
Purpose

The purpose of this procedure is to explain how the risk of fatigue is managed using a risk management approach to identify, assess and implement control measures.

Scope

This procedure applies to all rail workers in work groups and worksites where shift work and extended hours' arrangements are undertaken. This procedure should be read in conjunction with [SMS-08-OP-3128 Managing Shift Work and Rostering](#).

Process flow

Process

8.3 Manage fatigue risks

- 8.3.1 Undertake fatigue management training
- 8.3.2 Identify fatigue risk factors
- 8.3.3 Assess fatigue risks
- 8.3.4 Control fatigue risks
- 8.3.5 Monitor and review fatigue risk profile

Figure 1 Process flow for manage fatigue risks

Procedure

8.3: Manage fatigue risks

Sydney Trains will identify and manage the risks associated with fatigue resulting from significant mental or physical exertion, extended wakefulness or as a result of shift work or extended hours. This procedure supports [SMS-08-SP-3068 Health Management](#) by explaining how the risk management process applies to fatigue.

8.3.1: Undertake fatigue management training

General Managers of work groups engaged in shift work and extended hours' arrangements are responsible for the following procedure.

Procedure

Make sure Line Managers, rosters/schedulers and workers receive the appropriate fatigue management training and instructions (see Table 1 below).

Line Managers are responsible for the following procedure.

Procedure

1. Identify workers requiring fatigue management training.
 2. Determine the type of training required (see Table 1 below).
 3. Arrange for workers to attend identified training (refer to Learning and Development intranet pages – My HR).
 4. Record attendance of training in accordance with the organisation's record keeping requirements (refer to [SMS-09-SP-3021 Records Management](#)).
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Table 1 Fatigue Management Training

Employee Category	Internal Training Program	What the training / instruction covers
Line Managers	Personal Fatigue Management induction video SM31E Apply fatigue management strategies SM12 – Fatigue Management for Managers	What fatigue is, how it affects health and safety and the importance of sufficient restorative sleep. How work and non-work factors contribute to fatigue applying risk management processes to fatigue. Implementing work practices to reduce the risk of fatigue. Using FAID® to calculate fatigue associated with roster patterns.
Rosters and Schedulers	Personal Fatigue Management induction video SM31E Apply fatigue management strategies SM19 (face to face) SM19E (e-learning)	What fatigue is, how it affects health and safety and the importance of sufficient restorative sleep. How work and non-work factors contribute to fatigue. Implementing work practices to reduce the risk of fatigue. Using FAID® to calculate fatigue associated with roster patterns.
Workers (who undertake shift work or extended hours arrangements)	Personal Fatigue Management induction video SM31E Apply fatigue management strategies	What fatigue is, how it affects health and safety and the importance of sufficient restorative sleep. How work and non-work factors contribute to fatigue. Being aware of their responsibility to report to work fit-for-duty and their role in managing non-work causes of fatigue.

8.3.2: Identify fatigue risk factors

Line Managers will perform the following procedure.

Procedure

Line Managers will:

1. Define workgroups, in accordance with [SMS-10-OP-3092 Consulting Safety Information](#), using [SMS-06-FM-4130 Fatigue Risk Profile](#) by taking into account:
 - occupational groups
 - number of workers
 - nature of the work
 - working arrangements
 - management structure.

2. Identify fatigue hazards that are applicable to the particular work group using [SMS-06-FM-4130 Fatigue Risk Profile](#) and in consultation with workers, by:
 - examining rostering and shift work arrangements
 - monitoring work hours and overtime reports
 - monitoring the log books or work diaries of heavy vehicle drivers
 - reviewing incident data to identify if fatigue was a contributing factor
 - reviewing work schedules and contractual arrangements that may impose tight deadlines
 - identifying work practices such as operating complex equipment or coordinating complex processes
 - listening to feedback from workers to find out what factors are causing fatigue and the context in which this occurs
 - reviewing sick leave records to determine if fatigue is a factor
 - observing signs of fatigue (see Figure 2 for information on what to look for).



Note

Figure 2 provides guidance on the factors known to cause fatigue. Recognising the importance of these factors helps identify both current and future work arrangements that contribute to fatigue and supports work planning to reduce fatigue risks.

