2019

# JMO Handbook Shift Work, Fatigue and Wellbeing

Identify. Assess. Action.

NSW GOVERNMENT
Health
Hunter New England
Local Health District

Calvary
Mater Newcastle

# Table of Contents

# Introduction

**Delivering healthcare in Australia is a 24 hour, 7 day process, whereby around-the-clock delivery has become a community expectation in all metropolitan and most rural hospitals. Providing that level of care often requires complex rostering of a finite workforce, notably junior medical officers (JMOs), to cover acute hospital wards and services both day and night.**

This handbook has been developed to provide JMOs with a suite of practical tools and tips to assist with managing fatigue in the workplace and at home.

This guide examines the evidence concerning the hazards of shift work and provides techniques that can be used to reduce the risks associated with fatigue.

The main advice presented in this handbook is to minimise sleep debt, improve the quality of sleep, increase awareness of the effect of the circadian rhythm, encourage active monitoring of a JMOs personal life and wellbeing, and for the organisation to improve rostering practices and the general work environment.

By implementing this framework we are aiming for sustainable cultural change within the medical workforce, that will ensure the safety of both hospital patients and junior doctors.

*Note that within NSW Health, "JMO" encompasses those working as interns, residents and registrars (both accredited and non-accredited trainees).*



# Identify, Assess, Action

**The HNE-LHD Fatigue Risk Management Framework proactively controls risks through:**

Identify

1. *Identification of fatigue related signs and symptoms*

Assess

2. *Assessment of work and personal factors contributing to fatigue*

Action

3. *Action improvements to rostering to provide ample opportunity to sleep and rest*

# HNE-LHD JMO Wellbeing Action Plan

**Goal:** To improve the health, wellbeing, education and training experience of JMOs working in HNE-LHD

**Aim:** To spread a consistent JMO management framework across 9 acute sites in the LHD, and to include all JMOs from Intern to Advanced trainee

**Scope of plan:** There are 6 domains in the HNE action plan; the fatigue risk management framework forms part of the rostering and wellbeing domains

- Rostering and Allocations
- Education and Training
- Overtime
- Wellbeing
- Access to Leave
- Morale and Culture


**Download from**
https://www.health.nsw.gov.au/workforce/culture/publications/jmo-support-plan.pdf

- Employees must not be rostered for shift periods totalling more than **14 consecutive hours** (inclusive of meal breaks and handover)
- **Break** after rostered shift periods must be at least **10 hours**
- **Rostering review and safe hours policies and practices** – review of unclaimed and unpaid hours worked
- **NSW Health "JMO Your training and wellbeing matters' survey" –** annual census
- Establishment of a **JMO Recruitment Governance Unit**
- Expansion of length of training contracts and **improved parental leave** policies

# Morale & Culture

We are an organisation committed to JMO welfare, we offer transparency, openness and a human approach; we want to ensure that JMOs are satisfied in their employment and have the best career development opportunities. We are committed to:

- JMOs feeling **valued** for their work
- Working in a culture of **respect**
- Ensuring senior leaders **role-model** 'Excellence'
- **Improved rostering** practices
- Uninterrupted **breaks**
- Protected **training and education** time
- Formal **mentorship** programs
- Provision of **flexible work** options, e.g. support for job share or part-time positions

STATEMENT OF AGREED PRINCIPLES
**ON A RESPECTFUL CULTURE IN MEDICINE**

**OUR ORGANISATIONS:**

A. Are committed to creating a respectful culture in the practice of medicine, fostering a profession that reflects the diversity of our community, and promoting a culturally safe workplace for Indigenous Australians;

B. Agree that places of work, training and education are places where all participants should be treated with dignity and respect, and be free from unacceptable behaviour, including bullying, discrimination, harassment and racism;

C. Recognise that past practices and behaviours have not always met the high standards required to provide a safe, inclusive and respectful environment; and

D. Recognise that each party has a different, but valuable role to play in achieving this goal, as employer, educator, trainer, professional association or member organisation.

**OUR ORGANISATIONS AGREE TO:**

1. Take active steps to build and promote respect, equity, diversity, fairness and cultural safety within our organisation and in our dealings with students, trainees, supervisors, practitioners, employees, contractors, members and each other.
2. Implement policies that promote diversity and respectful behaviours and clearly describe what is unacceptable and unlawful behaviour.
3. Provide support, education and training to students, trainees, supervisors, practitioners, employees, contractors and members to prevent and eliminate unacceptable behaviours.
4. Ensure complaints about unacceptable or unlawful behaviour or other breaches of policy are dealt with quickly, fairly and transparently. Protect complainants from unwarranted retaliation or victimisation, and ensure that prompt and appropriate action, including sanctions, is taken where breaches are proven.
5. Actively cooperate on policies and initiatives designed to promote diversity and respectful behaviour and discourage unacceptable behaviour.
6. Ensure our leaders model appropriate behaviour and actively promote a respectful culture.
7. Demonstrate transparency and accountability in the organisation's progress towards a respectful culture by means such as feedback, reporting, research, publications and surveys.
8. Review the outcomes of policies, actions and other initiatives at regular intervals in order to assess and improve their effectiveness.

**ENDORSED BY:**

**Download from**
https://www.health.nsw.gov.au/workforce/culture/publications/jmo-support-plan.pdf

# Background

## What is fatigue?

Fatigue refers to mental or physical exhaustion that stops a person from being able to function normally. It is more than simply being tired or drowsy. Fatigue is caused by prolonged periods of physical and/or mental exertion without time to rest or recover.

