

# DRO

Deakin University's Research Repository

## This is the published version:

LaMontagne, Anthony and Keegel, Tessa 2012, *Reducing stress in the workplace: An evidence review: summary report*, Victorian Health Promotion Foundation, Carlton, Vic.

## Available from Deakin Research Online:

<http://hdl.handle.net/10536/DRO/DU:30061224>

Reproduced with the kind permission of the copyright owner.

**Copyright** : 2012, Victorian Health Promotion Foundation



# Reducing stress in the workplace

An evidence review: summary report

© Copyright Victorian Health Promotion Foundation 2012

ISBN: 978-1-921822-09-4

March 2012

Publication Number: P-032-GEN\_A

#### **Suggested citation**

VicHealth 2012, *Reducing stress in the workplace (An evidence review: summary report)*, Victorian Health Promotion Foundation, Melbourne, Australia.

#### **Acknowledgements**

This report is a summary of the full evidence review, *Reducing stress in the workplace (An evidence review: full report)*, available at [www.vichealth.vic.gov.au/workplace](http://www.vichealth.vic.gov.au/workplace)

The full evidence review was prepared by the McCaughey Centre, and special thanks are extended to the authors: Associate Professor Anthony LaMontagne and Dr Tessa Keegel.

This summary report was prepared by Rebecca Zosel with support from the authors of the full evidence review, and VicHealth staff: Irene Verins and Samantha McCrow.

#### ***Creating Healthy Workplaces evidence review series***

VicHealth commissioned five international evidence reviews to build a body of evidence and knowledge about effective workplace health interventions. Both full and summary reports are available for each of the five evidence reviews:

- Preventing race-based discrimination and supporting cultural diversity in the workplace
- Preventing violence against women in the workplace
- Reducing alcohol-related harm in the workplace
- Reducing prolonged sitting in the workplace
- Reducing stress in the workplace

**[www.vichealth.vic.gov.au/workplace](http://www.vichealth.vic.gov.au/workplace)**

#### **Cover photo**

Groups at greatest risk of workplace stress are younger people, working women, those in lower skilled occupations and precariously employed people. These groups are more highly represented in the service sector, but exposure to workplace stressors is widespread.

Photo: Taras Mohamed

# Reducing stress in the workplace

An evidence review: summary report

**VicHealth is playing a leading role in building the Australian knowledge base on effective workplace health interventions with our *Creating Healthy Workplaces* evidence review series. We hope that this report, and the series as a whole, becomes a focus for new conversations about workplaces and the critical role they play in the health of society.**

> Jerril Rechter, CEO, VicHealth

# Contents

Foreword	04
Executive summary	05
1. Introduction	06
2. Workplace stress: definitions and prevalence	07
3. The impacts of workplace stress	08
4. The benefits of reducing workplace stress	10
5. Population groups most at risk	11
6. Best practice: workplace interventions	12
7. Bibliography	15

## Foreword

Workplaces are important settings for health action and improvement. VicHealth has identified five areas where workplaces can begin to make advances, not only in improving the health of employees and preventing future problems, but also in enhancing productivity and reducing absenteeism and staff turnover. These five areas – race-based discrimination and cultural diversity, violence against women, alcohol-related harm, prolonged sitting and stress – are the subjects of VicHealth's *Creating Healthy Workplaces* evidence review series.

This report deals with workplace stress and is a summary of the full evidence review, *Reducing stress in the workplace (An evidence review: full report)*, available at [www.vichealth.vic.gov.au/workplace](http://www.vichealth.vic.gov.au/workplace). Its findings are both concerning and encouraging. They are concerning because the report clearly shows that unhealthy stress in the workplace has serious consequences for the mental and physical health of employees, manifesting in illnesses such as heart disease and depression and unhealthy behaviours like smoking. Equally, the report shows encouraging evidence that workplace stress is preventable, and that effective interventions to reduce and control workplace stress exist.

The measures discussed in this report to reduce workplace stress complement existing occupational health and safety (OHS) practices. Historically, OHS has focused on employers' legislated duty to eliminate and control risks to health and safety that arise directly from physical, chemical and biological risks in the workplace. As our understanding has improved, the need to consider the psychosocial working environment and the organisation of work has become more apparent.

Most working-age Australians spend around one-third of their waking lives at work and there are real opportunities to influence people's health in this setting. Although work has many recognised health benefits, some individuals experience poorer health because of stressors in the workplace.

The health problems of individual staff reverberate throughout the workplace, affecting co-workers, managers and businesses as a whole – not to mention families and communities.

VicHealth is thrilled to be playing a leading role in building the Australian knowledge base on effective workplace health interventions with our *Creating Healthy Workplaces* evidence review series. We invite you to read and consider the findings summarised in this report. We hope that this report, and the *Creating Healthy Workplaces* series as a whole, becomes a focus for new conversations about workplaces and the critical role they play in the health of society. While this report is not a definitive review, it introduces some key issues that require consideration when designing effective workplace health programs.

And finally, we hope that individual workplaces and employers are inspired to identify existing or potential workplace stressors and put practical interventions in place. Around the world, successful enterprises have found that implementing measures that enhance the physical and mental health of employees results in benefits far greater than the costs.



A handwritten signature in black ink, reading 'Jerril Rechter'.

**Jerril Rechter**  
Chief Executive Officer  
VicHealth

# Executive summary

The evidence review, *Reducing stress in the workplace (An evidence review: full report)*, found that exposure to workplace stressors is widespread and workplace stress-attributable illness burdens are large. Conservative estimates suggest that a substantial – and preventable – fraction of common chronic diseases among working Australians are attributable to workplace stress. Workplace stress is associated with numerous adverse health outcomes for employees, including cardiovascular disease and depression.