Each factor has the capacity to affect a person's ability and opportunity to obtain restorative sleep, the only cure for fatigue.

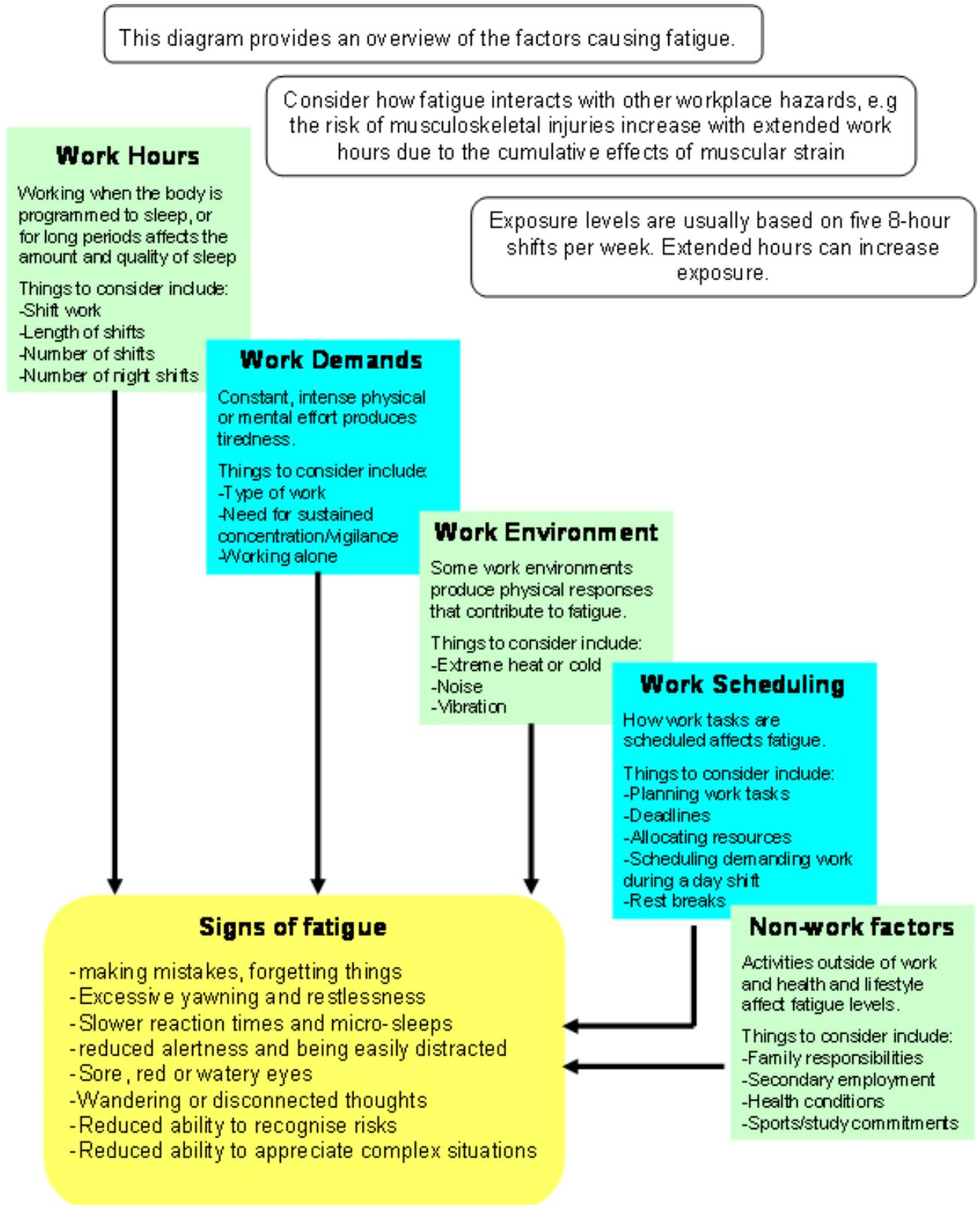


Figure 2 Factors known to cause fatigue

8.3.3: Assess fatigue risks

Line Managers, in consultation with workers, will perform the following procedure.