Fatigue is generally caused by:

- **Prolonged mental or physical activity**
- **Sleep loss and/or disruption of the internal body clock**

Factors both in and outside of the workplace can be a source of fatigue. These include:

- Sleeping Habits
- Quality of Sleep
- Circadian Rhythm
- Personal Life and Wellbeing
- Rostering
- Work Environment


## Can we manage fatigue?

**What we (the organisation) can do:**

- Design safe rosters with adequate recovery periods, breaks and night shifts
- Implement safe work practices for overtime and call-backs
- Review job demands and workload
- Improve environmental conditions, facility, culture and workplace behaviours
- Implement governance, policies and accountability
- Provide training for JMO managers and supervisors

**What you (the JMO) can do:**

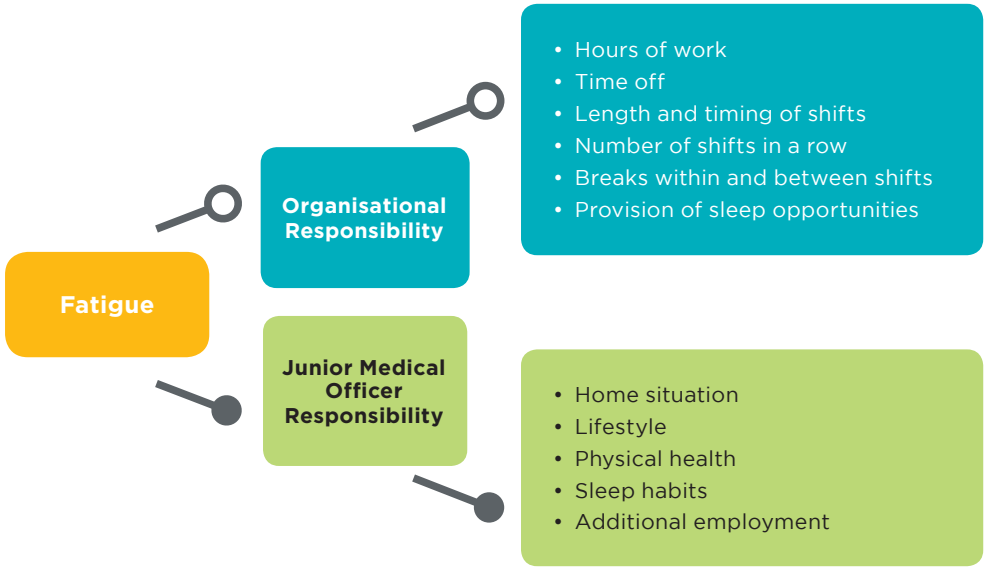
- Be fit for work
- Assess your sleep quantity and quality
- Escalate to management or supervisors if you are feeling fatigued
- Be self-aware to the impact of your lifestyle and non-work related activities
- Avoid risky behaviors when tired e.g. driving

# Fatigue Risk Management Framework

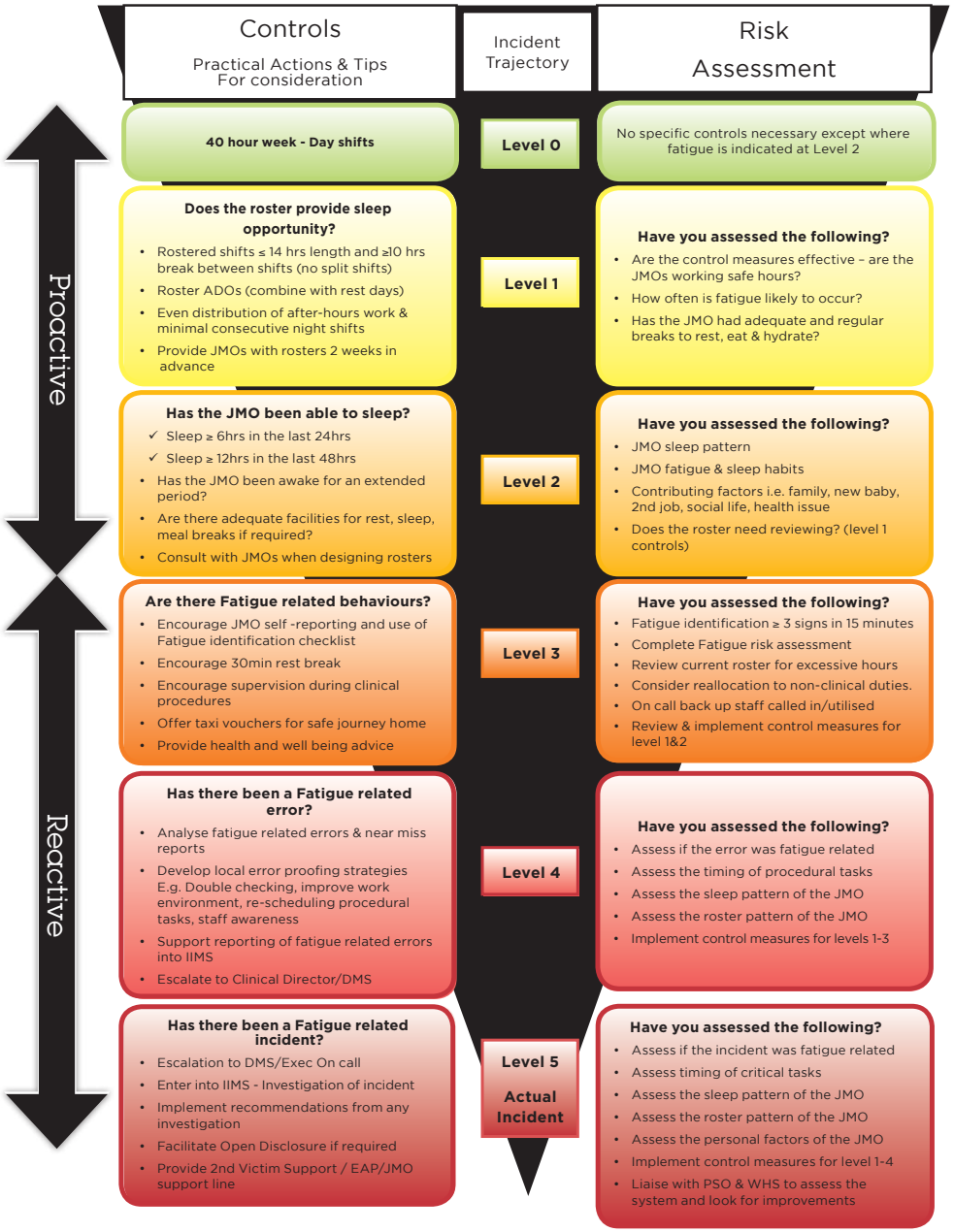
The framework presented is based on a fatigue risk management system that was implemented across Queensland Health in 2009, as well as learnings from global mining and aviation sectors. This framework includes 5 levels of control to manage fatigue related risks and hazards. The organisation aims to develop strategies that recognise and respond to fatigue in the medical workforce.

