Emergency services:
guideline for risk managing fatigue

Contents

Introduction

Safe Work Australia's *Guide for Managing the Risk of Fatigue at Work* (the Guide) provides practical guidance for persons conducting a business or undertaking and other duty holders on how to manage fatigue to ensure it does not contribute to health and safety risks in the workplace.

The Guide identifies measures which can be used to control health and safety risks arising from fatigue.

Factors contributing to the risk of fatigue are often interrelated. Incorporating a combination of control measures into good workplace systems, as well as control measures specific to the workplace, can help to minimise more than one contributor to fatigue. For example, increasing the amount of time between shifts and adjusting shift starting times may improve the opportunity for sleep.

The emergency services sector

The purpose of these guidelines is to assist emergency services to manage the risks of fatigue, recognising the unique challenges experienced by this sector. These guidelines should be read in conjunction with the Guide and have been developed in consultation with SAFECOM.

Thanks to those organisations represented by SAFECOM (comprising the Country Fire Service, Country Fire Service Volunteers Association, State Emergency Service, State Emergency Service Volunteers Association, Metropolitan Fire Service, United Firefighters Union, Volunteer Marine Rescue Organisations), SA Police and SA Ambulance Service who contributed to the development of these guidelines.

The emergency services environment

An emergency is a situation that poses an immediate risk to health, life, property or the environment. Emergencies require urgent intervention and are the result of an unplanned event. They often generate an extreme risk environment where consequences include loss of life.

The environments in which the emergency services are called to respond are variable to the extreme, and pose high risk to personal safety with few or no means of immediately eliminating that risk. The emergency situation can be a single or campaign event that threatens health, life, property or the environment for days and possibly weeks.

Emergency service providers (workers and volunteers) share a deep commitment to the welfare of the community. Their actions often impact significantly upon life or death.

In many situations, and in remote locations in particular, relieving support/back-up may not be readily available and community safety and preservation of life will depend upon the actions of a few. Services may be rendered to family and friends, generating the highest level of commitment and the risk of significant personal sacrifice.

Notwithstanding this, ensuring the personal safety of emergency service providers is first and foremost. It is recognised that the commitment to preserving life in extreme situations will undoubtedly prevail over the measures identified in the Guide.

These guidelines recognise the extreme physical and emotional investment displayed by emergency service providers. They are designed to provide a simple reference to risk management strategies that are available to minimise fatigue, and assist to sustain the emergency response, and thereby maximise the effectiveness of the personal investment. The guidelines appreciate the fundamental importance of emergency services and have been developed to assist with sustaining these services.

With regard to paid staff, each part of emergency services may have industrial awards and enterprise agreements which specify ordinary hours of work for workers, shift arrangements and the payments that attach to work that is outside of those parameters. Awards and agreements made under the relevant industrial relations legislation represent compulsory minimum requirements for workplaces. They will prevail over the Guide to the extent of any inconsistency. The Guide and these guidelines are designed as complementary tools to deal with assessing and managing fatigue for both workers and volunteers.

The effects of working hours and fatigue

Working hours, either the number of hours or the scheduling of them, can have a significant effect on the risk of work-related injury and illness through increasing exposure to hazards such as noise or heat, increasing the level of fatigue experienced or reducing recovery time between shifts.

A person suffering from fatigue may experience:

- difficulty in concentration

- impaired recollection of timing and events

- poor judgement

- reduced capacity for effective interpersonal communication

- reduced hand-eye coordination

- reduced visual perception
- reduced vigilance
- slower reaction times
- headaches
- dizziness.

These effects represent great risks to emergency services operations and personnel by:

- negatively impacting on the control and resolution of incidents
- increasing the opportunity for injury due to limited human resources
- risking damage to valuable plant and equipment.

In addition, research has linked negative health effects with inadequate management of long-term shift work, including heart disease, high blood pressure, stomach and other gastrointestinal disorders, and depression.