At an organisational level, workplace stress reduces productivity because of increased staff turnover, absenteeism and presenteeism. Other organisational outcomes linked to workplace stress include higher accident and injury rates, and higher healthcare expenditures and workers' compensation premiums.

Population groups most at risk of workplace stress include younger people, working women, those in lower skilled occupations and precariously employed people. Improvements in working conditions for these groups would lead to the greatest population health benefits.

Workplace stress is preventable. Substantial public health improvements could be achieved by reducing or eliminating it. There is a clear economic incentive for employers to invest in workplace stress interventions as the return on investment is high.

Effective interventions for the prevention and control of workplace stress are available, e.g. increasing resource allocations to complete tasks, coping skills training and employee assistance programs. Comprehensive organisational and systems levels approaches that range from primary intervention (to eliminate or reduce job stressors) and secondary intervention (to alter the ways that individuals perceive or respond to job stressors) to tertiary intervention (to treat, compensate and rehabilitate employees with job stress-related illness) are the most effective.

Additionally, in order to effectively reduce stress, workplace interventions should:

- be founded on a solid evidence base
- have clear aims, goals and tasks
- include a risk assessment
- be tailored but remain adaptable for implementation in a specific workplace
- be accessible and user-friendly to individuals at all levels of an organisation
- have a systematic approach
- facilitate competency building and skills development
- be developed with the participation of those who are being targeted by the intervention.



# 1. Introduction

The workplace has been identified as a priority setting for health action and improvement in VicHealth's *Strategy and Business Plan 2009–2013*. Late in 2009 VicHealth established a new program, **Creating Healthy Workplaces**, to enhance and sustain workplace health promotion research, policy and practice in Victoria by building the evidence base on effective workplace health interventions.

VicHealth's *Creating Healthy Workplaces* program focuses on five factors that influence health:

- race-based discrimination and cultural diversity
- violence against women
- alcohol-related harm
- prolonged sitting
- stress.

In recognition of the limited evidence currently available to guide the design and delivery of interventions, VicHealth commissioned five international reviews to build the evidence on effective workplace health interventions in relation to these five determinants of health.

This report is a summary of the full evidence review, *Reducing stress in the workplace (An evidence review: full report)*, available at [www.vichealth.vic.gov.au/workplace](http://www.vichealth.vic.gov.au/workplace). The key objective of the evidence review was to identify workplace interventions that reduce workplace stress.

The review focused on interventions that target change at the organisational and systems levels. An organisational and systems approach involves a whole of workplace focus that includes all stakeholders and brings about change in the workplace culture and infrastructure as well as policy, procedures and practices.

Organisational and systems levels interventions represent an effective and sustainable approach to creating supportive and healthy workplace environments. They target and seek to change the influences on, or root causes, of ill health within the workplace (e.g. the working conditions and culture). Organisational and systems-focused interventions result in benefits to both the workplace and individual employees. In contrast, individually focused interventions can be effective at the individual level but don't always have favourable impacts at the broader organisational level. VicHealth's focus on interventions that target change at the organisational and systems levels will build upon and complement existing workplace health practices and evidence, which largely focus on effecting change at the individual employee level.

## The workplace as a health promotion environment

Workplaces are an important environment for health action and improvement. VicHealth identifies the workplace as a priority setting in its *Strategy and Business Plan 2009–2013* because:

- Employment and working conditions are important social determinants of health. There is strong evidence linking fair, safe and secure employment arrangements with good health. Conversely, poor job security and conditions are associated with poor health.
- Workplaces play a critical role in the health of society. The workplace directly influences the physical, mental, economic and social wellbeing of employees, and in turn the health of their families, communities and society. Effective workplace health promotion can therefore result in a multitude of beneficial outcomes across all levels.
- The workplace provides an ideal setting and infrastructure to support the promotion of health to a large audience. Approximately two-thirds of working-age Australians are in paid work – many spending up to a third of every day at work.

In 2010, VicHealth commissioned a research team from The University of Melbourne's McCaughey Centre to conduct the workplace stress evidence review and identify:

- the impacts (health, social and economic) of workplace stress
- the benefits to the workplace of reducing workplace stress
- population groups that are most at risk
- workplace interventions that reduce workplace stress, including:
  - the major components of effective interventions
  - principles, frameworks and models to guide the design and delivery of interventions
  - tools and resources to support implementation
  - case studies.

**This report is a summary of the full evidence review, *Reducing stress in the workplace (An evidence review: full report)*, available at [www.vichealth.vic.gov.au/workplace](http://www.vichealth.vic.gov.au/workplace)**

## 2. Workplace stress: definitions and prevalence

The US National Institute for Occupational Safety and Health defines job stress as *“the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury”*.

‘Workplace stress’ refers to distress resulting from a situation where the demands of a job are not matched by the resources provided to get the job done. Both sides of this equation can be modified to prevent or reduce workplace stress, by modifying demands or stressors and improving job resources.

---

**Workplace stress refers to distress resulting from a situation where the demands of a job are not matched by the resources provided to get the job done.**

---

Workplace stressors are working conditions that increase the risk of workplace stress. Stressors are classified as psychosocial or physical. Psychosocial stressors (or psychosocial working conditions) include job demands, job control, job insecurity, bullying, harassment and more. Physical stressors include noise and ergonomic exposures (e.g. awkward working postures, repetitive movements). Resources might include an individual's occupational skills, job experience or education, or organisational resources such as machinery, raw materials or staffing levels.