Both employers and JMOs need to be aware of the risks posed by fatigue on the job, and take steps to reduce that risk. Each group needs to be mindful of their roles and responsibilities.

JMOs are responsible for using their allocated time away from work to obtain sufficient sleep in order to work safely and be fit for work. JMOs have a duty to alert their employer if they have not had sufficient sleep.




# Fatigue Risk Management Framework




*Adapted from: Centre for Sleep Research, University of South Australia, as cited in Queensland Health (2009)*

# Shift Work and Safety

Fatigue has long been known to reduce performance. Working at night reduces alertness, vigilance and cognitive reasoning. In fact, there is now clear international evidence that junior doctors who are sleep-deprived have more attentional failures and make more clinical errors than when they are able to gain enough sleep.


**20 – 25 hours without sleep reduces psychomotor performance to the level of someone with a blood alcohol concentration of 0.10 % which is significantly greater than the current maximum level for legal driving.**

Evidence from the U.S. shows that doctors who work extended shifts of 24 hours or longer, more than double their risk of being involved in a road traffic accident on their journey home compared with those working shorter shifts.

The likelihood of having a car crash on the way home is greater following a night shift than after any other shift. Moreover, when you are tired you become less able to judge your own performance accurately, so you may not even realise that you are making mistakes.

**Exhaustion also impairs learning and decreases your ability to make correct diagnoses. This can have important implications for both training, patient care and the health service. The combination of fatigue and a poorly adapted body clock, makes working during the night uncomfortable and increases errors.**

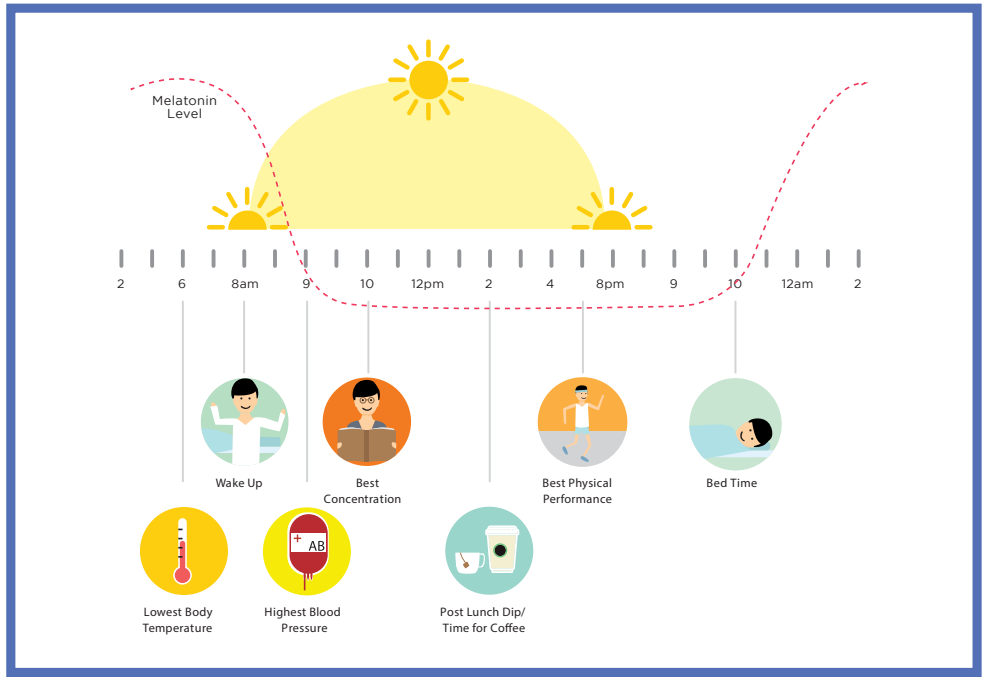
It has been found that errors or injuries in doctors in training were increased when they worked extended hours. The risk of occupational sharps injuries, motor vehicle accidents or making a serious medical error increase significantly with hours of duty.

**Doctors working more than 80 hours per week have been shown to be 1.6 times more likely to report an adverse patient event or medical error.**

# The Body Clock

Working at night inevitably causes sleep deprivation and fatigue. This is because the human body is designed to sleep at night. Our bodies are controlled by an internal daily body clock, situated in the suprachiasmatic nucleus (SCN) in the hypothalamus. The SCN spontaneously generates the circadian rhythms that regulate many physiological and behavioural processes in our bodies, such as temperature control, hormone production, alertness and sleep.

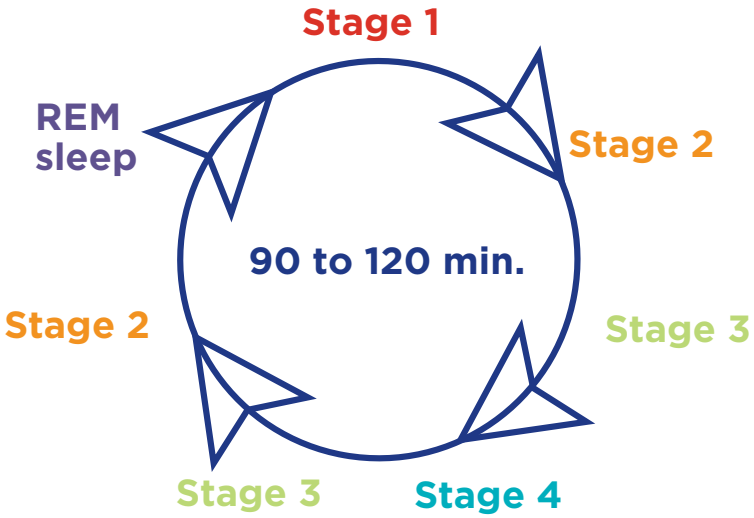
These circadian rhythms run over a period of approximately 24 hours and are strongly influenced by the natural cycles of light and dark. At night, many of the processes that are active during the day start to slow down as our bodies prepare for sleep. The circadian pacemaker also stimulates night-time release of the 'sleep hormone' melatonin from the pineal gland, which has the effect of lowering alertness and increasing the desire for sleep.