Risk management process

Everyone in the workplace has a work health and safety duty and can help to ensure fatigue does not create a risk to health and safety at work. Fatigue is not only caused by work-related activities, it is also affected by all activities carried out when a person is awake.

The Guide recommends that the management of risks associated with working hours be managed through the following three-step process:

Step 1 – identify all reasonably foreseeable hazards and factors that indicate risk.

Step 2 – assess risks of injury or harm arising from each identified hazard.

Step 3 – implement control measures to eliminate or minimise the risks.

The Guide and these guidelines provide detailed information on a risk management approach to dealing with working hours and fatigue, and outline a number of control measures that may be deployed in eliminating or reducing these risks.

Appendix A in the Guide provides a *Fatigue Checklist* to assist workplaces identify work-related factors that can contribute to fatigue. Emergency services can use this checklist to examine if such hazards apply to them.

If they do apply, Appendix C of the Guide provides a *Risk Management Chart*, reproduced in these guidelines as Attachment 2.

Emergency services should apply this tool to help determine the level of risk associated with these hazards.

Should medium to high risks be identified, the Guide provides information on potential control measures.

Using the checklist

The *Emergency services checklist* in these guidelines (refer Attachment 1), outlined in three categories, is based on the control guidance provided in the Guide. It is intended to provide a simple tool for managers and supervisors involved in emergency services to assess their exposure to risks associated with working hours and fatigue, and to identify suitable controls.

The first category *Organisational Actions* lists organisational-wide actions required to systematically manage risks associated with working hours and fatigue.

The second category *Operational Response – Preparedness and Planning* details more local level controls that managers and supervisors need to consider. These are the controls that can be considered ahead of time, preparing and planning for the emergency and the fatigue-related risks they may present.

The third category *Operational Response – In Case of Emergency* relates to issues needing to be considered by the manager or supervisor at the point of allocating resources in the event of an emergency situation.

Using these guidelines

These guidelines have been developed to assist the emergency services community in general. You may wish to customise the information to capture individual considerations and strategies in a format that is relevant to your purposes and simple to use. The guidelines may also contain useful references for inclusion in your local documents.

Next steps

Individual agencies may need to review and update their work health and safety policies, procedures and strategies to ensure that risks associated with working hours and fatigue are adequately controlled. Further information, training and tools may also be identified for development to assist in this process.

