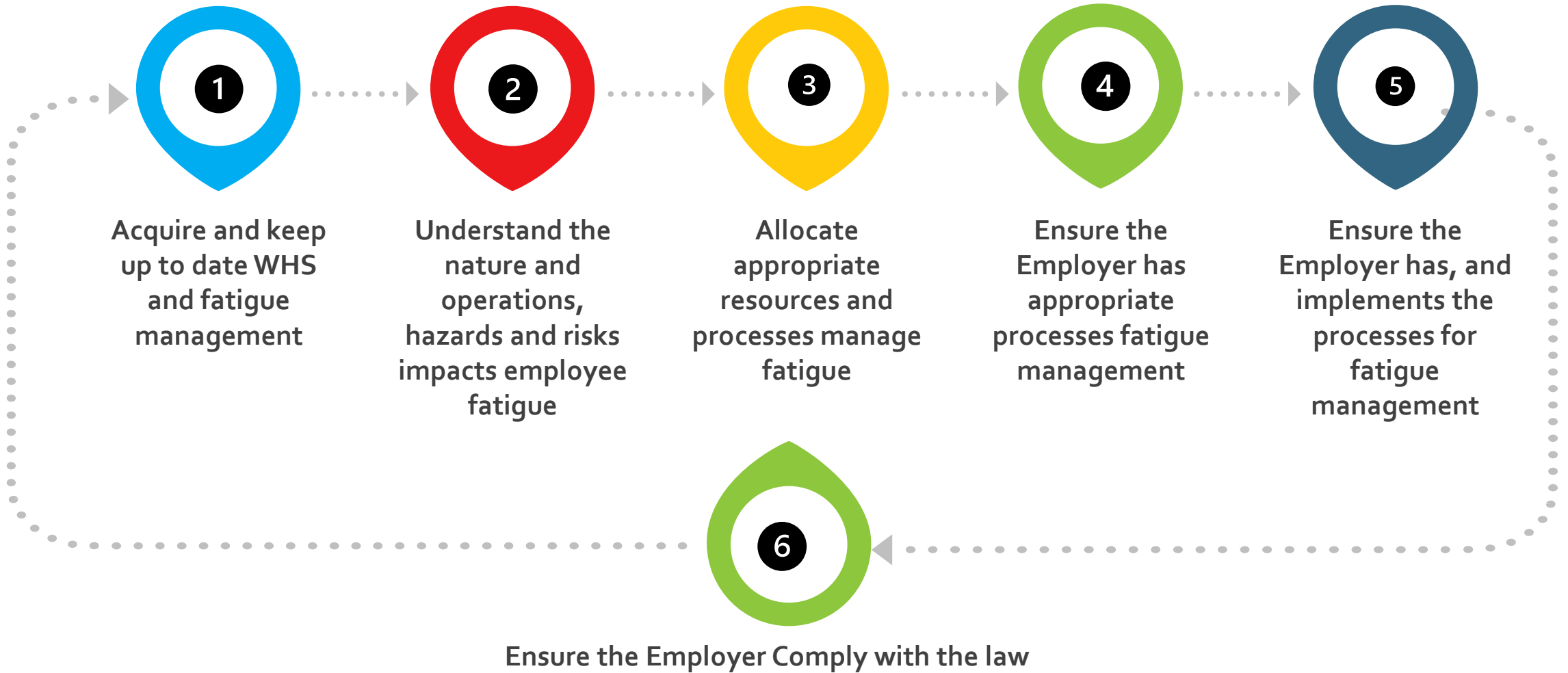


Person Conducting a Business or Undertaking (Employers)



- Provide systems for work schedules that prevent high levels of fatigue
- Provide work systems that allow for adequate rest and recovery periods
- Provide safe work practices, such as limiting overtime to sensible levels
- Provide systems to assess, control, and monitor fatigue-related hazards
- Provide and develop policies, procedures, and practices to manage risks related to fatigue
- Provide systems for information on workplace hazards

Officers



Workers and Others



1

Arrive at work in a fit state to work the expected shift length.

2

Report all safety incidents and accidents.

3

Maintain appropriate communication about safety with work colleagues, management, and relevant unions.

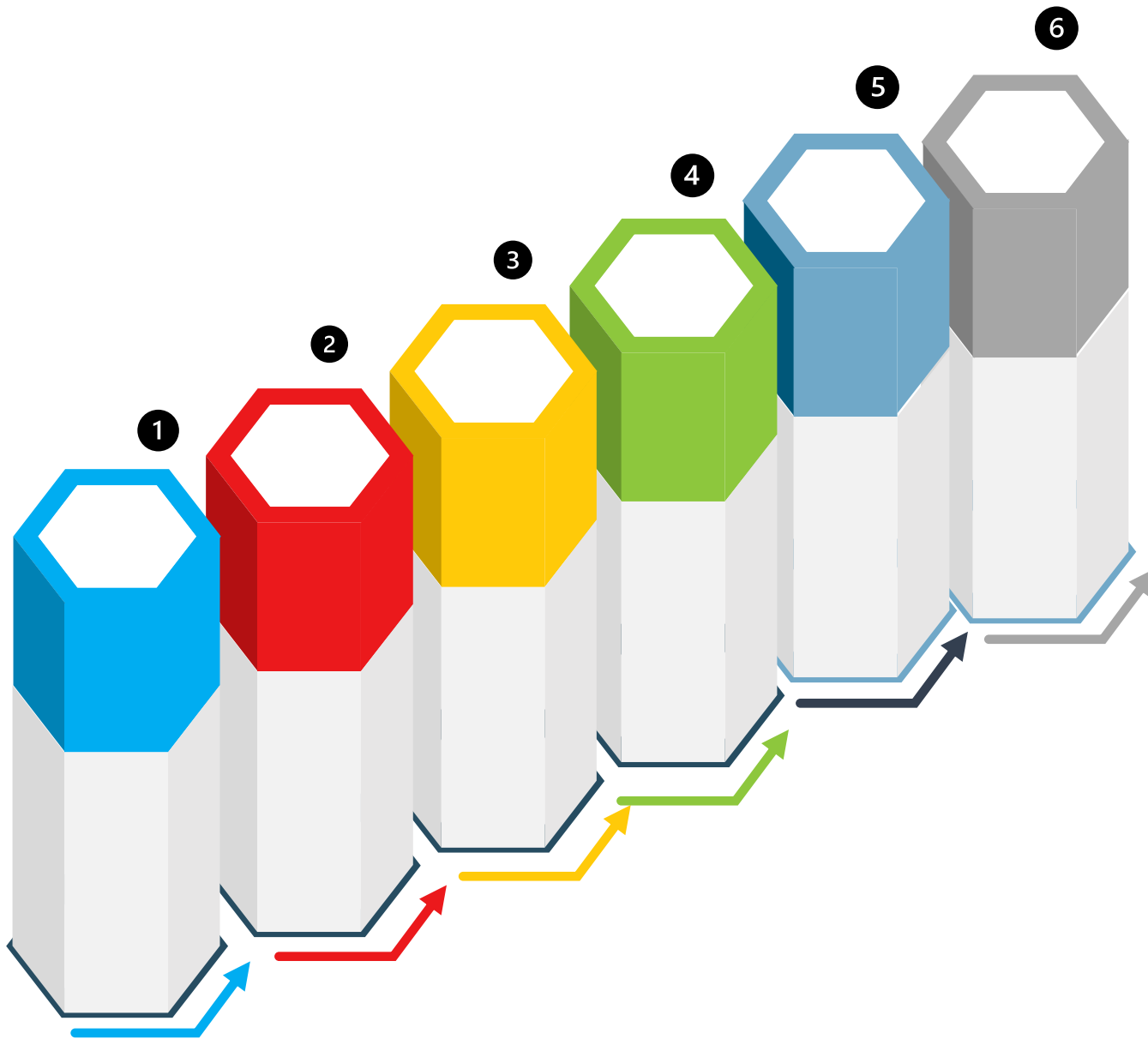
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Be aware of fatigue and how to counter its effects in the workplace.