# Sleep Cycle

Sleeping undisturbed for 8 hours allows your body to regulate the quality of each stage of sleep it gets. A complete sleep cycle can last between 60 and 90 minutes.

## Five sleep stages




**Stage 1** is the transition between consciousness and sleep. You can generally hear and respond to someone.

**Stage 2** is a light sleep. You are easily awakened but you're not aware of your surroundings. You spend about half your sleep time in stages 1 and 2.

**Stages 3** and **4** are deep slumber. This is a restorative phase.

**Stage 5** is known as REM or rapid eye movement sleep, and it's the stage of sleep where you dream. It's thought to be important for learning and consolidation of memory. Whenever you're sleep deprived, your body will first try to catch up on deep sleep (stages 3 and 4) and REM sleep.

# Sleep Hygiene

Sleep hygiene is about having good habits that ensure sleep quality and alertness during the day. Good sleep hygiene benefits both your physical and mental health. Other benefits include improved productivity and better overall quality of life.

**Sleep Calculator**

This website can help you to optimise the length of your REM (deep, restorative) sleep when you are working shifts. It calculates either the best time to go to sleep or the best time to wake up. https://sleepcalculator.com/

## Set up your bedroom for sleeping

**Dark**
Light makes your body think it's time to wake up, therefore your room should be dark.

**Temperature**
As soon as the temperature falls outside of 18-24°C, your body will keep you awake to cool down or heat up as necessary.

**Distractions**
Try to use your bedroom only for relaxing and sleeping. Move potential distractions such as televisions and computers to another room.

**Noise**
Use an answering machine for your phone. If there are children in the house, make sure they won't wake you. If noise is keeping you awake, try using ear plugs or use "white noise", such as a fan or an untuned radio, to help dampen other sounds.

## Good sleep habits

**Routine**
Doing little things like brushing your teeth every day in the same order before bedtime can train your body that it's time to sleep, even if it's daytime and your body is normally awake.

**Wind down**
It's better to relax before trying to sleep. A little light exercise can sometimes help, although avoid anything strenuous.

**Eating and drinking**
Your body is programmed to digest food during the day, so it's better not to eat a big meal just before bedtime. A light snack may be okay. Avoid anything with caffeine, such as coffee or energy drinks. Alcohol is not a good idea either, because you won't sleep as deeply and don't wake up feeling as refreshed.

**Don't toss and turn**
If you can't get to sleep, it's sometimes better to get up and do something relaxing instead of tossing and turning. Try reading or taking a bath.

**Adjusting to new shifts**
Try changing your bedtime by an hour or two each day to get your body gradually used to your new shift.

# Sleep and Shiftwork

The ability to cope with shiftwork varies from person to person, and depends on your individual circadian rhythm. People can generally be divided into morning or evening types.

Morning people adapt better to early morning hours but have more trouble coping with night work. Evening types cope better with evenings and night shifts. They tend to manage better overall since they generally have less rigid sleep habits and find it easier to catch up by sleeping late in the morning.

## How much sleep do I need?

It varies from person to person, most people need between 7 and 9 hours per day.

## When should I sleep?

Most people fall asleep naturally somewhere between 10 p.m. and 7 a.m. Sleeping outside these times is usually more difficult. Research suggests that night shift workers get 1 to 3 hours less sleep per day than day workers. In addition to sleeping less, people who work shifts get sleep of a lower quality.

## Why can't I get enough sleep?

- **Inadequate sleep opportunity** – this is a sign that there is an issue with your roster which should be discussed with the JMO manager
- **Personal stress** – there may be things going on in your life outside work that are affecting your ability to get adequate sleep e.g. sick children at home, social or family life
- **Medical problems** – cold, flu or even a sleep disorder can affect your sleep

# Driving Home

One of the most dangerous things you can do while fatigued is drive. You may be driving during the very times that your body most wants to sleep.

Night shift workers are 4 to 7 times more likely to have an accident when driving home.

**Some times are more dangerous than others for driving. There are circumstances when you should be more aware of the risk of having a fatigue-related accident:**

- Long drives without a break
- Driving home after a long shift
- Driving between midnight and 6 a.m.
- Driving in heavy traffic
- Long stretches of road with low traffic

**Strategies to get home safely**

- You could have a **coffee** before leaving work, but remember it may affect your ability to get to sleep when you get home.
- You could also have **a nap** before you leave work, but be sure to wait until you're fully awake before getting behind the wheel.
- **Drive carefully**, don't speed to get home faster, PULL OVER if you find yourself fighting to stay awake.
- If your hospital has **taxi vouchers** available speak to the afterhours bed manager. Book a Taxi on 131 008 or via the app 13cabs at the end of your shift.

# Signs and Symptoms of Fatigue

## How can you tell if another person is tired?

**Physical:** falling asleep, head nodding, heavy eyelids, rubbing eyes, lack of coordination, dizziness, change in appetite, headache, impaired vision, yawning

**Mental:** making errors, difficulty making decisions, difficulty concentrating, trouble communicating, short attention span, lapses in memory, slower reaction times

**Emotional:** irritable, unmotivated, lethargic, lacking in energy, quiet, withdrawn

If you catch someone yawning 3 times in 15 minutes, you should bring it to their attention. If it looks like they may fall asleep, you should tell your supervisor/ manager.