Attachment 1

Emergency services checklist – Working hours and fatigue

Organisational actions

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Resources ☐ Is the optimal level of resources available?		Cross-agency arrangements supporting: ☐ unified command ☐ access to cross-agency resources including operational personnel, logistic personnel, planning personnel Intra-agency arrangements supporting: ☐ access to back-up resources within the agency		
Policies and procedures ☐ Does the organisation have adequate policies and procedures in place to manage risks associated with working hours and fatigue?		Policies and procedures outlining the arrangements, practices and procedures dealing with working hours and fatigue including: ☐ a statement of commitment to reasonable working hours and their management ☐ role and responsibilities of supervisors and personnel in relation to fatigue prevention and management ☐ fatigue management plan / strategy ☐ policies relating to drugs and alcohol, fitness for work, working in heat and work-life balance ☐ incorporation of working hours / fatigue considerations in all relevant operational procedures and policies e.g. rosters, shift work, overtime, on-call arrangements ☐ procedures and tools to identify and manage fatigued personnel		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Systematic management of risks ☐ Are risks associated with working hours and fatigue incorporated within the organisation's ongoing system to identify, assess and control risks?		Risk management system incorporates consideration of risks arising from working hours and fatigue involving: ☐ identification of risks associated with working hours and fatigue through consultation, incident investigation, hazard reporting, review of operational procedures and work processes ☐ assessment of identified risks ☐ implementation of controls for medium to high risks including incorporation of working hours / fatigue considerations in all relevant operational procedures and policies e.g. rosters, shift work, overtime, on-call arrangements ☐ monitoring and review of controls		
Information and training ☐ Is information on working hours and fatigue prevention and management incorporated in the organisation's information and training, and provided to managers, supervisors and personnel?		☐ For managers and supervisors: • information and training to understand the health and safety hazards and risks arising from working hours arrangements and their control measures • organisational policies, procedures and operational practices to prevent and manage fatigue • incorporation of working hours / fatigue considerations in all relevant operational procedures and policies ☐ For personnel: • information and training to understand the health and safety hazards and risks arising from working hours arrangements and their control measures • organisational policies and procedures to prevent and manage fatigue		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Supervision ☐ Is adequate supervision provided?		Ensure adequate supervision occurs, in particular for new or inexperienced personnel or personnel exposed to high levels of fatigue.		
Consultation ☐ Are personnel adequately consulted?		In relation to health and safety risks associated with working hours, consult personnel on: ☐ policies and procedures ☐ identification, assessment and control of risks associated with working hours and fatigue ☐ information and training needs		
Incident investigation ☐ Does the organisation's hazard and incident reporting and investigation system include consideration of working hours and fatigue?		Ensure hazard reporting, incident reporting and investigation systems include prompts to examine the contribution of working hours or fatigue.		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Extended exposure to hazards e.g. hazardous substances and atmospheric contaminants, noise, extreme temperatures ☐ Consider the exposure to these and other hazards. Are exposures within national exposure standards? Consider lengthy exposures (>8hr).		☐ consult the national exposure standard for each hazardous substance to assess risk and determine an appropriate work period, particularly where exposures exceed an 8 hour period ☐ provide adequate information, instruction, training and supervision to ensure exposure is minimised ☐ review work methods, design safe systems of work, provide personal protective equipment (PPE) ☐ obtain advice from a competent person who can advise on the specific risks, appropriate work period and control measures		
Operational response – preparedness and planning				
Working hours ☐ Consider the number of hours worked and their scheduling. • Is there an excessive number of hours worked either daily or weekly? • Consider substantive / second job implications, particularly for volunteers. • Is travel adding to the length of working hours?		☐ review the work needing to be done ☐ review the resources available ☐ deploy additional resources – either within the agency or cross-agency – front-line personnel, co-ordination personnel or logistics ☐ attempt to forward plan the work and endeavor to provide notice of working hours ☐ provide alternative transport arrangements for personnel who may be fatigued ☐ minimise travel by providing access to amenities (eating, sleeping, resting facilities)		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
		☐ encourage personnel to report fatigue, prior to and during shift		
		☐ encourage personnel to monitor and report fatigue observed in colleagues		
		☐ allocate duties, shifts and overtime appropriately, mindful of levels of fatigue		
		☐ manage relief / stand-by / on-call arrangements appropriately, mindful of levels of fatigue		
