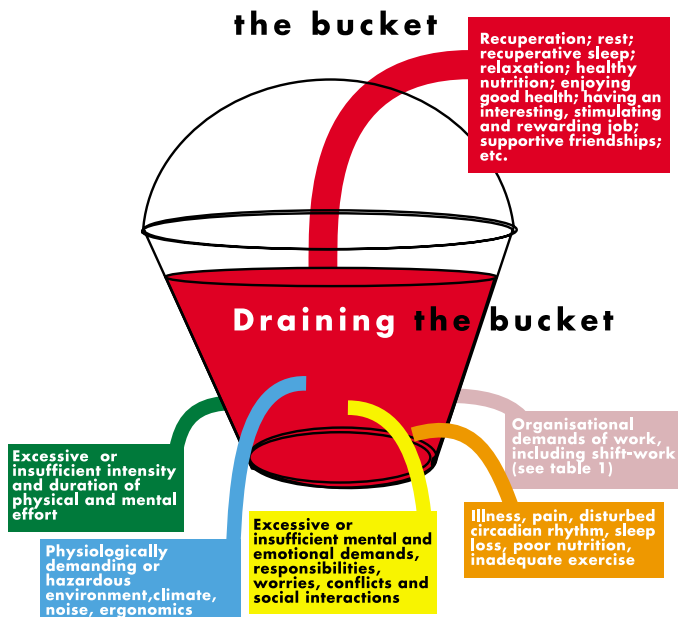


“Stress” is a word in common use. It has a variety of meanings, depending on the way it is used. “Stress” can refer to the demands that people face at work or at home, or it may mean a state of fatigue or a health problem. Whichever meaning it has, the common picture is that a person is having difficulty coping with some aspect of their life.

“Fatigue” can occur for many different reasons — physical, mental or emotional. Being tired, “drained” or exhausted are familiar feelings for everybody. These feelings, if severe or prolonged, and can lead to a person becoming “unsafe”. Laboratory experiments indicate, for example, that people who have gone without sleep for long enough are just as impaired as people who are over the legal limit for alcohol.

Stress can contribute to fatigue. Impairment from this cause — being unable to carry on working safely through fatigue, has obvious implications for workplace safety.



The simple “bucket model” of fatigue shows a reservoir of tolerance for activity. The model shows that a balance is needed between work demands, home events and physical and mental effort and rest. Effort drains the reservoir and adequate recuperation is needed to refill it.

The health and safety consequences of stress and fatigue at work are fully discussed in the companion OSH publication: *Stress and Fatigue — Their impact on health and safety in the workplace*.

## Responsibilities under the Health and Safety in Employment Act

Employers are required to take all practicable steps to prevent harm occurring to employees. The Act requires employers to adopt a systematic approach to identifying, assessing and controlling hazards at work. Because impairment can arise from stress or fatigue, that may occur at home or at work, employers should aim to identify this impairment when it threatens workplace health and safety.

Employees also have obligations. In this context employees should use opportunities for recuperation responsibly.

They should ensure that the personal life choices they make (e.g. use of alcohol or recreational drugs or working second jobs which prevent adequate rest) don’t pose a risk of harm to themselves or other people at work.

## Preventing stress and fatigue

There are many points at which interventions can occur to prevent stress and fatigue. This pamphlet emphasises workplace factors, and additional strategies would be needed for stressors that occur outside work.

*Primary prevention (Preventing problems from happening)*

### **Make work congenial**

1. Take active steps to design jobs and tasks so that people are mentally and physically stimulated and thus enjoy their work.
2. Design the physical environment (workstations, lighting, air-conditioning etc.) with human factors in mind, so that people can work in congenial surroundings.

### **Consider the way work is organised**

3. Job and task design — provide optimal levels of physical and mental activity interspersed with appropriate breaks to allow adequate recuperation. ( Ask the question: What is the cycle of work and rest that ensures optimum performance?)
4. Design rosters safely.
5. Ensure adequate staffing levels.

### **Manage people considerately**

6. Select people who fit the requirements of the task.
7. Train people so they can do the work/tasks effectively.
8. Encourage participation at work.
9. Make sure that work/tasks are defined clearly
10. Provide feedback to employees about their performance and provide for feedback from employees about the performance of supervisors.
11. Provide support for people at work — when they encounter problems doing their work, or when they have emotional or family difficulties.
12. Create mechanisms for resolving interpersonal difficulties at work.