---

**Job strain is experienced by 25 per cent of working women and 18 per cent of working men.**

---

The most widely used model for measuring psychosocial and physical stressors is Karasek and Theorell's demand/control model, which suggests that workplace stress arises from the interaction of low job control with high demands, which produces ‘job strain’.

Exposure to workplace stressors is widespread. Australian research has found that around 25 per cent of working women and 18 per cent of working men experience job strain. Similar levels are observed in other industrialised democracies.

### 3. The impacts of workplace stress

The impacts of workplace stress can be understood in the context of the workplace stress *process*, as outlined in Figure 1. Exposure to stressors leads to distress, which in turn leads to adverse short-term responses such as elevated blood pressure and tenseness. Distress and short-term responses increase the risk of enduring health outcomes such as coronary heart disease, anxiety disorders and nicotine addiction. Importantly, workplace stress can affect health directly through physiological changes and indirectly by fostering a range of unhealthy behaviours. The stress process can be influenced by a wide range of modifying factors: social, psychological, biophysical, behavioural and genetic.

The effects of workplace stress on individuals’ health are well substantiated in a large body of international research. They are summarised in Table 1. There is also growing evidence of the impacts of workplace stress on organisations.

#### Physical health

The evidence linking workplace stress with cardiovascular disease (CVD) is strong. Numerous studies show workplace stress is associated with physiological risk factors for CVD (e.g. hypertension, overweight) and with CVD outcomes (e.g. heart attack, coronary heart disease).

There is growing evidence that workplace stress also increases the risk of diabetes and metabolic syndrome (a combination of risk factors for diabetes and heart disease including high blood pressure, high blood cholesterol and increased waist circumference). Other physical health problems associated with workplace stress include musculoskeletal disorders, immune deficiency disorders and gastrointestinal disorders.

Figure 1: Workplace stress process and modifying variables

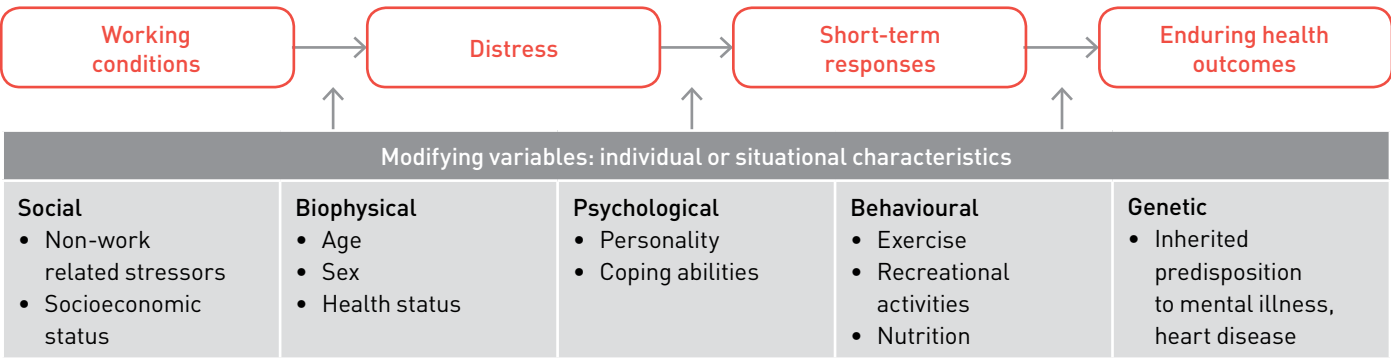


Table 1: Workplace stress and health outcomes

Health outcome groups	Specific health outcomes
Physical	<ul style="list-style-type: none"><li>• Cardiovascular disease (CVD)</li><li>• Coronary heart disease (CHD)</li><li>• Myocardial infarction (heart attack)</li><li>• Hypertension</li><li>• Diabetes</li><li>• Metabolic syndrome</li></ul>
Mental	<ul style="list-style-type: none"><li>• Depression</li><li>• Anxiety disorders</li><li>• Distress</li><li>• Burnout</li><li>• Suicide</li><li>• Poor mental health</li></ul>
Behavioural	<ul style="list-style-type: none"><li>• Smoking</li><li>• Alcohol consumption and dependence</li><li>• Low physical activity</li><li>• Poor diet</li><li>• Overweight and obesity</li></ul>

## Mental health

The evidence linking workplace stress with depression is strong. Workplace stress is also associated with anxiety, psychological distress, burnout, increased visits for psychiatric treatment, suicide and poor mental health.

High demands, low job control and the combination of the two (job strain) are associated with common mental disorders (e.g. depression and anxiety). Common mental disorders and sickness absence have been linked to a range of job factors, including management style, work overload and pressure, lack of control over work and unclear work role. Low social support, job insecurity and perceptions of adverse psychosocial factors in the workplace are also associated with poor mental health.

Simultaneous exposure to high job demands, low job control and low social support at work can result in significantly increased risk of mental health problems.

## Behavioural outcomes

Workplace stress can harm health indirectly by fostering a range of unhealthy behaviours: cigarette smoking, alcohol abuse, lack of exercise, poor diet and higher body weight. Overall, the evidence is mixed but appears strongest for heavy alcohol consumption among overweight men and the co-occurrence of multiple risky health behaviours.

Though further research is needed, it is plausible that workplace stress contributes to unhealthy and addictive behaviours.

## Impacts on organisations

Workplace stress is associated with a range of adverse impacts on organisations. Workplace stress reduces workplace productivity through increased staff turnover, absenteeism (an employee's time away from work due to illness) and presenteeism (decreased on-the-job performance due to the presence of health conditions). Workplace stress causes illnesses, which result in increased absenteeism. Some estimate as much as 60 per cent of absenteeism is attributable to stress-related illness.