		☐ consult with personnel regarding the identification, prevention and management of fatigue		
Shiftwork ☐ Consider the management of shift work. • Are shift lengths excessive? • Are night shifts minimised / effectively scheduled? • Is the speed and direction of shifts appropriate?		☐ as above ☐ review the roster design – length, direction and speed of shift (forward shift rotation) ☐ design shifts and rosters to allow for adequate sleep, recovery time to eat, wash and travel ☐ allocate shifts appropriately, mindful of levels of fatigue		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Night work ☐ Consider the scheduling and management of night work. • Are night shifts minimised / effectively scheduled? • Are lengths of night shifts excessive? • Are there excessive sequential night shifts? • Is there a sufficient period of non-work following a sequence of night shifts?		☐ as above ☐ review the work schedule, reducing the need for night work ☐ keep sequential night shifts to a minimum ☐ ensure adequate time off following a sequence of night shifts ☐ provide controls, clear procedures and supervision for hazardous work carried out at night, particularly between 0200 and 0600 ☐ endeavour to provide notice of night work		
Breaks during work ☐ Consider the ability to take breaks during work time. • Is there the opportunity for adequate breaks?		☐ ensure breaks where working hours are lengthy or where personnel have reported risky levels of fatigue ☐ rotate duties where possible, enabling rotation from more to less arduous tasks ☐ provide access to amenities where possible, such as eating, drinking, washing and resting facilities		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Breaks between work periods ☐ Consider if the scheduling of work provides sufficient recovery time between work periods. • Is there sufficient recovery time? • Consider substantive / second job implications, particularly for volunteers.		☐ ensure breaks allow adequate recovery time ☐ with night shift, allow a rest break of 24 hours after each night shift cycle ☐ consider effects of overtime ☐ allow consecutive days off, including some weekends ☐ where practicable, allow flexibility to change shifts ☐ minimise travel by providing access to amenities (eating, sleeping, resting facilities)		
Physically, mentally or emotionally demanding work ☐ Consider the demands of the work. • Is there highly physical work resulting in muscle fatigue? • Are there excessive mental or emotional demands?		☐ minimise extended work periods without breaks ☐ where practicable, redesign jobs to include variation of physical and/or mental tasks ☐ new personnel allocated using mentoring principles		
Fatigue critical tasks ☐ Consider tasks which should not be undertaken by fatigued personnel. • Are there tasks where fatigue may contribute substantially to risk?		☐ schedule critical work for certain hours when the risks may be lower ☐ avoid the need for people to work alone ☐ ensure adequate breaks between shifts / schedules ☐ increase the level of supervision to ensure shortcuts are not taken		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Extended exposure to hazards ☐ Hazardous substances and atmospheric contaminants ☐ Noise ☐ Extreme temperatures ☐ Extreme environmental conditions		☐ provide adequate information, instruction, training and supervision to ensure exposure is minimised, safe work methods followed, personal protective equipment (PPE) used ☐ where practicable, provide a cool area for personnel to take a rest break and rehydrate ☐ where practicable, schedule work for times when temperatures are more moderate ☐ minimise exposure time – rotate tasks where possible		
Information and training ☐ Has your organisation's information and training been cascaded to your personnel?		☐ Ensure your personnel have received information and training to understand: • the health and safety hazards and risks arising from working hours arrangements and their control measures • organisational policies, procedures and operational practices to prevent and manage fatigue		
Supervision ☐ Is there adequate supervision or are personnel working alone in some instances?		☐ monitor work to ensure safe work practices are followed ☐ supervise new workers or workers unfamiliar with the work environment ☐ where practicable, ensure workers do not work alone ☐ for those working alone, provide a means of communication and a procedure for regular contact		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
Individual factors ☐ **Fatigue or lack of sleep** Consider the level of fatigue with which individuals present – from previous shifts or (in the case of volunteers) from their substantive employment. ☐ **Travel time between work and home** Consider if individuals are subject to lengthy travel time between work and home. ☐ **Fitness for work** Consider if individuals present for duty under the influence of drugs or alcohol.		☐ follow the organisation's procedures for managing fatigued personnel – this may involve applying the fitness for work policy or the drugs and alcohol policy ☐ responses to fatigued personnel may involve: • cancellation of shift • delayed shift enabling personnel to recoup • shorter shift • ensuring breaks • monitoring and supervision of fatigued personnel • job rotation • light duties ☐ provide alternative transport arrangements for personnel who may be fatigued ☐ provide adequate supervision		
Operational response – in case of emergency				
		Scope the job and work time ☐ are there long hours to be worked? ☐ what activities are required to be undertaken and when? ☐ attempt to forward plan the work ☐ endeavour to provide notice of working hours		