Procedure

1. Complete the risk assessment portion of the [SMS-06-FM-4130 Fatigue Risk Profile](#) by indicating the appropriate response in the No/Yes columns against each identified risk factor. A 'Yes' response indicates a fatigue risk factor for the assessed work group.
2. Take the following factors into account when completing the fatigue risk profile:
 - fatigue management is not an exact science
 - factors can be inter-related and should not be considered in isolation
 - not all causes of fatigue contribute equally
 - chronic health conditions/temporary illnesses may impact on fatigue
 - bio-mathematical models should only be used as guidance for possible fatigue inducing rosters.



Note

Multiple profiles may be needed to cover different occupational groups with different fatigue risk profiles. A single profile may cover multiple workgroups when the duties, rostering arrangements and fatigue risks are identical across the workgroups.

8.3.4: Control fatigue risks

For each identified risk factor decide on control measures that reduce the risk of fatigue SFAIRP.

Line Managers, in consultation with workers, will perform the following procedure, unless otherwise stated.

Procedure

1. Eliminate the risk of fatigue where reasonably practicable.
2. Where risks cannot be eliminated, select the most appropriate control measure(s) for each risk factor and record the selected control on the [SMS-06-FM-4130 Fatigue Risk Profile](#). See Table 2 for provides guidance on fatigue-related control measures for each fatigue risk factor. However, there may be other control measures relating to management practices that should be considered.
3. Refer to [SMS-08-OP-3128 Managing Shift Work and Rostering](#) for guidance and instructions on controlling risks through rostering.
4. Send the proposed Fatigue Risk Profile to the Manager of the Business Unit for review and acceptance of the proposed risk controls.
5. The Manager of the Business Unit will review and approve proposed risk controls, if they are suitable.
6. Implement selected controls in accordance with [SMS-18-SP-3078 Safety Action Management](#).

Fatigue Risk Factor	Measures to manage risk of fatigue
Work Hours	<p>Use rostering principles and tools such as FAID within a risk management context where control measures are implemented such as:</p> <ul style="list-style-type: none"> • reducing the use of shift work, especially night shift where possible • limiting the number of consecutive night shifts • limiting the duration of night shifts • limiting the duration of shifts to no more than 12 hours including overtime • designing working hours to allow sufficient time for restorative sleep • allocating shift workers consecutive days off • scheduling consistent start times or where rotating rosters are used, using forward rotation for shifts (morning-afternoon-night) rather than a backward rotation (night-afternoon-morning) • identifying ways to make sure shifts do not extend beyond usual finish times • monitoring actual hours worked against rostered hours to identify and review situations where excessive hours are being worked • allowing new workers and workers returning from leave with time to acclimatise to shift work • developing procedures for managing shift-swapping and reducing recalls to duty.
Work Demands	<ul style="list-style-type: none"> • redesigning work to remove or reduce excessive physical and mental demands • introducing a variety of tasks to minimise physical and mental demands and assist in maintaining alertness or reducing monotony during a shift or when carrying out less cognitively demanding work • using vigilance systems to help maintain alertness • using plant, machinery and equipment (such as lifting equipment) to eliminate or reduce excessive physical demands • introducing job rotation to limit a build-up of mental and physical fatigue • using regular rest periods in addition to scheduled meal breaks • developing procedures to manage queuing of heavy vehicles.

