

PURPOSE & SCOPE

To ensure that employees are monitored for their levels of fatigue and to implement guidelines for the addressing of the problem of fatigue so as to allow an adequate amount of time for an employee to sleep, rest and recover from a period of work.

Although this procedure is targeted at Company employees, the same issue is relevant to subcontractors and their employees, who should be similarly monitored. Where a subcontractor or their employee's level of fatigue is in question, the issue should be raised with the subcontractor and resolved.

DEFINITIONS

Fatigue

States of mental and/or physical function where the level of alertness, reaction time, decision making and communication abilities are depleted.

REFERENCES

- *Safety Risk Management*
- *Drugs and Alcohol Procedure*

RESPONSIBILITIES

Managing Director

- Ensure that adequate measures from identifying fatigue amongst employees are implemented and maintained for the duration of the project.

Supervisor

- Monitor the performance of employees under their control in respect of fatigue; and
- Report on any incidents and implement appropriate action to relieve employees exhibiting symptoms of fatigue.
- Ensure the Company's attitude and procedures in relation to working when fatigued are conveyed to employees through the site induction process.

METHOD

General

Fatigue results from insufficient rest and sleep between activities.

Work-related fatigue can arise from:

- Non-traditional shifts;
- Greater workload within standard shifts;
- Situations requiring concentration for extended periods during working hours;
- Working in temperature extremes;
- Long periods of commuting to and from work.
- Vibration.
- Lighting/glare and noise.

Causes of non-work-related fatigue include:

- Sleep disruption;
- Stress such as that associated with financial difficulties or domestic responsibilities;
- Moonlighting (working at a second job).

Work-related fatigue can be reduced by good management of the organisation. Non-work-related fatigue varies considerably between individuals because of all the different circumstances and is dependent on a person's environment in addition to their physical and mental attributes. Non-work-related fatigue is best managed at the individual level through strategies such as education and counselling (refer to *Drugs and Alcohol* in relation to counselling procedures), as well as identifying any organisational issues which might have an impact.

Symptoms of fatigue include:

- Tiredness;
- Loss of alertness;

- Greater likelihood of involuntary sleep (e.g. micro-sleeps which are brief involuntary “naps” that last 4-5 seconds);
- Poor memory (e.g. not being able to recall the work activity which has just been completed);
- Irritability and depression;
- Poor judgement; and
- Slow reaction to signals.

Acute fatigue results from an immediate episode of sleep deprivation. It results in:

- Unpleasant muscular weariness;
- Tiredness in everyday activities; and
- Reduced co-ordination and alertness.

If the sleep deprivation is not remedied, chronic fatigue can result which leads to further deterioration in performance.

Management of Fatigue Risk Factors

The employer holds the fundamental responsibility of managing the risks associated with fatigue. However, employees are responsible for ensuring that their behaviour does not create or exacerbate risks.

The fact that individual behaviour outside of work can have a considerable influence on fatigue levels does not reduce the employer’s obligation to address the issue consistently with the principles of risk management, including application of the hierarchy of control.

Identification of Fatigue Risk Factors

The following risk factors should be considered when identifying the risks associated with fatigue.

- *Workload*

Factors which should be taken into account in designing jobs and in identifying risk of fatigue include:

- The physical effort required e.g. lifting, carrying, driving, operating a machine, using a keyboard;
- The demands caused by monotonous, repetitive activities or the need for high vigilance and concentration;
- The pressure on the employee, e.g. number of different tasks required to be done where realistically only a certain number can be completed effectively;
- The amount of control and autonomy the employee has over their work;
- The hours of work including night shift versus day shift, length of shifts, timing of shifts and breaks between and within shifts;
- The body’s physiological and psychological responses to workload, e.g. heart rate, hormone production, blood pressure, stress, anxiety;
- Whether job performance changes with the time of day;
- Whether supervisors and workers are able to change work activities and tasks in response to fatigue; and
- The work environment, e.g. heat, cold, dust, noise.

Moonlighting (working at other jobs) can add significantly to an individual’s workload. It can be difficult to determine but the consequences it can have in contributing to fatigue means that the possibility of moonlighting should be identified.

- *Travel Time*

In addition to the actual hours at work, travel time to and from work each day should be considered particularly when extended shifts are worked. In some instances travelling time can add significantly to a work shift. Sleep time is reduced and recovery times needed after work may be extended.

- *Family and social needs of employees*

If practical, and if known, the family and social commitments of employees should be taken into account in risk identification. This does not mean that employees with family and other commitments should be

unfairly targeted. Arrangements for shift work and extended hours should, where possible, consider the needs, commitments and responsibilities for all employees who are trying to balance work and other commitments.

Assessment of Fatigue Risk Factors

Risk assessment is undertaken to determine the likelihood of potential injury or illness for those exposed to identify risk factors. This should involve an assessment of the likelihood of serious consequences from working while fatigued. As well as the data generated by identifying the risks, information that will support effective risk assessment includes:

- Incident reports; and
- Self-reports from employees

Controlling Fatigue Risk Factors

Controlling of risk factors should be in accordance with the hierarchy of control identified in *Safety Risk Management* as follows:

- *Eliminate*

Eliminating risk factors associated with fatigue can be difficult. However, wherever possible, the sources of high risks should be removed from the workplace. This might include:

- Eliminating the use of shift work or extended hours for certain functions;
- Moving as much activity as possible to day shifts, particularly work which may be a high risk at times when impairment is likely (e.g. at night);
- Manage shift rotation by adopting a day, afternoon, night order so as to allow for sufficient sleep time between shifts;
- Adjust the length and frequency of breaks to match the type of work being performed (physical/mental effort) and the length of shift; or
- Eliminating sources of risks that might exacerbate fatigue (e.g. excessive noise or manual handling, extremes of temperature or poor ventilation).

Job design should ideally ensure sufficient level of physical activity or variation of types of activities to help workers maintain alertness, thus eliminating to some extent the likelihood of lapses in concentration, micro-sleeps, etc.

- *Substitute*

Substituting safer practices for those currently used can produce an effective set of control strategies. Such strategies include:

- Improved work scheduling;
- Improved roster design; and
- Control over hours of work.

- *Engineer*

Engineering controls may help control risks, for example:

- Heating and cooling to control ambient temperatures and suitable ventilation to support alertness;
- Alarms and monitors, particularly for solo work (e.g. driving vehicles);
- Ergonomic modifications of equipment or workplace layout. A modification of the equipment or layout can reduce the worker's fatigue.

- *Document*

The use of documented procedures is of limited value, however, the education of workers into the danger of fatigue and fatigue management can prove to be an effective strategy.

- *Protect*

The use of personal protective equipment is of limited use as a control measure in relation to fatigue. It may help in some circumstances; however, e.g. the use of hats and sunglasses can reduce environmental stress and fatigue in outdoor workers.

RECORDS & ATTACHMENTS

The following is the risk management process, which must be applied to identifying hazards, assessing, and controlling risks associated with fatigue.