Emergency services checklist – Working hours and fatigue				
Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
		Assess the individual ☐ have volunteers come from substantive jobs / have personnel come from other duties? ☐ acknowledge travel time ☐ how strenuous were these duties ☐ how much sleep / rest have individuals had in the last 24 hours ☐ how many hours since they last slept ☐ do individuals report medium-high fatigue prior to shift ☐ are there medical conditions needing to be taken into account? ☐ are individuals under the influence or have reported ingestion of alcohol or drugs? ☐ are individuals fit for duty (refer to agency specific policies or procedures for determining and managing this)?		
		Determine fatigue risks ☐ encourage personnel to report fatigue, prior to and during shift ☐ encourage personnel to monitor and report fatigue observed in colleagues		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
		☐ follow the organisation's procedures for managing fatigued personnel – this may involve applying the fitness for work policy or the drugs and alcohol policy ☐ responses to fatigued personnel may involve: • cancellation of shift • delayed shift enabling personnel to recoup • shorter shift • ensuring breaks • increased monitoring and supervision • job rotation • light duties ☐ consider tasks which should not be undertaken by fatigued personnel		
		Review the resources ☐ review the work needing to be done ☐ review the resources available ☐ deploy additional resources – either within the agency or cross-agency – operational personnel, co-ordination personnel or logistics ☐ reduce the need / length of night work		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
		Allocate duties ☐ allocate duties appropriately, mindful of levels of fatigue ☐ rotate duties where possible, enabling rotation from more to less arduous tasks ☐ where practicable, assign duties that include a variation of physical and/or mental tasks ☐ manage relief / stand-by / on-call arrangements appropriately, mindful of levels of fatigue ☐ schedule critical work for certain hours when the risks may be lower		
		Provide amenities ☐ provide alternative transport arrangements for personnel who may be fatigued ☐ provide access to amenities where possible, such as eating, drinking, washing and resting facilities		
		Manage ☐ ensure breaks where working hours are lengthy or where personnel have reported risky levels of fatigue ☐ ensure supervision of fatigued personnel		