5

Be aware of your shift intolerance such as night shift.

Managers and Supervisors



01

Develop, and assist work schedules that prevent high levels of fatigue.

02

Develop and assist work schedules that allow for adequate rest and recovery periods.

03

Ensure safe work practices, such as limiting overtime to sensible levels.

04

Continuously assess, control, and monitor fatigue-related hazards.

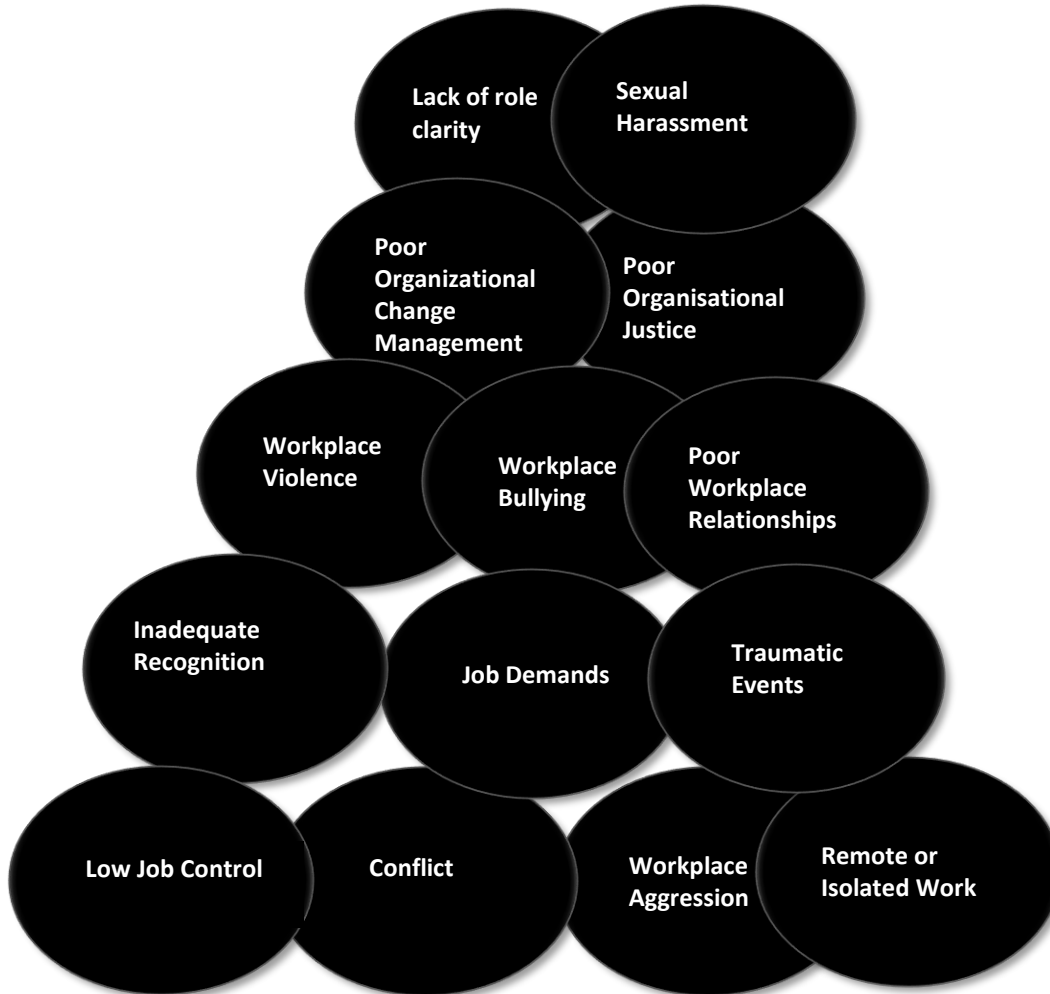
05

Develop and assist policies, procedures, and practices to manage risks related to fatigue.

06

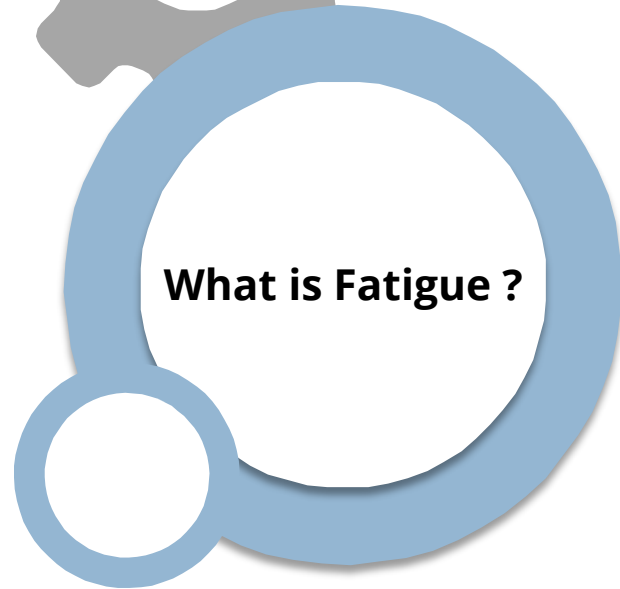
Provide and assist information on workplace hazards.