---

**As much as 40 per cent of employee turnover and 60 per cent of absenteeism is caused by workplace stress and stress-related illnesses.**

---

Workplace stress results in higher employee turnover; up to 40 per cent of turnover has been attributed to stressors at work.

High job control has been shown to predict lower absence and presenteeism.

Other organisational outcomes linked to workplace stress include higher accident and injury rates, and higher healthcare expenditures and workers' compensation premiums.

## 4. The benefits of reducing workplace stress

Workplace stress is preventable, as has been demonstrated in a large and growing body of intervention research. Therefore, substantial public health improvements can be achieved by reducing or eliminating workplace stress. Benefits accrue to individuals (e.g. better health) and to organisations (e.g. lower absenteeism), reversing the impacts and burdens described in the previous section.

### **Economic benefits of reducing workplace stress**

The economic benefits of reducing workplace stress at a population level are considerable. While some international studies have been conducted, there has been relatively little health economic research on workplace stress in Australia.

To date, detailed costs have only been estimated for depression. In a recent VicHealth commissioned study, the cost of depression in the Australian workforce attributable to job strain was estimated at \$730 million over one year, and \$11.8 billion over a lifetime. The vast majority of these costs relate to employment (e.g. lost productive time and job turnover) and are borne by employers.

---

**Employers stand to gain the greatest economic benefits from reducing workplace stress.**

---

Employees without access to paid sick leave are an important component of the Australian labour market; around 25 per cent of working Australians have no paid annual or sick leave. Absenteeism costs for employees with depression who do not get paid for sickness absence were estimated at \$85 million over one year. This is a substantial cost borne by these individuals and may result in promoting attendance at work when unwell (presenteeism).

## 5. Population groups most at risk

Population groups that are most at risk of workplace stress were identified by assessing exposure to workplace stressors in the Victorian working population.

---

**Population groups that are most at risk of workplace stress include younger people, working women, those in lower skilled occupations and precariously employed people.**

---

Groups at greatest risk of experiencing job strain and associated illness burdens are younger people, working women, those in lower skilled occupations and precariously employed people. Improvements in working conditions for these groups would lead to the greatest population health benefits.

These population groups are more highly represented in the service sector (e.g. health and community services; hospitality).

From a health equity perspective, there is a need to focus on lower skill level/lower occupational status employees as they are more likely to be exposed to stressors than higher skill level employees. They are also more susceptible to workplace stress-related ill health, which is likely to be due to having fewer social and material resources to help them withstand work pressures.

Casual full-time staff have the worst psychosocial working conditions, with the lowest job control and highest job pressure, as well as the highest odds of multiple job holding, shift work and exposure to four or more traditional occupational hazards (e.g. exposure to toxic substances, electrical hazards).

Sexual harassment at work is another psychosocial working condition that shows some distinct patterning in the working population; precariously employed women are at greatly elevated risk of unwanted sexual advances at work compared to women employed in permanent full-time jobs.

## 6. Best practice: workplace interventions

### Review method

The authors conducted an evidence review to identify interventions that reduce workplace stress, including:

- the major components of effective interventions
- principles, frameworks and models to guide the design and delivery of interventions
- tools and resources to support implementation
- case studies.

The review focused on interventions that target change at the organisational and systems levels. Systematic reviews of the workplace stress intervention literature were summarised, and a comprehensive search conducted for the most recent information on best practice, to provide a combination of best evidence on *what to do* for workplace stress intervention (systematic reviews) as well as *how to do it* (best practice). National and international peer-reviewed as well as other literature was included.

This summary report presents the major components of effective interventions and the principles, frameworks and models to guide the design and delivery of interventions.

Visit [www.vichealth.vic.gov.au/workplace](http://www.vichealth.vic.gov.au/workplace) for a copy of the full evidence review: *Reducing stress in the workplace (An evidence review: full report)*.

### Organisational and systems levels approach

Effective interventions for the prevention and control of workplace stress are available. Systems approaches are the most effective at reducing workplace stress. Systems approaches combine organisationally focused interventions to improve psychosocial working conditions with employee-directed, individual-level interventions to improve the capacity of staff to withstand stress. Systems approaches are beneficial at both the individual (e.g. better health) and organisational (e.g. lower absenteeism) level. In contrast, individual-focused approaches (e.g. coping and time management skill development) in the absence of other interventions have less impact – they favourably affect individual-level outcomes but tend not to have favourable impacts at the organisational level.

Despite the extensive evidence in support of systems approaches to reducing workplace stress, prevalent practice in Victoria and internationally remains disproportionately focused on individual-level intervention, with inadequate attention to the reduction of working conditions that increase the risk of workplace stress. This situation needs to be reversed in order to realise the full preventive potential of workplace stress intervention.

### Primary, secondary and tertiary intervention

Systems approaches can also be defined as integrating primary, secondary and tertiary interventions, as outlined in Figure 2.

*Primary preventive interventions are proactive*, aiming to prevent the occurrence of stress by removing or reducing stressors. They address sources of stress in the workplace – the working conditions, or stressors, that increase the risk of stress. They entail improvements in the ways of routinely involving employees in job planning and decision-making, and improvements in the psychosocial and physical work environments. Examples include changes in job demands and job redesign, and the formation of joint labour/management health and safety committees.