AMA Fatigue Risk Assessment Tool -
Allows a JMO to review a 7 day period of their roster.
http://www.safehours.ama.com.au

**Being fatigued can make you a risk to yourself, other clinicians, and your patients.**





# Identify - Fatigue

*Adapted from: Fatigue Risk Management System for the Canadian Aviation Industry. McCulloch et al (2007)*

## Fatigue Identification Checklist

| Physical | tick | Mental | tick | Emotional | tick |
|---|---|---|---|---|---|
| Yawning | | Difficulty concentrating | | Quieter than usual | |
| Heavy eyelids | | Lapses in attention | | Increased stress levels | |
| Blurred vision | | Difficulty remembering | | Reduced motivation | |
| Head drooping | | Failure to communicate important information | | Lacking energy | |
| Feeling tired after sleep | | Risk taking behaviour | | Anxiety and decreased tolerance | |
| Reduced performance | | Disorganisation | | Mood disturbances | |
| Slower reaction times | | | | Emotional outbursts | |
| Impaired hand eye coordination | | | | Irritability | |
| Headache | | | | Irrational reactions | |
| Micro-sleeps | | | | | |
| **Sub-Total =** | | **Sub-Total =** | | **Sub-Total =** | |
| | | | | **Grand Total =** | |

A JMO who presents with 3 or more symptoms within 15 minutes is likely to be experiencing fatigue related impairment.

**Progress to formal assessment where Scores are >3 for the JMO**

| JMO Manager Signature: | | Date: |
|---|---|---|

# Sleep Opportunity

Evaluate your roster in order to calculate your fatigue risk score. You will need to look at the factors that affect sleep opportunity, for example shift length, days off, and number of night shifts.

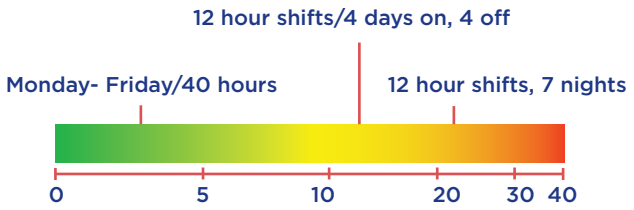
For instance, a 9 a.m. to 5 p.m. standard work week (5 days in a row) would produce a score of zero. On the other hand, a roster of seven 12-hour night shifts, followed by seven days off would produce a score of 21, which would be considered high.

*The table shown here is an example only.*

**Fatigue Likelihood Scoring Matrix of Work Schedules**

| | 0 points | 1 point | 2 points | 4 points | 8 points |
|---|---|---|---|---|---|
| **a) Total hours per 7 days** | ≤ 36 hours | 36.1 - 43.9 | 44 - 47.9 | 45-54.9 | 55+ |
| **b) Maximum shift duration** | ≤ 8 hours | 8.1 - 9.9 | 10 - 11.9 | 12 - 13.9 | ≤ 14 |
| **c) Minimum short break duration** | ≤ 16 hours | 15.9 - 13 | 12.9 - 10 | 9.9 - 8 | ≤ 8 |
| **d) Maximum night work per 7 days** | 0 hours | 0.1 - 8 | 8.1 - 16 | 16.1 - 24 | ≤ 24 |
| **e) Long break frequency** | ≤ 1 in 7 days | ≤ 1 in 7 days | ≤ 1 in 14 days | ≤ 1 in 21 days | ≤ 1 in 28 days |

The graph below shows how some common rosters might score using the system above.








# Assess - Fatigue

*Adapted from: AMA National Code of Practice – Risk Assessment Guide (2016)*

**Fatigue - Risk Assessment Guide**

**Review the current 7 day roster (Monday to Sunday). Tick the boxes that apply to the JMO.**

| Low Risk | Medium Risk | High Risk |
|---|---|---|
| ☐ Worked < 50 hours | ☐ Worked 50 to 70 hours | ☐ Worked > 70 hours |
| ☐ Shift length < 10 hours | ☐ Shift length < 14 hours | ☐ Shift length > 14 hours |
| ☐ No rostered overtime | ☐ > 10 hours overtime | ☐ > 20 hours overtime |
| ☐ Took three or more 10min breaks during shift | ☐ Took one or two 10min breaks during shift | ☐ No short breaks taken during shift |
| ☐ Rostered on-call < 3 days | ☐ Rostered on-call ≥ 3 days | ☐ Rostered on-call continuously > 7 days |
| ☐ No night shifts | ☐ At least 2 night shifts | ☐ At least 3 night shifts |
| ☐ > 10 hour break between shifts and 2 days off | ☐ > 10 hour break between shifts and 1 day off | ☐ < 10 hour break on at least two shifts. No days off |
| ☐ Forward shift rotation and predictable cycle | ☐ Forward shift rotation but changed cycle | ☐ No stable direction or speed of rotation |
| ☐ No changes to roster without notice | ☐ Some changes to roster – overtime or call-backs | ☐ Unpredictable roster multiple call-backs & overtime |
| ☐ Sleep opportunity - 2 full nights of sleep | ☐ Sleep opportunity – 2 out of 3 sleep times at night including 1 full night of sleep | ☐ Sleep opportunity < 1 out of 2 sleep times at night, no opportunity for full night sleep |

**Risk Assessment Results – This provides a crude risk assessment only**

**Now review the roster over 14 days and then 28 days.**
**If Medium and High risks are still present, then this doubles the risk.**

| JMO Manager Signature: | | Date: |
|---|---|---|

# Fatigue is a Serious Safety Hazard

Sometimes working conditions that are likely to produce fatigue are unavoidable – such as working overtime. However there are some fatigue-proofing strategies that can reduce the risk.