PSYCHOSOCIAL HAZARDS



LAWS

State/Territory	Status	Managing Risk	Apply Risk Controls
Australian Capital Territory	Law in effect	Yes	Yes
New South Wales	Law in effect	Yes	No
Northern Territory	Law in effect	Yes	Yes
Queensland	Law in effect	Yes	Yes
South Australia	Law in effect	Yes	Yes
Tasmania	Law in effect	Yes	No
Victoria	No	Section 21 of the Victorian - Occupational Health and Safety Act (2004), employers have a general duty care to provide and maintain for employees, as far as practicable, a working environment that is safe and without risks to health	
Western Australia	Law in effect	Yes	No
Commonwealth	Law in effect	Yes	Yes



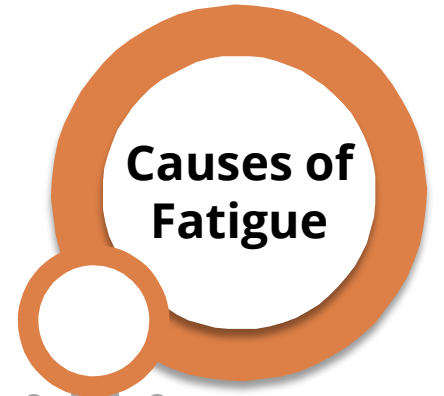
What is Fatigue ?



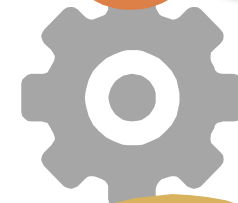
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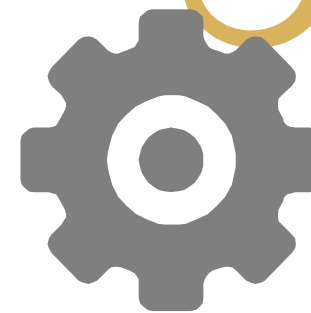
3



Causes of Fatigue



Signs of Fatigue



MODULE 3 FATIGUE MANAGEMENT

DISCUSSION

The Sleep Deprivation Quiz

7
Do you find that you can hardly make it through the working day without caffeine in some form?

1
Do you fall asleep in less than five minutes after going to bed?

2
Do you often feel like you could do with a nap?

6
Do you sleep an hour or two longer than usual on days when off duty?

3
Do you become drowsy after eating a large meal?

5
Do boring activities make you sleepy?

4
Do you fall asleep when watching TV or sitting in meetings and presentations?



What is Fatigue ?

“A state of impairment that can include physical and/or mental elements, associated with lower alertness and reduced performance...There are a number of contributing factors to fatigue, but they usually relate to lack of sleep quantity or quality, extending the time someone is awake, or other work related or individual factors.”

Fatigue is a physical condition in which:

- you feel exhausted all the time
- affects daily living
- mental and emotional state





If I am fatigued.....

- No one else will notice
- It's no one else's business
- A bit less sleep won't affect me
- Sleep is only about number of hours in bed
- I can substitute quality sleep with other mechanisms

Shift Work and Fatigue

- Globalisation, competition and demand
- Shift work on the rise (16% shift work)
- Work schedule design
- Different types of shifts
 - Extended shift
 - Night Shift->15% workers
 - Morning and afternoon shift



1

Trauma and Disaster Recovery

Trauma is any event that is perceived to be traumatic to an individual.

- Accident, assault.
- Abuse, neglect, bullying, torture.
- Bush fires, storms, acts of terror.
- Seeing or hearing about a traumatic event.
- Memories of past traumas.



1

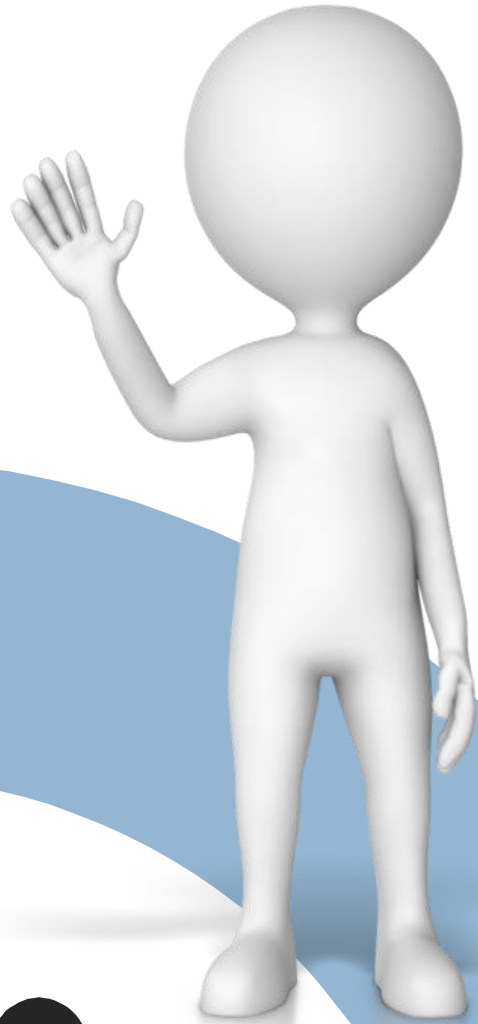
Emergency Recovery and Fatigue

During and after emergency

- Work long hours
- Face high level of stress
- Witness distressing scenes
- Balancing working in the recovery space while also trying to still manage work-days within your own normal workplace.
- Increased hours and demand because of the recovery effort

Leads to:

- Decreased concentration
- Difficulty in decision making
- Increased absenteeism
- Difficulty to sleep
- Conflict with other employees and customers
- Physical and mental health problems