---

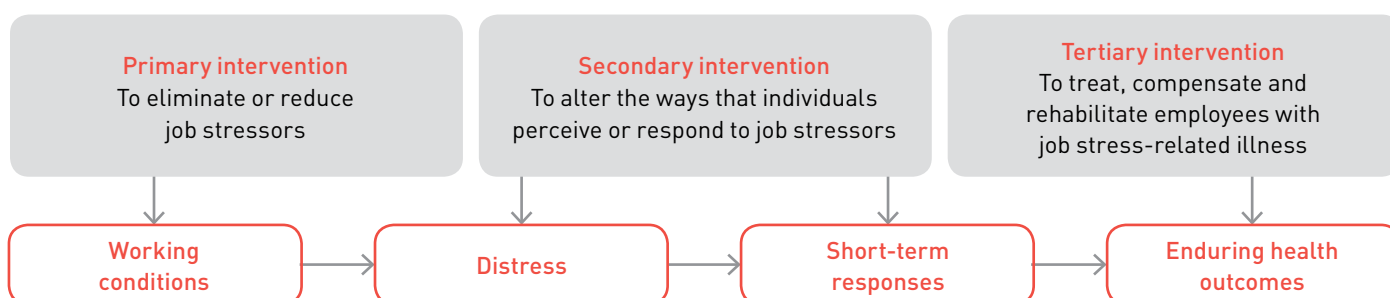
**Systems approaches are the most effective at reducing workplace stress.**

---

*Secondary interventions are corrective*, aiming to alter the ways that individuals perceive or respond to stressors, and are done in addition to removing or reducing stressors. Examples include stress management skills development (e.g. time management and coping skills, meditation, muscle relaxation).

*Tertiary interventions are reactive*, aiming to minimise the effects of stress-related problems once they have occurred, through treatment or management of symptoms or disease. Examples include efforts to assist staff in dealing with the impacts of workplace stress (e.g. employee assistance programs) and rehabilitation and return-to-work programs for those affected by workplace stress-related illness.

**Figure 2: Workplace stress process and intervention points**



Primary preventive interventions are also known as 'stress prevention'. 'Stress management' generally refers to secondary and tertiary interventions. These two complementary approaches, together comprising a systems approach, correspond roughly to the perspectives of the two major disciplines involved in addressing and understanding workplace stress: occupational health and safety, and psychology.

A comparative summary of these two disciplines in relation to workplace stress is provided in Table 2, alongside examples of intervention activities at the primary, secondary and tertiary levels.

**Table 2: Primary, secondary and tertiary intervention**

Relative effectiveness	Intervention level	Occupational health and safety: hierarchy of controls	Psychology and related disciplines	Examples of intervention objectives and corresponding activities	
				Objectives	Activities
<div> <div>Most</div> <div></div> <div>Least</div> </div>	<b>Primary</b> Goal: To eliminate or reduce job stressors (eliminate or reduce risk factors for job stress)	Control at the source of the hazard or interception of the hazard in its path from source to employee through: <ul style="list-style-type: none"> <li>hazard elimination</li> <li>substitution with safer technology</li> <li>process isolation to contain exposure</li> <li>engineering controls to reduce exposure</li> </ul>	Organisational psychology: address stressors at the level of the organisation, or work-directed intervention	<ul style="list-style-type: none"> <li>Reduce job demands</li> <li>Improve job control</li> <li>Improve social support</li> </ul>	<ul style="list-style-type: none"> <li>Increase time or other resource allocations to complete specific tasks</li> <li>Redesign the physical work environment to reduce musculoskeletal load and noise</li> <li>Provide breaks from client-based work</li> <li>Increase employee participation in work planning and decision-making</li> <li>Assess and integrate employee needs into planning of work schedules</li> <li>Assess and integrate employee needs to optimise supervisory social support</li> <li>Create clear promotion pathways</li> </ul>
	<b>Secondary</b> Goal: To alter the ways that individuals perceive or respond to stressors	Control at the individual level through: <ul style="list-style-type: none"> <li>administrative controls (e.g. job rotation)</li> <li>training and education</li> <li>personal protective equipment</li> <li>health surveillance</li> </ul>	Psychology: organisation-directed interventions, particularly around the organisation-individual interface and individual-directed interventions	<ul style="list-style-type: none"> <li>Alter individual responses to job stressors</li> <li>Improve individual ability to cope with short-term stress responses</li> <li>Detect stress-related symptoms and intervene early</li> </ul>	<ul style="list-style-type: none"> <li>Provide cognitive behavioural therapy or relaxation response training</li> <li>Provide anger management training</li> <li>Conduct health screening for stress symptoms, ambulatory blood pressure, hypertension, etc. – assess results on work group level</li> </ul>
	<b>Tertiary</b> Goal: To treat, compensate and rehabilitate employees with job stress-related illness	Control at the level of illness through: <ul style="list-style-type: none"> <li>treatment</li> <li>workers' compensation</li> <li>rehabilitation and return to work programs</li> </ul>	Psychology, psychiatry: counselling and psychotherapy	<ul style="list-style-type: none"> <li>Treat job stress-related illness</li> <li>Compensate job stress-related illness</li> <li>Rehabilitate job stress affected employees</li> </ul>	<ul style="list-style-type: none"> <li>Provide medical care, counselling and employee assistance programs</li> <li>Reduce adversarial aspects of compensation process</li> <li>Include modification of job stressors in return-to-work plans</li> </ul>



## Key features of best practice approaches

Recognising the need for an integrated approach to psychosocial risks at work across the Member States of the European Union, a major project was undertaken to develop the European Psychosocial Risk Management – Excellence Framework (PRIMA-EF). PRIMA-EF identified several key features of best practice approaches to reducing workplace stress, as follows:

- Develop workplace interventions with a full understanding of theory and evidence-based practice.
- Use a systematic and step-wise approach to planning, and develop clear aims, goals and tasks.
- Conduct a risk assessment to identify risk factors and population groups that are most at risk.
  - Employees and their representatives (e.g. elected OHS representatives, trade union representatives) should participate in the risk assessment, which can take the form of walk-through workplace inspections, group discussions and/or confidential employee surveys.
  - Focus on work, not individuals. The goal is to identify, assess and control aspects of work that increase the risk of workplace stress.
  - Stressors such as ‘job control’ manifest differently by sector, occupational skill level, gender, age, employment arrangement and other factors. Risk assessment guidance needs to strike a balance between providing generically applicable advice and providing adequate and actionable detail.
- Tailor interventions to suit a sector or workplace size, but ensure they remain flexible and adaptable for implementation in a specific workplace.
- Ensure the interventions are accessible and user-friendly in their format, process and content to individuals at all levels of an organisation, from lowest status employees to highest level managers.
- Use a systematic approach, with components of the intervention aimed at both the individual and the organisation (or, put differently, addressing primary, secondary and tertiary levels).
- Facilitate competency building and skills development for employees at all occupational levels. This enables individuals to identify and manage workplace stress and builds leadership and management skills at the organisational level.
  - Effective workplace stress interventions were characterised by a decreasing need to be expert driven and facilitated.

Additionally, effective workplace stress interventions include the meaningful participation of groups targeted by the intervention, both in the intervention design and delivery. Participation is integral to preventing and controlling workplace stress; strong participatory processes are a concrete enactment of job control, demonstrate organisational fairness and justice, and build mutual support among employees and between staff and supervisors. Participatory approaches are of particular importance for employees at lower occupational skill levels.

---

**Organisations often require unique solutions to workplace stress problems, even if the intervention is based on generic principles and frameworks.**

---

The participation of groups targeted by an intervention also helps to tailor the intervention to the context at hand, enabling participants’ expertise to be integrated with the content expertise of the professionals involved in the intervention. This is crucial as organisations often require unique solutions to workplace stress problems, even if the process of intervention is based on generic principles and frameworks. More traditional and complementary means of tailoring an intervention to context include needs assessment or risk assessment.

## 7. Bibliography

**This is a list of references to literature contained in the full evidence review, *Reducing stress in the workplace (An evidence review: full report)*.**

ASCC 2007a. *Compendium of Workers' Compensation Statistics Australia 2004–05*. Canberra: Australian Government: Australian Safety and Compensation Council (ASCC).

ASCC 2007b. *Part E: The Mechanism Mental Stress. Compendium of Workers' Compensation Statistics Australia 2004–05*. Canberra: Australian Government: Australian Safety and Compensation Council (ASCC).

Aust, B & Ducki, A 2004. Comprehensive health promotion interventions at the workplace: experiences with health circles in Germany. *Journal of Occupational Health Psychology*, 9, 258–270.

Australian Bureau of Statistics 1998. *Mental Health and Wellbeing Profile of Adults: Victoria*. Canberra: Australian Bureau of Statistics.

Australian Bureau of Statistics 2007. *National survey of mental health and wellbeing: summary of results*. Canberra: Australian Bureau of Statistics.

Australian Human Rights Commission 2010. *Workers with Mental Illness: a Practical Guide for Managers*. Sydney: Australian Human Rights Commission.

Azaroff, LS, Champagne, NJ, Nobrega, S, Shetty, K & Punnett, L 2010. Getting to know you: occupational health researchers investigate employee assistance professionals' approaches to workplace stress. *Journal of Workplace Behavioral Health*, 25, 296–319.

Bambra, C, Egan, M, Thomas, S, Petticrew, M & Whitehead, M 2007. The psychosocial and health effects of workplace reorganisation. 2. A systematic review of task restructuring interventions. *J Epidemiol Community Health*, 61, 1028–37.

Bambra, C, Gibson, M, Sowden, AJ, Wright, K, Whitehead, M & Petticrew, M 2009. Working for health? Evidence from systematic reviews on the effects on health and health inequalities of organisational changes to the psychosocial work environment. *Prev Med*, 48, 454–61.

Baum, F 2002. Health development and empowerment: communities and individuals. In: *The New Public Health*. 2nd edn. New York: Oxford University Press.

Belkic, K, Landsbergis, P, Schnall, P & Baker, D 2004. Is job strain a major source of cardiovascular disease risk? *Scand J Work Environ Health*, 30, 85–128.

Belkic, K, Landsbergis, P, Schnall, PL, Baker, D, Theorell, T, Siegrist, J, Peter, R & Karasek, RA 2000. Psychosocial factors: review of the empirical data among men. In: Schnall, PL, Belkic, K, Landsbergis, P & Baker, D (eds), *The Workplace and Cardiovascular Disease. State of the Art Reviews in Occupational Medicine*. Philadelphia: Hanley & Belfus, Inc.

Benach, J & Muntaner, C 2007. Precarious employment and health: developing a research agenda. *J Epidemiol Community Health*, 61, 276–277.

Benach, J, Muntaner, C & Santana, V (eds) 2007. *Employment Conditions and Health Inequalities: Final Report to the WHO Commission on Social Determinants of Health*, Geneva: World Health Organization.

Bildt, C & Michelsen, H 2002. Gender differences in the effects from working conditions on mental health: a 4-year follow-up. *Int Arch Occup Environ Health*, 75, 252–258.

Blewett, V & Shaw, A 2008. Future Inquiry: participatory ergonomics at work. *Human Factors in Organizational Design and Management - IX*.

Blomkvist, V, Eriksen, W, Theorell, T, Ulrich, R & Rasmanis, G 2005. Acoustics and psychosocial environment in intensive coronary care. *Occup Environ Med*, 62, e1.