These are just a few examples:

1. **Increased monitoring:** JMOs working in pairs, checklists, double-checking, supervisor checks
2. **Task rotation:** moving critical or procedural tasks to daytime hours
3. **Additional breaks:** a break of 10 to 20 minutes is usually enough to improve your performance in the short term
4. **Napping:** naps have been shown to improve alertness; a nap should only last 20 to 30 minutes

## Be Aware Of High-Risk Times For Fatigue

There are particular times of the day when the risks associated with fatigue are higher:

- **Midnight to 6 a.m**. (especially 3a.m. to 5 a.m.) – this low point in the circadian rhythm affects alertness and performance
- **The beginning and end of shift** when handover occurs – fatigue levels can affect communication
- **When you work without a break** for a number of hours – the longer the shift, the likelier you have accumulated fatigue
- **Early shift starts** (before 6 a.m.)

In general, we are poor judges of our own fatigue. It's difficult to tell when your fatigue levels have reached a point where it's no longer safe to work.





# Action - Fatigue

*Adapted from: Fatigue Management Policy , Department of Health and Human Services, Ambulance Tasmania (2010)*

| Risk | **Suggested Fatigue Control Measures** (tick as appropriate) |
|---|---|
| **Low** | **Minor increase in likelihood of fatigue**<br>☐ Undertake a risk assessment & implement rostering controls<br>☐ Notify Clinical Supervisor/DPET/Clinical Director<br>☐ Team monitoring by peers<br>☐ JMO self-management controls, e.g. self-monitoring of non-work hours, caffeine, task rotation, self-paced workload, food and hydration |
| **Medium** | **Moderate increase in likelihood of fatigue**<br>☐ Undertake environmental risk assessment & implement rostering controls<br>☐ Notify Service Manager & Clinical Supervisor<br>☐ Team and process management controls e.g. increased supervision, task re-assignment, supervisory checks by bed manager, buddy with a peer<br>☐ Support additional rest breaks & taxi vouchers home |
| **High** | **Significant increase in likelihood of fatigue**<br>☐ Undertake risk assessment – **JMO must not start shift until fit for work**<br>☐ Modify the roster to enable immediate rest/nap<br>☐ Adjust the workforce to cover the shift & provide additional sleep hours<br>☐ Notify Service Manager, Clinical Supervisor & Exec on call<br>☐ File a fatigue report to Clinical Director & Director of Medical Services<br>☐ Document the incident into IIMS as a corporate risk – loss of service |

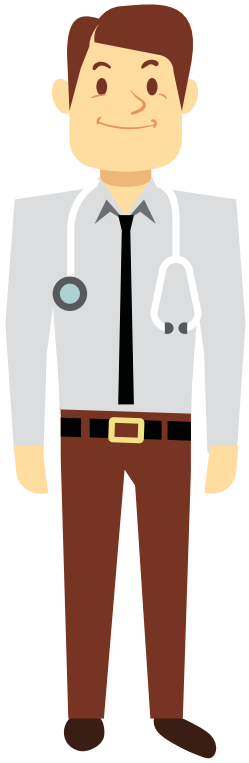
**JMO Manager Action Plan:**

*Fatigue risk controls can be tailored to the organisation or to the individual sites based on current local processes.*

| JMO Manager Signature: | | Date: |
|---|---|---|

# Health Consequences

Fatigue and poor sleep have been shown to have an impact outside of work. Studies have found that shift workers are more likely to suffer from irritability, stress, anxiety, and depression; as well as gastrointestinal problems, cardiovascular illnesses and reproductive issues.



- **Irritability, stress, anxiety, depression**
  These may be worsened by the stress of balancing work and family/social life.
- **Gastrointestinal problems**
  Constipation, indigestion and ulcers may be related to the time of day you eat. Eating at night when gastric juices are dormant can disrupt the gastric system. The types of food eaten by shift workers (fast food, high carbohydrate snacks) may make this worse.
- **Cardiovascular illnesses**
  Studies have found that shift workers have a higher risk than day workers of developing cardiovascular diseases such as high blood pressure and coronary heart disease.
- **Reproductive problems**
  Some studies have found that women who work shifts, and night shifts in particular, experience higher frequency of:
  - Irregular menstrual cycles and worse menstrual pain
  - Impaired fertility
  - Lower foetal growth and birth weight
  - Increased risk of miscarriage and pre-term birth

# Family and Social Life

Working shifts can make you feel socially isolated, you work while others have fun! It can take a heavy toll on your family and you may be tempted to choose social or family activities over sleep.

### Social Isolation

Working shifts can be socially isolating. Friends may stop calling because they assume you're not available. When working shifts you may be less likely to join a club, attend social gatherings, or get involved in group activities such as sports.

### Effect on Family

Balancing family and work can be difficult. It can be frustrating to you and your family that you're not available to participate. It can be a source of conflict, which can in turn lead to relationship difficulties. Conflicts can worsen as the demands of work or family increase.

### Social Time Vs Sleep

If you start to feel socially deprived, you may sacrifice sleep to spend time with family and friends. This is a potential safety hazard.

# Take a Nap

While a nap is no substitute for a good night's sleep, it can help you recover from fatigue and make you feel refreshed. However, the benefits of a nap do not last as long as a good long sleep.

**How long?**
How long you should nap depends on how much time you have available. You'll feel more refreshed if you wake up naturally at the end of your sleep cycle. A nap should be at least 15 minutes long.

**When to nap?**
Although the recovery value doesn't seem to depend on what time of day you take it, it's easiest to fall asleep when your body is most tired – between midnight and 6 a.m., and mid-afternoon. The recovery value of the nap isn't dependent on the time of day when it is taken.

**Sleep inertia**
Remember that when you wake up from a nap, you may feel groggy and disoriented for up to 20 minutes. This is especially true if you're wakened by an alarm instead of waking up naturally, or if you awaken from a particularly deep stage of sleep. This is called sleep inertia. Make sure you build in time to wake up properly before taking on anything that requires full concentration, such as driving.