1

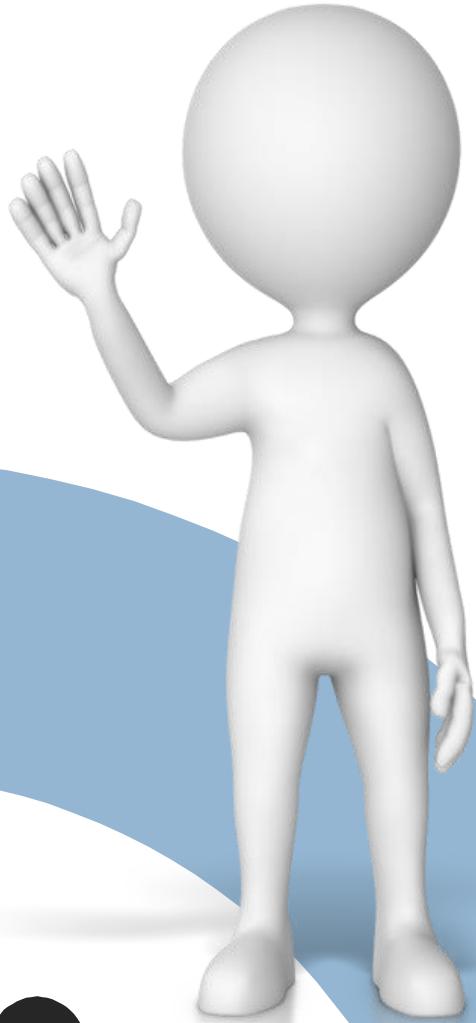
Recognizing the Signs of Trauma-Related Fatigue

Some common signs of trauma-related fatigue:

- Persistent tiredness,
- Difficulty concentrating,
- Increased irritability or anger, and
- Decreased motivation.

Employees may also experience:

- Physical symptoms such as headaches,
- Muscle tension, and
- Sleep disturbances.



1



2



What are the causes of fatigue?

- Emotional stress.
- Traumatic event.
- Mental workload.
- Exhausting or sustained physical exertion.
- Inadequate food and fluid intake.
- Adverse environmental conditions.
- Periods of monotony or boring activities.
- Disrupted and lost sleep.



DISCUSSION

- What are some of the signs and symptoms of fatigue?
 - Physical
 - Mental
 - Emotional

Signs And Symptoms Of Fatigue

3



Physical Symptoms

- Yawning
- Slowed blinking
- Headache
- Eye-rubbing
- Head droops
- Microsleeps

Emotional Symptoms

- Emotional Symptoms
- Quieter or withdrawn than normal
- Lacking in energy
- Lacking in motivation to do the task well
- Irritable or bad-tempered behaviour with colleagues, family, or friends



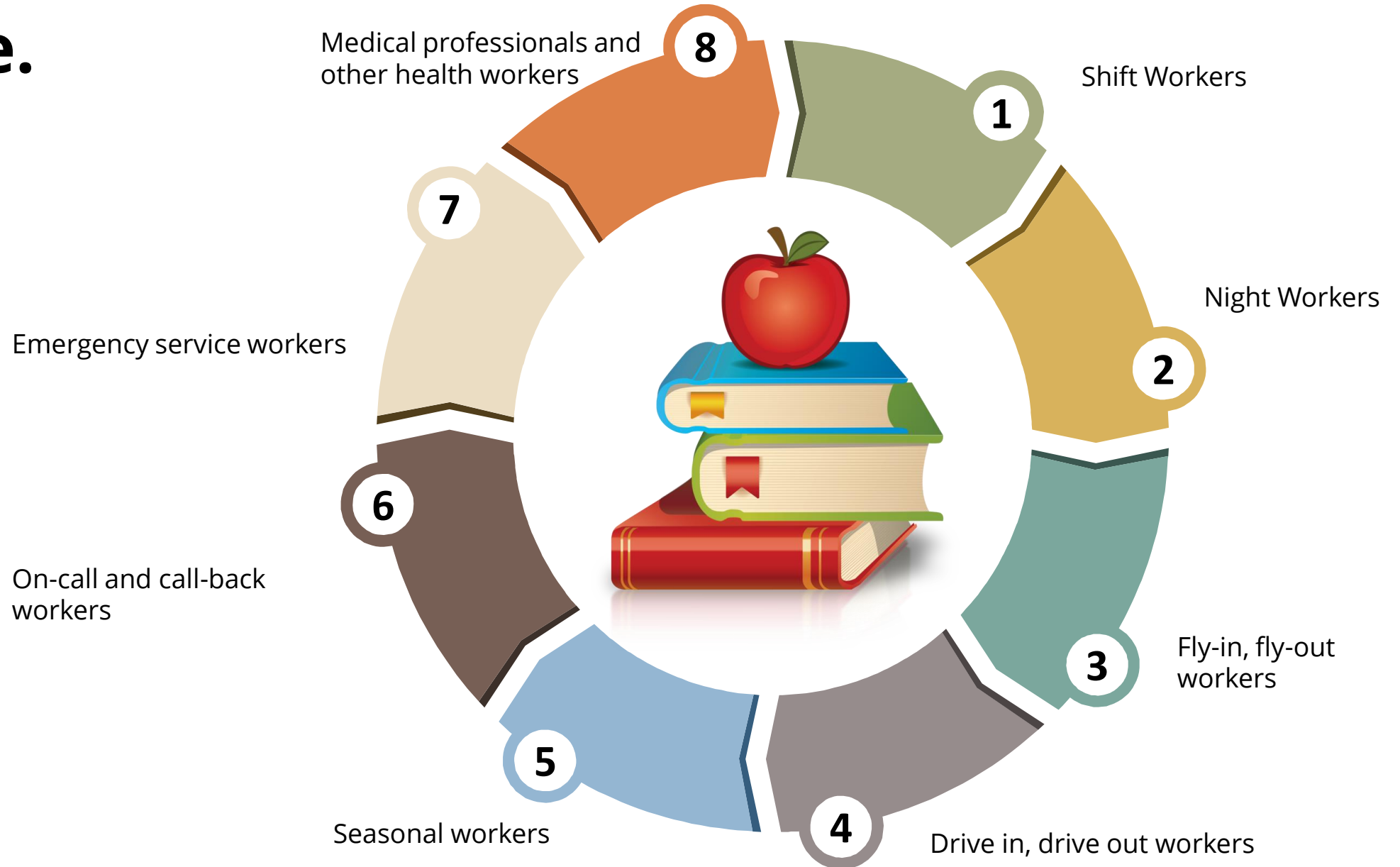
Signs And Symptoms Of Fatigue

Mental Symptoms

- Difficulty concentrating on tasks
- Lapses in attention
- Difficulty remembering what you are doing
- Failure to communicate important information
- Failure to anticipate events or actions
- Unintentionally doing the wrong thing
- Unintentionally failing to do the right thing



Employees at risk Of fatigue.