Fatigue Risk Factor	Measures to manage risk of fatigue
Work Environment	<ul style="list-style-type: none"> • avoiding physically demanding work during periods of extreme temperature • using heating/cooling devices in extreme temperature work environments (where appropriate) and/or providing appropriate work clothing and shelter • installing ventilation/cooling devices in hot, confined work environments such as vehicle cabins • providing access to facilities for rest, meal breaks and other essential requirements such as bathroom facilities • providing access to suitable accommodation when workers need to work away from home, where the sleep environment is conducive to restorative sleep (i.e. quiet, dark, cool) • monitoring exposure to noise, temperature and chemicals and enforcing strict controls to ensure that exposure is limited • providing personal protective equipment and ensuring correct use • rotating workers through different tasks to reduce the effects of environmental factors on fatigue.
Work Scheduling	<ul style="list-style-type: none"> • scheduling safety critical work outside periods when natural sleep cycles encourage people to sleep i.e. avoid scheduling work between 12 am and 6 am • managing deadlines so workload can be safely undertaken especially during night shift • supporting regular scheduled start times where possible and practicable • including adequate breaks during a work schedule, especially during a night shift • providing adequate breaks between shifts to allow enough time for rest and recovery before the next shift including time for sleeping and eating • making sure there are adequate resources to do the job so breaks during and between shifts are not adversely affected and excessive demands are not placed on workers • arranging for vacant positions to be filled in a timely manner to ensure there are sufficient numbers of workers to complete work schedules • planning work tasks so that work demands decrease towards the end of the shift • allowing for traffic delays in relation to work involving heavy road vehicles • developing procedures to manage shift-swapping and reducing recalls to duty • providing sufficient notice to workers of changes in work schedules.

Fatigue Risk Factor	Measures to manage risk of fatigue
Non-Work Factors	<ul style="list-style-type: none">• briefing workers on fatigue risk factors and their responsibility to present for work as fit for duty• checking that workers are fit-for-work and encouraging them to self-identify where appropriate• following up when an worker self-identifies by identifying difficulties she/he may have with rostering arrangements, health conditions, family/carer responsibilities• assessing applications for secondary employment and approving applications only if they are satisfied that there is no increased risk of fatigue• encouraging workers to seek medical advice to manage both temporary illnesses and chronic health conditions which may lead to higher levels of fatigue• providing new workers and those returning from leave with time to acclimatise to shift arrangements• monitoring leave to ensure workers do not accrue excess annual leave, in accordance with the Sydney Trains Union Collective Agreement• monitoring sick leave to make sure that workers affected by fatigue are identified and managed appropriately in accordance with Sydney Trains Union Collective Agreement• referring workers who may be experiencing fatigue as a result of personal issues to Sydney Trains Employee Assistance Program.

8.3.5: Monitor and review fatigue risk profile

General Managers, in consultation with rostering staff, SEQR professionals and Line Managers will perform the following procedure:

Procedure

1. Develop and implement a fatigue risk management plan for their Division that identifies:
 - Fatigue risks associated with different roles
 - The fatigue self-assessment and sign on process
 - Management of shift swapping
 - Location of the fatigue management training plan
 - FAID tolerability levels and processes to manage shift or duty extensions
 - How fatigue risks are monitored and reviewed
2. Review the fatigue risk management plan when there are changes that may impact fatigue or at least annually.

Line Managers, in consultation with workers, will perform the following procedure.

Procedure

1. Review completed fatigue risk profile(s) at least annually, or where:
 - there are changes to legislation, work environment, equipment or work practices that make the risk assessment or control measures ineffective or out-of-date
 - there are changes in scheduled rosters
 - FAID® scores consistently exceed tolerability limits
 - an injury or incident occurs where fatigue is found to be a contributing factor
 - feedback from workers indicate a particular shift/roster may be introducing fatigue risks
 - absenteeism records indicate that particular shifts may be of concern
 - there are new developments that can assist in managing fatigue more effectively.
2. Record any changes to the risk assessment or control measures on the [SMS-06-FM-4130 Fatigue Risk Profile](#).
3. Send the proposed Fatigue Risk Profile to the Manager of the Business Unit for review and acceptance of the proposed risk controls.
4. Upon approval, implement selected controls in accordance with [SMS-18-SP-3078 Safety Action Management](#).

References

[SMS-10-OP-3092 Consulting Safety Information](#)

[SMS-08-OP-3128 Managing Shift Work and Rostering](#)

[SMS-06-FM-4130 Fatigue Risk Profile](#)

Version Control

Version	Change from previous	Date	Comment
1.0	First release of Sydney Trains SMS	01/07/2013	Launch of Sydney Trains SMS documents
1.1	Include reference to fatigue risk management plans, reference to new fatigue awareness video added, other minor changes	14/09/2015	Updated following review
1.2	Change of approver and custodian	31/01/2019	SMS update