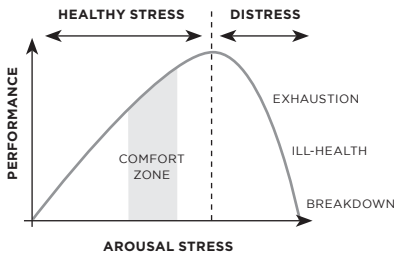
## Plan a Power Nap

**Napping is better than falling asleep on the job. A 10 to 15 minute nap has been shown to improve alertness for about an hour.**




# Managing Exam Stress

Every JMO that sits an exam during their training will experience stress and anxiety. It is important to remember that you are not alone, that exam stress is a normal response to your circumstances, and there are strategies that can assist you in managing negative thoughts, anxiety and stress.




### Some stress is actually necessary for optimum performance

This is referred to as 'healthy stress' and this is the area that you should be aiming to remain within during your exam preparation. You need to optimise performance but not enter the 'distressed' state. Try to monitor your stress levels to ensure that you are remaining in the 'healthy stress' zone as much as possible.

Avoid big lifestyle changes in the run up to the exam. Try not to disrupt the balance between the four major life areas. It is recommended that there is a fairly even balance between **family, friends, work** (this includes study) and **leisure time**.

## Top Tips for reducing stress:

1. Identify the sources/contributing factors for your stress – write these down in a **stress journal**. Look for patterns/triggers. Avoid situations that worsen these stressors.
2. Take regular **study breaks** and do some **light exercise**.
3. If you are feeling fatigued or tired take a **short nap** (30 mins) to recharge your batteries.
4. Complete **stretching exercises/massage therapy** to relieve tension in your neck and upper back.
5. Try **breathing exercises** (5 mins twice a day) to reduce anxiety and increase feelings of calmness.

# Drink Plenty of Fluids


Dehydration slows you down and increases feelings of sluggishness and makes you feel tired. When your body is low on water, it tries to conserve what you have left. It slows down your activity and makes you relax, which can make you feel sleepy. Being dehydrated can also make you feel lightheaded and cause headaches.

Working in heat, air conditioning, or at night can also be dehydrating, so you should pay particular attention to the effects of your working environment, or if your job is physically demanding and makes you sweat.

Be careful with what you drink and eat. Drinking excessive coffee, tea, soft drinks, or alcohol can make you feel thirstier and will actually make you more dehydrated as they are diuretics. Eating high-fat or high-salt foods can also make you dehydrated as they require additional water to digest.

**Don't forget to drink 2 litres of fluid a day!**

Most people don't drink enough to stay fully hydrated. If drinking water isn't easily accessible where you work, consider bringing a bottle with you.

# Healthy Eating

Being careful about what you eat can play an integral role in maintaining alertness on the job. Maintaining blood sugar levels is key to controlling the ups and downs in your energy levels.

The way blood sugar levels react to food is known as the glycemic index (GI). Snack bars or sugary foods can give you a rush of energy but that's usually followed by a low that makes you feel tired again. Foods like potatoes, pizza, and white bread all have a high glycemic index which will make you feel sluggish. Whereas a tuna salad sandwich on brown bread has a low glycemic index, that will keep you from feeling tired longer.

Low GI foods can be used to keep your blood sugar level stable and stop it from becoming too high or low. Eat regular low GI snacks across a shift to help you avoid big changes in your energy levels.

# Be Smart with Caffeine

## Strategic use of caffeine

Many people use the caffeine in a strong cup of coffee or tea to get their day started and to fight off feelings of fatigue. If you drink multiple cups of coffee throughout the day, or even one cup at the same time every day, your body will adapt to the caffeine making it less effective. Therefore try to avoid drinking caffeine except when you are really tired.

## Caffeine lasts up to 6 hours

It takes about 15-30 minutes to feel the stimulating effects of caffeine, but it can last for up to 5 hours. Watch out - avoid drinking caffeine too close to bedtime or you will not be able to sleep.

## Dependence and tolerance

Your body quickly builds up a tolerance to caffeine – the more regularly you use it, the more it will take to keep you alert when you really need help. You can also develop a dependence to caffeine. Many people develop withdrawal symptoms such as headaches when they try to go without.

Remember that stimulants only hide or postpone the effects of fatigue. They do not replace the need for sleep.

| Caffeine Content of Common Foods/Drinks | | | |
|---|---|---|---|
| **Coffee (250mL)** | | **Tea (250mL)** | |
| Instant | 65-100mg | Green Tea | 8-30mg |
| Drip | 115-175mg | Regular | 50-70mg |
| Brewed/Espresso | 80 - 135mg | | |
| **Soft Drinks** | | | |
| Coke/Pepsi (340mL) | 50mg | **Most Chocolate Bars** | 20-40mg |
| Jolt (500mL) | 100mg | **NoDoz, 1 Regular Strength Tablet** | 100mg |
| Red Bull (200mL) | 80mg | | |

To make smart use of caffeine, you should be aware of the caffeine content of common drinks or foods.

You should also be aware that the sugar in many caffeinated drinks can actually work against the stimulating effect of the caffeine and reduce your alertness after the initial effect wears off.

# Physical Exercise

Going for regular walks can help improve your energy levels and stamina, reduce the risk of heart disease and other health problems, and help you feel and sleep better.

You should avoid heavy exercise one hour before bedtime. Let your body unwind and calm down before sleep.

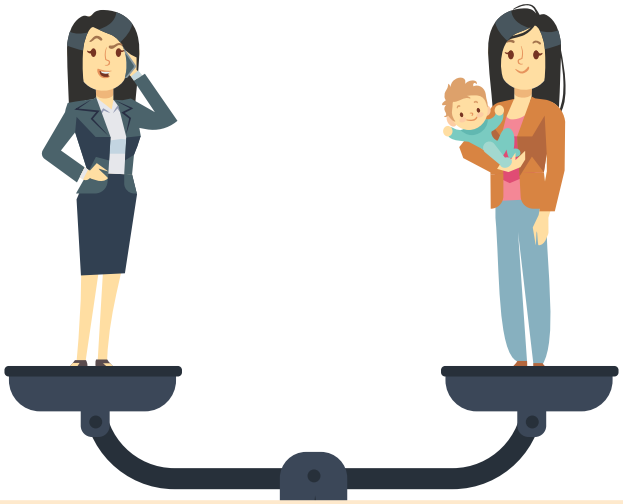
Any activity that keeps your heart rate elevated for at least 20 minutes is ideal. This should help to relieve stress, boost your health, strengthen your immune function, and improve your muscle tone and strength.