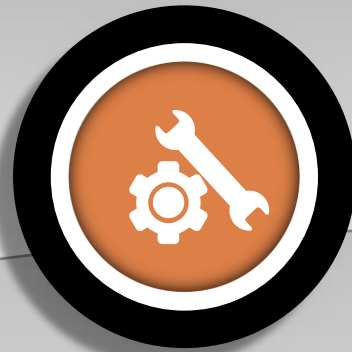
MODULE 4



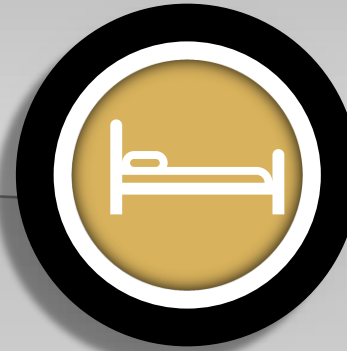
SLEEP



**BODY
CLOCK**



**SLEEP
CYCLES**



**SLEEP
DISORDERS**



REMEDIES



BODY CLOCK

CIRCADIAN RHYTHM

Our bodies are complex systems that operate on a 24-hour cycle known as the circadian rhythm.

LIKE PLANTS



Sleep at nights. Be active during the day

HEALTH



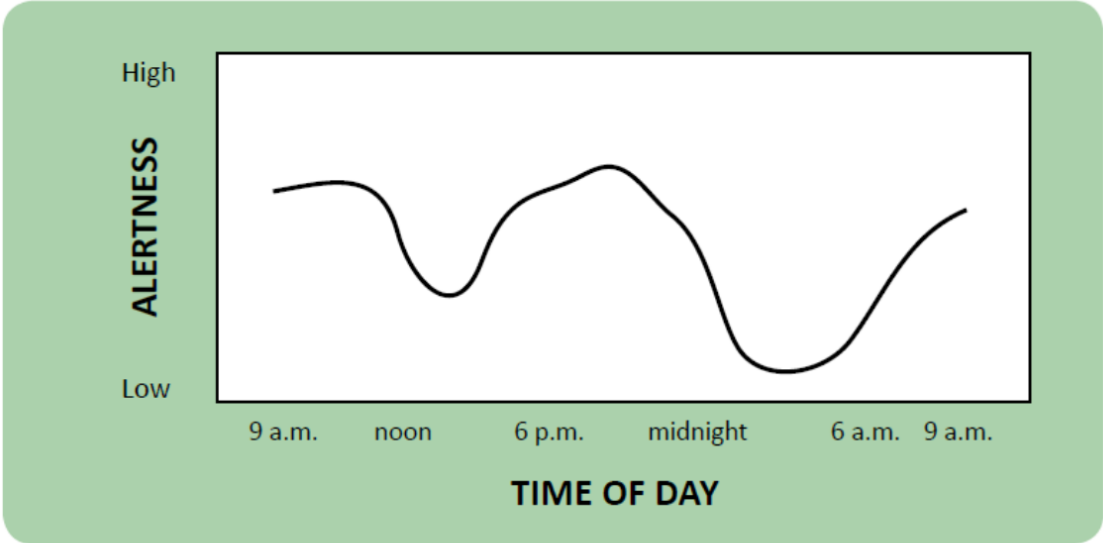
Clock regulates various physiological processes, including sleep-wake cycles, hormone production, and body temperature

Brain - suprachiasmatic nucleus (SCN)



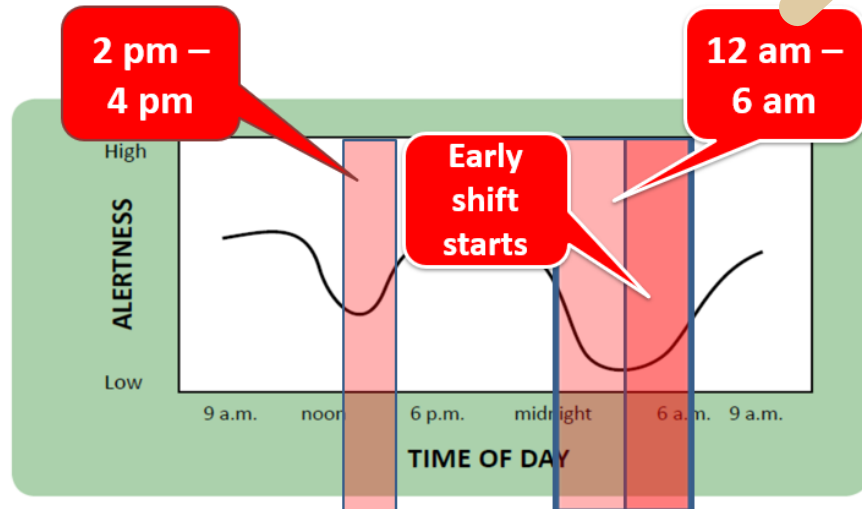
Receives signals from the environment, primarily light exposure, which helps synchronize our internal clock with the external world.

BODY CLOCK



Source – Salem Health - Sleep Centre

CIRCADIAN RHYTHM



Source – Salem Health - Sleep Centre

- Working midnight to dawn (especially between 2 a.m. and 5 a.m.).
- When regular breaks have not been taken.
- When shifts are longer than eight hours.
- Early shift starts (before 6 a.m.).
- When employees are new to the job or workplace.

Fatigue Vs Blood Alcohol Concentration

BAC is measured in grams of alcohol per 100 ml blood.

17 Hours Fatigue => 0.05% BAC

Likely presentation

- cheerful, relaxed, sense of wellbeing
- decreased inhibitions
- increased chance of accidents
- loss of fine motor skills

20 Hours Fatigue => 0.08% BAC

Likely presentation

- Intoxication and aggression.
- Speech, memory, coordination, attention, balance impaired.
- Significant impairment driving skills.

24 Hours Fatigue => 0.1% BAC

Likely presentation

- Impaired perception and memory.
- Vision issues, including decreased peripheral vision, blurriness, and delayed glare recovery.
- Loss of balance.
- Drowsiness.
- Nausea and vomiting.

The infographic features a central orange circle with the word "SLEEP" in white, topped with a white house icon. This circle is surrounded by a thick black ring and an orange ring, all enclosed within a dashed white circle. Four colored dots (orange, green, yellow, grey) are positioned on the dashed circle, with lines connecting them to text boxes on the right. At the bottom, there are icons for an alarm clock and a first aid kit.

SLEEP

SLEEP

Sleep is defined as a state of partial or full unconsciousness during which voluntary functions are suspended and the body rests and restores itself.