Emergency services checklist – Working hours and fatigue

Risk	Risk assessment (low, medium or high)	Possible emergency services control options – for medium or high risk (tick those relevant)	Action required (who / when)	Action completed (yes / date)
		☐ provide controls, clear procedures and supervision for hazardous work carried out at night, particularly between 0200 and 0600 hours ☐ avoid the need for people to work alone ☐ for those working alone, provide a means of communication and a procedure for regular contact		

APPENDIX C – RISK MANAGEMENT CHART

This chart can be used to consider potential factors that contribute to the risk of fatigue. It outlines some control measures which can be implemented to manage the risk of fatigue in the workplace.

Step 1: Hazard identification
Identify potential hazards and risks at the workplace. Examples of some factors that contribute to fatigue are listed below. Consider these factors in the context of your specific workplace or industry.

Step 2: Risk Assessment
To assist risk assessment, a general level of risk for each hazard is indicated along arrow guides. In assessing risk consider interaction between hazard factors that could influence the level of risk. Also take into account specific workplace/ industry circumstances that may influence it.

Step 3 Risk Control
Where a hazard factor is assessed as medium/ higher risk, consider implementing control measures, such as those outlined in section 2 of this code.

Factors that contribute to Fatigue	General risk indicator for factors that contribute to fatigue			Control measures
Work Scheduling and Planning **Hours**	Lower risk → Higher risk			**The most appropriate control measures should be implemented for the identified risk factor. Control measures may include:**
■ Average weekly hours (other than FIFO)	35-40 hours (working week)	48 hours (working week)	56 hours (working week)	■ Scheduling safety critical work outside low body clock periods (i.e. between 2am and 6am)
■ Total hours over a three month period (other than FIFO)		624 working hours		■ Structure shifts and work plans so that demands are highest towards the middle of the shift and decrease towards the end
■ Daily work hours	9 working hours	12 working hours		■ Use forward rotation roster systems (day-evening-night)
■ Daily work hours and work-related travel, including commute		10 working hours	13 working hours	■ Designing working hours and rosters to provide for adequate sleep opportunity (considering time for eating, washing, personal commitments etc)
■ Scheduling of work	Regular, predictable hours	Irregular and unpredictable hours, short notice of schedule, extended overtime, on call across shift cycle		■ Monitor actual time worked against the allocated roster and indentify if excessive hours are being worked
Shiftwork	Lower risk → Higher risk			**Additional control measures should be implemented for special work arrangements and can include:**
■ Length of shift (other than FIFO)		10 hours	13 hours	■ Considering sleep opportunity and recovery in instances where workers are required to work on call after a normal shift or on days off
■ Time of shift	Day shift	Afternoon shift	Night shift	■ Avoiding quick shift changeovers, such as finishing at 11pm and starting again at 7am
■ Speed and direction of shift	Forward rotation (morning/afternoon/night	Backward rotation (night/evening/ morning)	slower rotation (i.e. weekly / 3-4 weekly rotation)	■ Use forward rotation roster systems (day-evening-night)
■ Split shifts and variable shifts			13 hour period	■ Allocate shift and night workers consecutive days off to allow for at least two full nights rest including some weekends

Step 1: Hazard identification

Step 2: Risk Assessment

Step 3: Risk Control

Hazards that contribute to fatigue

General risk indicator for hazards that contribute to fatigue

Control measures

Night Work

- Shift end (for those working 8 hrs or more between 10pm and 6am)
- Sequential night shifts

Lower risk   Higher risk

		After 10pm and before 6am
8 hours	10 hours	12 hours

6 or more 8 hour shifts
5 or more 10 hour shifts
4 or more 12 hour shifts

The most appropriate control measures should be implemented for the identified risk factor. Control measures may include:

- Planning into work schedules enough workers and other resources to do the job without placing excessive demands on workers.
- Keeping sequential night shifts to a minimum
- Avoiding overtime allocation after afternoon or night shifts

Breaks

- Period of non-working following a sequence of night shifts
- Frequency of breaks during work
- Recovery time / sleep opportunity between work periods

Lower risk   Higher risk

48 hours	Less than 48 hours
Adequate and regular breaks	Infrequent or no breaks
Adequate time for sleep, travel, meals, etc	Inadequate time for sleep, travel, meals etc

The most appropriate control measures should be implemented for the identified risk factor. Control measures may include:

- Ensuring that workers have and take adequate and regular breaks so that they can rest, eat and rehydrate
- Including rest periods in the work schedule and allow time for controlled sleeping and napping if necessary
- Designing working hours and rosters to allow for good quality sleep and enough recovery time between work days or shifts for travelling, eating, washing and sleeping

Job demands

- Repetition (physical and/or mental)
- Physical
- Mental

Lower risk   Higher risk

Varying task demands	Highly repetitive work and or high concentration work, with high demands over an extended period of time
Minimal physically demanding work	Highly physically demanding work that results in muscle fatigue

The most appropriate control measures should be implemented for the identified risk factor. Control measures may include:

- Install fit for purpose plant machinery and equipment for use at the workplace
- Redesign jobs to limit periods of excessive mental or physical demands
- Introduce job rotation to limit build up of mental and physical fatigue

Step 1: Hazard identification

Hazards that contribute to fatigue

Environmental Conditions

- Exposure to hazardous substances and atmospheric contaminants

- Exposure to noise

- Exposure to extreme temperatures

- Exposure to vibration

Step 2: Risk Assessment

General risk indicator for hazard factors

Lower risk   Higher risk

hazardous substances, low risk calculated using relevant exposure standard	For hazardous substances, high risk calculated using relevant exposure standard
- exposure for short duration - low noise levels	– exposure for long duration - high noise levels
Short period of exposure	Long period of exposure
Short period of exposure	Long period of exposure

Step 3: Risk Control

Control measures

The most appropriate control measures should be implemented for the identified risk factor. Control measures may include:

- Avoid working during periods of extreme temperature

- Install heating devices in cold work environments or provide access to cooled areas