**Regular exercise will help you to sleep well, stay healthy, and feel fit.**

It may not be easy to find a regular time to exercise if your work schedule keeps changing, but you don't need to join a gym or a local sports team to enjoy the benefits of exercise.

Get fit and stay active with **Fitness Passport**, our corporate fitness program. Fitness Passport will get you access to a wide range of local gyms, pools and fitness facilities at a low cost, helping you to reach your health and fitness goals.

# Work Life Balance



## Get enough sleep

Remember that it's your responsibility to get enough sleep to be fit for work and be rested to fully enjoy your family and social time.

## Spend time with friends and family

When you are working shift work, you may have to plan your time more carefully, and make more of an effort to stay in touch with friends. Let your family and friends know your roster; plan events well in advance.

## Enjoy time for yourself

Join a recreational organisation or enjoy a hobby to minimise social isolation. It will provide you with an opportunity to socialise, relax and meet new people. Plan a trip or event, get some exercise – or even catch up on some much-needed sleep!

## Stay fit and healthy

Get regular exercise and eat a nutritionally balanced diet. Learn to relax, manage your fatigue, and get the sleep you need. Pay attention to your overall health and visit your GP regularly.

# Did you know help is available?

Check your RESIDENT GUIDE APP for a list of support services available, this is listed under wellbeing.

If you need assistance, you can contact:

- **JMO Managers, DPETs, Network Managers, Directors of Clinical Training, Supervisors**
- **Mentors**
  - Junior Mentor Program
  - Senior Mentors
  - College Mentors
- **Employee Assistance Program**
  - http://intranet.hne.health.nsw.gov.au/hr/eap
- **Respectful Workplace Consultant**
- **Mindfulness sessions**
  - held at Prevocational Orientation,
  - weekly/monthly at the JHH
- **JMO Compliance Officer**
- **Various Support Hotlines**

# JMO Support Lines

- **Employee Assistance Program**
- **JMO Support Line** - 1300 JMO 321 or 1300 566 321
- **Doctors Health Advisory Service (NSW and ACT)** – 02 9437 6552
- **Lifeline** - 13 11 14
- **Suicide Call Back Service** - 1300 659 467
- **Beyondblue** - 1300 22 4636
- **SANE Australia Helpline** - 1800 18 SANE (7263)
- **Medical Benevolent Association of NSW**
- **JMO Health – are you ok?**

> "You don't have to be positive all the time. It's perfectly ok to feel sad, angry, annoyed, frustrated, scared and anxious. Having feelings doesn't make you a "negative person". It makes you human."
>
> **- Lori Deschene**

# References


- Australian Medical Association (2017) "Best Practice Rostering: Training and Resource Kit: Practical Tools for Rostering Doctors", Australian Medical Association Limited
- Caldwell et al (2009) "Fatigue Countermeasures in Aviation" Aviation, Space, and Environmental Medicine; Vol. 80, No. 1
- Cooper, M. D. (2000) "Towards a model of safety culture." Safety Science, 36, p. 111-136
- Dawson D. & McCulloch K. (2005) "Managing fatigue: it's about sleep" Sleep Medicine Reviews; volume 9 Issue 5:365-80
- Ferguson, Sally & Neall, Annabelle & Dorrian, Jill (2013) "Strategies used by healthcare practitioners to manage fatigue related risk: beyond work hours." Medical Sociology Online. 7:24
- HETI (2014) "The JMO Census" HETI
- Horrocks, N. & Pounder, R. (2006) "Designing safer rotas for junior doctors in the 48 hour week". Royal College of Physicians, London
- Lerman SE et al (2012) "American College of Occupational and Environmental Medicine Presidential Task Force on Fatigue Risk Management." Journal of Occupational Environmental Medicine. February; 54(2):231-58
- NSQHS "National Standards", The Australian Commission on Safety and Quality in Health Care
- O'Keefe, K. & Gander, P. (2012) "Best practice rostering, shift work and hours of work for resident doctors: A review". New Zealand Resident Doctors' Association (NZRDA)
- Reason, J. (1998) "Achieving a safe culture: theory and practice." Work & Stress, 12(3), 293-306
- Reason, J. (2000). "Beyond the limitations of safety systems", Australian Safety News
- Workcover NSW (2013) "Shift work: How devise an effective roster", Workcover NSW, No. 225


# Acknowledgements


**Dr MaryAnn Ferreux**

Project Lead
Director of Medical Services
Calvary Mater Newcastle

**Dr Sergio Diaz Alvarez**

Clinical Director of Medicine
The Maitland Hospital
Hunter New England Health Service

**Dr Peter Finlayson**

Director of Medical Services
Rural & Regional Health services
Hunter New England Health Service

**A/Prof Pooshan Navathe**

Director of Medical Services
The Maitland & Lower Hunter Hospitals
Hunter New England Health Service

**Dr Laura Bird**

Clinical Superintendent
John Hunter Hospital
Hunter New England Health Service

**Dale Erwin**

Director of Medical Workforce
Hunter New England Health Service

**Victoria Wall**

Project Officer
Hunter New England Health Service

**Angela Lawrence**

Acting JMO Manager
Calvary Mater Newcastle

**HRMOA President**

Hunter Resident Medical Officer's Association
Hunter New England

**HETI Medical Training Network Project Funding**

HETI
HEALTH EDUCATION & TRAINING INSTITUTE

## Notes

## Notes

Health
Hunter New England
Local Health District

Calvary | Mater Newcastle