AVERAGE SLEEP

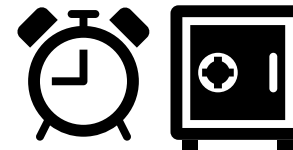
- Newborns sleep 16-18 hours a day
- Preschool sleep 10-12 hours a day
- School aged children and teens at least 9 hours a day
- Most adults 7-8 hours

SLEEP DEPRIVATION

Sleep deprivation occurs when an individual fails to get the amount of sleep that they need.

SLEEP DEBT

Sleep debt or sleep deficit is the cumulative effect of not getting enough sleep. A large sleep debt may lead to mental or physical fatigue, and can adversely affect one's mood, energy, and ability to think clearly.



Sleep cycle 120 minutes approximately 4-6 cycles – each cycle length of sleep drops

STAGE 1

Light sleep & easily awakened 1-7 minutes

Light Sleep

1

Light Sleep

2

STAGE 2

Eye movement & brain waves slowing down 10-25 minutes

Deep Sleep

3

STAGE 3

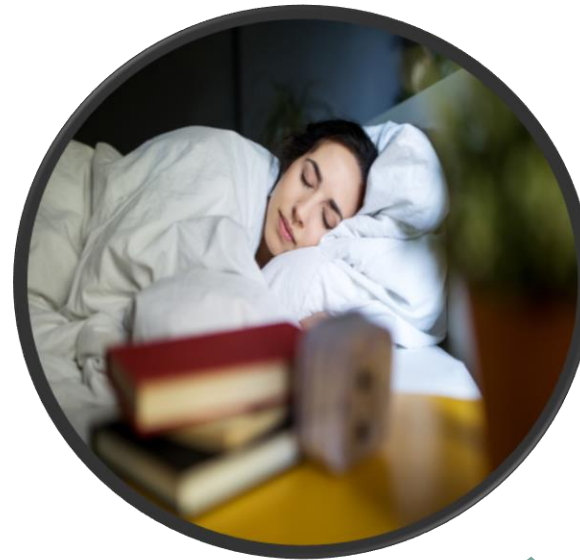
Deep sleep, difficult to wake up 20-40 minutes

Vivid Dreaming

4

REM STAGE

Breathing becomes more rapid and irregular 10-60 minutes





SLEEP DISORDERS

INSOMNIA

Difficulties falling asleep, staying asleep, or achieving restorative sleep, despite having the opportunity to do so.

SLEEP APNOEA

Sleep apnoea is a sleep disorder characterised by repeated interruptions in breathing during sleep.

SLEEP WALKING

Sleepwalkers tend to move about in their deep sleep. They may get out of their bed and sometimes even leave the house.

NARCOLEPSY

Narcolepsy is a chronic disorder of excessive daytime sleepiness. It may occur with other symptoms such as cataplexy, sleep paralysis and hallucinations.

MOVIE





REMEDIES

SETTING UP YOUR BEDROOM

- Block out as much as light as possible (Blackout curtains, roller shutters, heavy blinds)
- Use your bedroom only for sleep and relaxation (remove work desks, computers and even televisions)
- Control the noise that does enter your bedroom (roller shutters, double glazed windows and insulation)
- Reduce the impacts of noise that does enter your bedroom (aircon, fan noise)
- Ear plugs, and relaxation music
- Set up a thermo-neutral zone (18-24° C)
- Establish a pre-bed routine



Power Nap

- A power nap is a short period of sleep.
- 10-30 minutes



Benefits of Power Nap

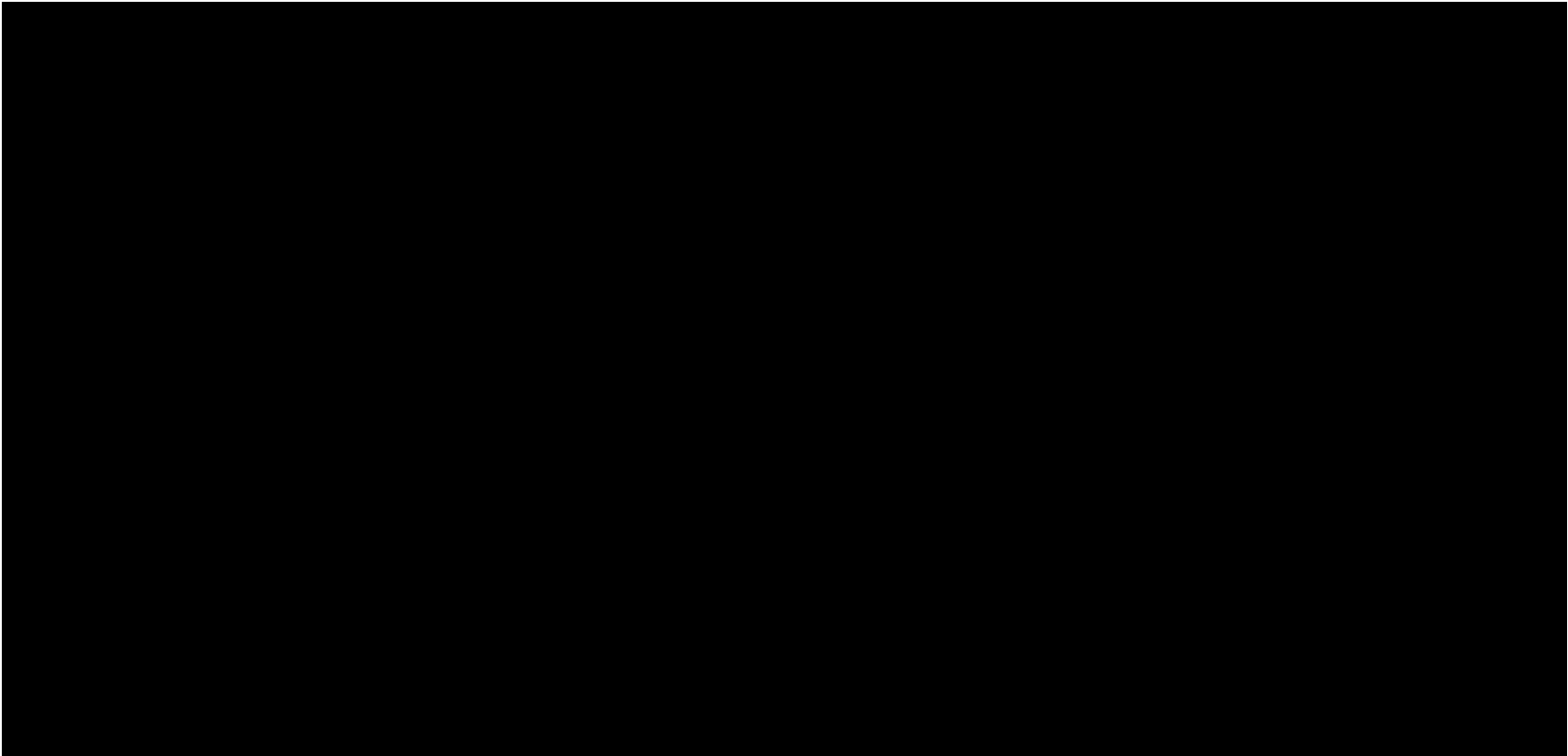
- Help us recover from sleep deprivation.
- Reset our systems, replenish our energy levels.
- Improve our performance.