- Install fit for purpose machinery (low noise)

- Install cooling devices in hot work environments like truck cabins and ensure shelters for shade are available in hot work environments

- Installation of adjustable, low vibration seats in appropriate machinery and vehicles and provide low vibration hand held equipment

- Taking reasonable steps to ensure the workplace and surroundings are well lit, safe and secure

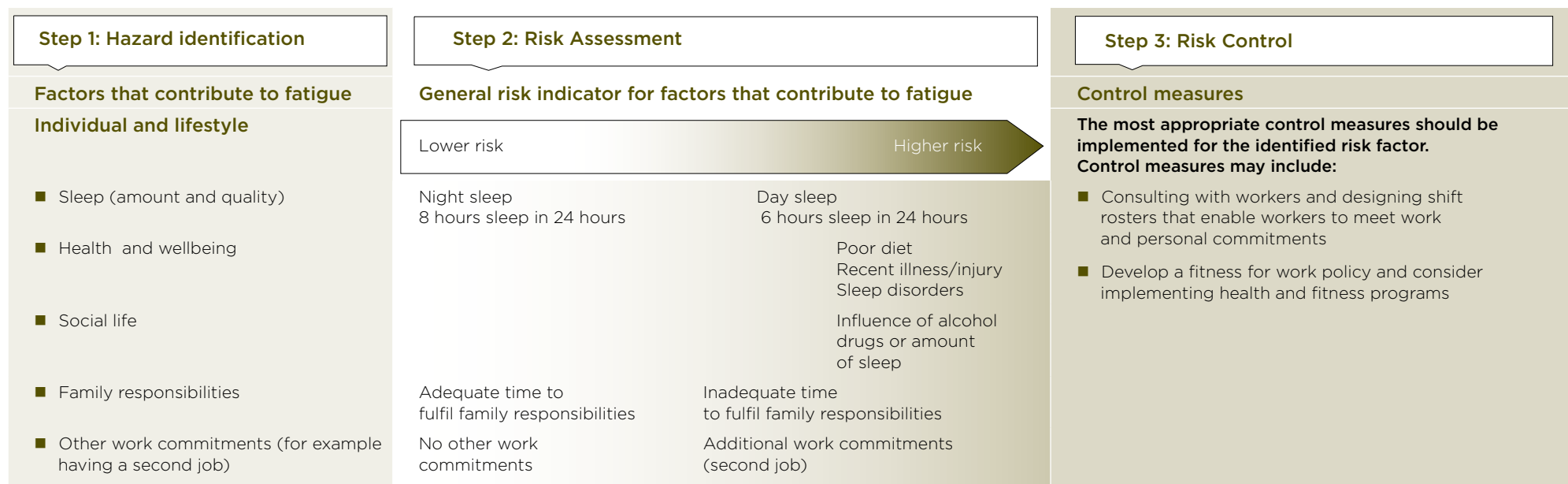| Step 1: Hazard identification	Step 2: Risk Assessment	Step 3: Risk Control
Factors that contribute to fatigue	**General risk indicator for factors that contribute to fatigue**	**Control measures**
Individual and lifestyle	Lower risk ➝ Higher risk	**The most appropriate control measures should be implemented for the identified risk factor. Control measures may include:**

	Lower risk	Higher risk	
■ Sleep (amount and quality)	Night sleep 8 hours sleep in 24 hours	Day sleep 6 hours sleep in 24 hours	■ Consulting with workers and designing shift rosters that enable workers to meet work and personal commitments
■ Health and wellbeing		Poor diet Recent illness/injury Sleep disorders	■ Develop a fitness for work policy and consider implementing health and fitness programs
■ Social life		Influence of alcohol drugs or amount of sleep	
■ Family responsibilities	Adequate time to fulfil family responsibilities	Inadequate time to fulfil family responsibilities	
■ Other work commitments (for example having a second job)	No other work commitments	Additional work commitments (second job)	