Bonde, JP 2008. Psychosocial factors at work and risk of depression: a systematic review of the epidemiological evidence. *Occup Environ Med*, 65, 438–445.

Bosma, H, Peter, R, Siegrist, J & Marmot, M 1998. Two alternative job stress models and the risk of coronary heart disease. *American Journal of Public Health*, 88, 68–74.

Bosma, H, Stansfeld, S & Marmot, M 1998. Job control, personal characteristics and heart disease. *Journal of Occupational Health Psychology*, 3, 402–409.

Bourbonnais, R, Comeau, M, Vezina, M & Dion, G 1998. Job strain, psychological distress and burnout in nurses. *Am J Ind Med*, 34, 20–28.

Broom, DH, D'Souza, RM, Strazdins, L, Butterworth, P, Parslow, R & Rodgers, B 2006. The lesser evil: bad jobs or unemployment? A survey of mid-aged Australians. *Soc Sci Med*, 63, 575–586.

Brun, JP & Cooper, C 2009. *Missing Pieces: 7 Ways to Improve Employee Well-being and Organizational Effectiveness*, Basingstoke, Hampshire, Palgrave Macmillan.

Chandola, T, Britton, A, Brunner, E, Hemingway, H, Malik, M, Kumari, M, Badrick, E, Kivimaki, M & Marmot, M 2008. Work stress and coronary heart disease: what are the mechanisms? *Eur Heart J*, 29, 640–648.

- Chandola, T, Brunner, E & Marmot, M 2006. Chronic stress at work and the metabolic syndrome: prospective study. *BMJ*, 332, 521–525.
- Cheng, Y, Kawachi, I, Coakley, EH, Schwartz, J & Colditz, G 2000. Association between psychosocial work characteristics and health functioning in American women: prospective study. *BMJ*, 320, 1432–1436.
- Cranford, C, Vosko, L & Zukewich, N 2003. Precarious employment in the Canadian labour market: a statistical portrait. *Just Labour*, 3, 23–35.
- D'Souza, RM, Strazdins, L, Lim, LL-Y, Broom, DH & Rodgers, B 2003. Work and health in a contemporary society: demands, control and insecurity. *Journal of Epidemiology and Community Health*, 57, 849–854.
- Darr, W 2005. *Examining the relationship between stress and absenteeism: A research synthesis*. Montreal: Concordia University.
- de Croon, EM, Sluiter, JK, Blonk, RW, Broersen, JP & Frings-Dresen, MH 2004. Stressful work, psychological job strain and turnover: a 2-year prospective cohort study of truck drivers. *J Appl Psychol*, 89, 442–454.
- de Lange, AH, Taris, TW, Kompier, MAJ, Houtman, ILD & Bongers, PM 2002. Effects of stable and changing demand-control histories on worker health. *Scand J Work Environ Health*, 28, 94–108.
- de Lange, AH, Taris, TW, Kompier, MAJ, Houtman, ILD & Bongers, PM 2004. The relationships between work characteristics and mental health: examining normal, reversed and reciprocal relationships in a 4-wave study. *Work & Stress*, 18, 149–166.
- de Lange, AH, Taris, TW, Kompier, MA, Houtman, IL & Bongers, PM 2005. Different mechanisms to explain the reversed effects of mental health on work characteristics. *Scand J Work Environ Health*, 31, 3–14.
- Dragano, N, He, Y, Moebus, S, Jockel, KH, Erbel, R & Siegrist, J 2008. Two models of job stress and depressive symptoms. Results from a population-based study. *Soc Psychiatry Psychiatr Epidemiol*, 43, 72–78.
- Eakin, JM 1997. Work-related determinants of health behavior. In: Gochman, D (ed) *Handbook of Health Behavior Research I: Personal and Social Determinants*. New York: Plenum Press.
- Egan, M, Bambra, C, Thomas, S, Petticrew, M, Whitehead, M & Thomson, H 2007. The psychosocial and health effects of workplace reorganisation. 1. A systematic review of organisational-level interventions that aim to increase employee control. *J Epidemiol Community Health*, 61, 945–954.
- ENWHP. 1997. *Luxembourg Declaration on Workplace Health Promotion in the European Union* [Online]. European Network for Workplace Health Promotion. Available: [http://www.enwhp.org/fileadmin/downloads/free/Luxembourg\\_Declaration\\_June2005\\_final.pdf](http://www.enwhp.org/fileadmin/downloads/free/Luxembourg_Declaration_June2005_final.pdf) [Accessed 7 March 2011].
- ENWHP. 2002. *Barcelona Declaration on Developing Good Workplace Health in Europe* [Online]. European Network for Workplace Health Promotion. Available: [http://www.enwhp.org/fileadmin/downloads/declaration\\_englisch\\_a3\\_01.pdf](http://www.enwhp.org/fileadmin/downloads/declaration_englisch_a3_01.pdf) [Accessed 3 May 2005].
- Fletcher, B 1988. The epidemiology of occupational stress. In: Cooper, C & Payne, R (eds) *Causes, Coping and Consequences of Stress at Work*. Chichester: John Wiley & Sons.
- Grosch, J & Sauter, S 2005. Psychologic stressors and work organization. In: Rosenstock, L, Cullen, M, Brodtkin, C & Redlich, C (eds), *Textbook of Clinical Occupational & Environmental Medicine*. 2nd ed. Philadelphia: Elsevier.
- Hasselhorn, H, Tackenberg, P & Peter, R 2004. Effort-reward imbalance among nurses in stable countries and in countries in transition. *International Journal of Occupational and Environmental Health* 10, 401–408.
- Head, J, Stansfeld, SA & Siegrist, J 2004. The psychosocial work environment and alcohol dependence: a prospective study. *Occupational and Environmental Medicine*, 61, 219–224.
- Heraclides, A, Chandola, T, Witte, DR & Brunner, EJ 2009. Psychosocial stress at work doubles the risk of type 2 diabetes in middle-aged women: evidence from the Whitehall II study. *Diabetes Care*, 32, 2230–2235.
- Hoel, H, Sparks, K & Cooper, C 2001. The cost of violence/stress at work and the benefits of a violence/stress-free working environment. Geneva: International Labor Organization (ILO).
- Huang, GD, Feuerstein, M & Sauter, SL 2002. Occupational stress and work-related upper extremity disorders: concepts and models. *American Journal of Industrial Medicine*, 41, 298–314.
- Hurrell, JJ & Murphy, LR 1996. Occupational stress intervention. *American Journal of Industrial Medicine*, 29, 338–341.
- Ibrahim, S, Smith, PM & Muntaner, C 2009. A multi-group cross-lagged analyses of work stressors and health using Canadian national sample. *Soc Sci Med*, 68, 49–59.
- IEAPA 2010. *International Employee Assistance Professionals Association (IEAPA): About employee assistance* [Online]. Available: [www.eapassn.org/i4a/pages/index.cfm?pageid=869](http://www.eapassn.org/i4a/pages/index.cfm?pageid=869) [Accessed 18 December 2010].