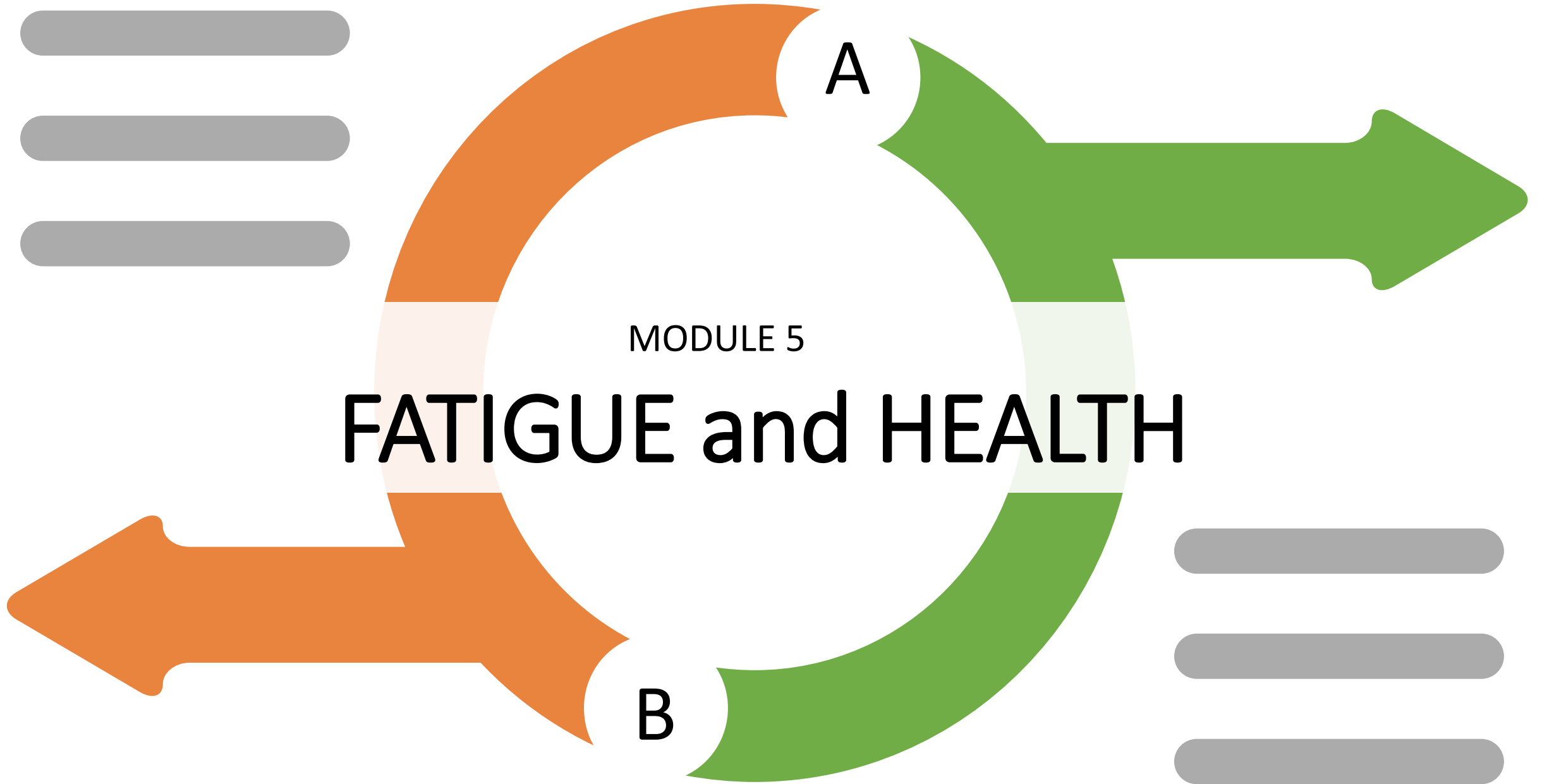


Setting Up for a Power Nap

- Location
- Timing
- Distractions
- Comfort
- Environment

MOVIE





MENTAL HEALTH

PHYSICAL HEALTH

WORKPLACE

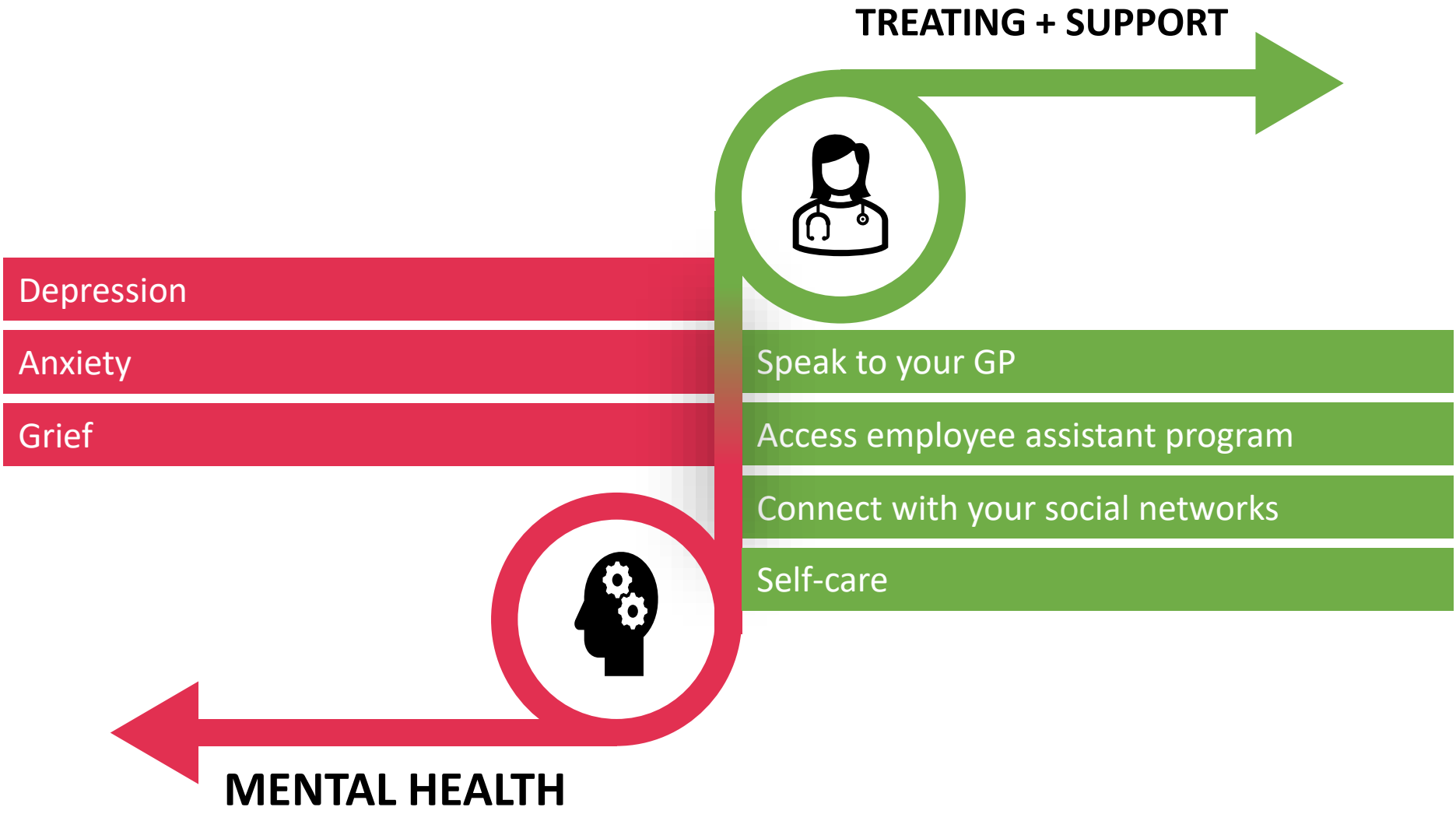
FOOD

FOOD

HYDRATION

COFFEE

EXERCISE



Strategies for Managing Fatigue and Restoring Productivity in Traumatized Employees

- Promote work-life balance

- Provide access to resources

- Encourage self-care

- Foster a supportive workplace culture

Providing Support and Resources for Traumatized Employees

- Provide EAP

- Flexible work arrangements

- Peer support networks

- Education and Training (e.g. MHFA Training)

- Anemia
- Arthritis
- Fibromyalgia
- Chronic fatigue syndrome
- Infections, such as cold and flu
- Addison's disease, a disorder that can affect your hormone levels
- Hypothyroidism, or underactive thyroid
- Hyperthyroidism, or overactive thyroid
- Sleep disorders, such as insomnia
- Eating disorders, such as anorexia
- Autoimmune disorders
- Congestive heart failure
- Cancer
- Diabetes
- Kidney disease
- Liver disease
- Chronic obstructive pulmonary disease (COPD)
- Emphysema

TREATING + SUPPORT

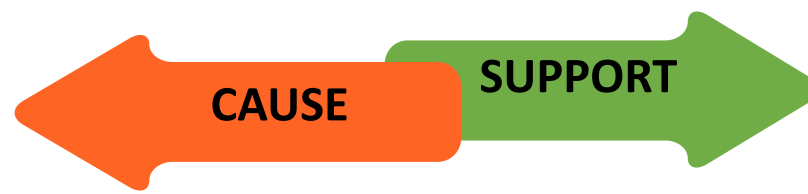


Speak to your GP

Self-care

Connect with your social networks

PHYSICAL HEALTH



Shift Work



Poor Workplace Practices



- Long work hours,
- Hard physical labour, irregular
- Working hours (such as rotating shifts),
- A stressful work environment (such as excessive noise or temperature extremes),
- Boredom, working alone with little or no interaction with others, or
- Fixed concentration on a repetitive task

Workplace Stress



Burnout



Unemployment



Shift work schedule design

Developing a working-hours policy on daily work hours, maximum average weekly hours, total hours over a three-month period, on-call work and work-related travel.



Job demands

- Encouraging workers to report work-related fatigue