### **Promote health and fitness**

13. A positive, sensitive interest by organisations in the promotion of personal health and fitness is encouraged.

*Secondary prevention  
(Preventing problems from getting worse)*

### **Train for enhanced “coping” skills**

This is the traditional “stress management” approach. In this option the individual is expected to improve his/her state of adaptation to the requirements of the job. The power to change the job to fit the person lies with the organisation, and is primary prevention. While the “stress management” strategy has a part to play, it is obvious that primary prevention is to be preferred. The “stress management” approach on its own will not compensate for jobs that place unreasonable demands on people.

*Tertiary prevention (Helping people with problems)*

Arrange for appropriate treatment and rehabilitation for the person suffering from work-related stress.

Where work has been identified as a cause or partial cause for the problems that have arisen, employers should re-evaluate their primary prevention strategies and other control measures to prevent further occurrences.

*Topics where further advice will be needed*

This advice has covered stress and fatigue in the general sense. Other publications deal with special topics in this area, such as post traumatic stress disorder. Special care is often needed by people who witness or are involved in an event such as an armed robbery, or where a colleague is injured or killed in a workplace accident.

## Methods of assessing fatigue in the workplace

Most employers have developed a number of simple, easily used mechanisms to run a business. For example:

*Are there enough people to work today?*

*Do they have the right equipment for the day's tasks?*

*Are they clear about their functions?*

Some employers will need to extend these mechanisms by asking a further question:

*Is each person safe for the work in hand?*

Of course, some industries have greater risks for fatigue than others. Where fatigue is often part of the job, and where this compromises health and safety, employers

## Assessment of an employee's safety to carry on working

Criterion	Assessment scale	
	<i>Won't usually need assessment</i>	<i>Increasing need for assessment</i>
1. How many hours did the employee work in the past week?	Under 40 hours	Over 65 hours
2. What is the pattern of the hours worked in the past week?	Regular 8-hour shifts	Extended irregular shifts
3. Is the employee suffering from acute sleep loss?	Regular sleep of usual day/night pattern and length	Disturbed or curtailed sleep
4. Does the employee have a sleep debt?	No reason for sleep debt	Hours worked and personal circumstances make sleep debt a probability
5. Is the employee required to work at a time that is out of synchrony with the waking cycle of the employee's circadian rhythm?	No	Sleep periods are out of synchrony with the employee's present circadian rhythm
6. What events are currently occurring away from work — is the employee experiencing life stressors?	None	Life events pose major problems
7. How well has this employee coped in the past?	Has coped well in the past	Has not coped well in the past
8. Does the employee get support at work — and at home?	Has had good support in the past	Support networks not evident
9. What is the physical intensity of work?	Medium	Very low or very high
10. Does the employee's physical fitness match the demands of the work?	Close fit between fitness and requirements	Obvious discrepancies
11. What are the mental and emotional demands of the work?	Medium	Very low or very high
12. Does the employee's mental/emotional state match the demands of the work?	Close fit	Obvious discrepancies
13. Do environmental factors pose an additional load?	No influences	Major influences

should be able to assess quickly the suitability of their employees for the intended work.

One of the many practical approaches that could be used to assess the probability of fatigue in an employee is presented in the table below. This is not a scientific formula and it should not be used to differentiate between safe and unsafe situations. It is rather an aide-memoire. Some of the questions will be difficult to answer — or even to ask — while others will require a value judgement. There is no obligation to use this particular method, but some form of assessment should take place.

Specialised methods for assessing fatigue are available:

1. An example of one system for assessing fatigue is “fatigue score” software. At the start of the shift, each employee spends one minute playing a specially designed computer game. Research has shown that the employee’s score (indexed to their normal score) gives a valid measure of fatigue. A low score determines their not working that shift.
2. Software can be used to estimate the degree of fatigue that will be reported by an average person performing work at that time of the day. This method can be used to derive a “fatigue budget” for each individual or for a group of employees. The budget can be used like a financial budget in that peaks can be avoided and that the fatigue of individuals and the group minimised over a period.

### *Further information*

The following publications are available from your nearest OSH office. See the *Blue Pages* at the front of your telephone directory for an address or phone number.

*Stress and Fatigue: Their impact on health and safety in the workplace — Information for occupational health professionals, human resource practitioners and others* (\$20 incl. GST)

*Shift-work — Reducing its effect on health and safety* (pamphlet)

*Dealing with the Threat of Armed Robbery: Advice for employees* (pamphlet)

*Guidelines for the Safety of Staff from the Threat of Armed Robbery* (\$10 incl. GST)

*A Guide for Employers and Employees on Dealing with Violence at Work* (\$10 incl. GST)

# Stress and fatigue

Reducing their impact

— advice for employers and employees