- Redesigning the job to limit periods of excessive mental or physical demands
- Introducing to job rotation to limit a build-up of mental and physical fatigue
- Developing contingency plans for potential situations Planning for expected changes in work flow.



Environmental conditions

- Avoid or minimise working during periods of extreme temperature
- Provide a cool area where workers can take a rest break and rehydrate
- Install ventilation and mechanical cooling devices
- Provide adequate facilities for rest, sleep, meal breaks, site accommodation
- Install adjustable, low-vibration seats in machinery and vehicles
- Provide and maintain a workplace which is well lit, safe and secure.

DIET

- Drink plenty of water
- Be careful with caffeine
- Eat breakfast – food boosts your metabolism and gives the body energy.
- Don't skip meals – going without food for too long allows blood sugar levels to dip.
- Eat a healthy diet – increase the amount of fruit, vegetables, wholegrain foods, low fat dairy products and lean meats in your diet.
- Don't overeat – large meals can drain your energy.
- Eat iron rich



SLEEP

- Get enough sleep.
- Go to bed and get up in the morning at the same time every day.
- Have a warm bath or shower before bed.
- Limit caffeine –cause insomnia.
- Learn how to relax – relaxation technique. Avoid sleeping pills – sleeping pills are not a long-term solution because they don't address the causes of insomnia.



LIFESTYLE

- Don't smoke – cigarette smoke contains many harmful substances.
- Increase physical activity – physical activity boosts energy levels, while a sedentary lifestyle is a known cause of fatigue.
- Move more, sit less.
- Seek treatment for substance abuse.
- Workplace issues



PSYCHOLOGICAL

- Talk about it.
- Reduce stress.
- Assess your lifestyle.
- Learn to do nothing.
- Have more fun.
- Talk to your GP.
- Access Employee Assistance Program.



Understanding and preventing fatigue.