- Israel, BA, Baker, EA, Goldenhar, LM, Heaney, CA & Schurman, SJ 1996. Occupational stress, safety and health: conceptual framework and principles for effective prevention interventions. *Journal of Occupational Health Psychology*, 1, 261–286.
- Johnson, JV & Hall, EM 1988. Job strain, workplace social support and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. *American Journal of Public Health*, 78, 1336–1342.
- Jordan, J, Gurr, E, Tinline, G, Giga, SI, Faragher, B & Cooper, CL 2003. *Beacons of Excellence in Stress Prevention: Research Report 133*. London: UK Health & Safety Executive Books.
- Karasek, R & Theorell, T 1990. *Healthy Work: Stress, Productivity and the Reconstruction of Working Life*, New York, Basic Books, Inc., Publishers.
- Karasek, RA 1979. Job demands, decision latitude and mental strain: implications for job redesign. *Admin Sci Q*, 24, 285–308.
- Kawakami, N, Araki, S, Kawashima, M, Masumoto, T & Hayashi, T 1997. Effects of work-related stress reduction on depressive symptoms among Japanese blue-collar workers. *Scandinavian Journal of Work, Environment & Health*, 23, 54–59.
- Kawakami, N, Haratani, T & Araki, S 1992. Effects of perceived job stress on depressive symptoms in blue-collar workers of an electrical factory in Japan. *Scandinavian Journal of Work, Environment & Health*, 18, 195–200.
- Keegel, T, Ostry, A & LaMontagne, AD 2009. Job strain exposures versus stress-related Workers' Compensation claims in Victoria (Australia): Developing a public health response to job stress. *J Public Health Policy*, 30, 17–39.
- Kessler, RC, Berglund, P, Demler, O, Jin, R, Merikangas, KR & Walters, EE 2005. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry*, 62, 593–602.
- Kivimäki, M, Elovainio, M, Vahtera, J & Ferrie, JE 2003a. Organisational justice and health of employees: prospective cohort study. *Occup Environ Med*, 60, 27–33; discussion 33–34.
- Kivimäki, M, Elovainio, M, Vahtera, J, Virtanen, M & Stansfeld, SA 2003b. Association between organizational inequity and incidence of psychiatric disorders in female employees. *Psychol Med*, 33, 319–326.
- Kivimäki, M, Ferrie, JE, Head, J, Shipley, MJ, Vahtera, J & Marmot, MG 2004. Organisational justice and change in justice as predictors of employee health: the Whitehall II study. *Journal of Epidemiology & Community Health*, 58, 931–937.
- Kivimäki, M, Leino-Arjas, P, Luukkainen, R, Riihimäki, H, Vahtera, J & Kirjonen, J 2002. Work stress and risk of cardiovascular mortality: prospective cohort study of industrial employees. *BMJ*, 325, 857–861.
- Kivimäki, M, Virtanen, M, Vartiainen, M, Elovainio, M, Vahtera, J & Keltikangas-Järvinen, L 2003c. Workplace bullying and the risk of cardiovascular disease and depression. *Occup Environ Med*, 60, 779–783.
- Kouvonen, A, Kivimäki, M, Cox, SJ, Poikolainen, K, Cox, T & Vahtera, J 2005. Job strain, effort-reward imbalance and heavy drinking: a study in 40,851 employees. *Journal of Occupational & Environmental Medicine*, 47, 503–513.
- Kristensen, TS, Hannerz, H, Hogh, A & Borg, V 2005. The Copenhagen Psychosocial Questionnaire – a tool for the assessment and improvement of the psychosocial work environment. *Scand J Work Environ Health*, 31, 438–449.
- Kumari, M, Head, J & Marmot, M 2004. Prospective study of social and other risk factors for incidence of type 2 diabetes in the Whitehall II study. *Arch Intern Med*, 164, 1873–1880.
- Kuper, H & Marmot, M 2003. Job strain, job demands, decision latitude and risk of coronary heart disease within the Whitehall II study. *Journal of Epidemiology & Community Health*, 57, 147–153.
- Kuper, H, Singh-Manoux, A, Siegrist, J & Marmot, M 2002. When reciprocity fails: effort-reward imbalance in relation to coronary heart disease and health functioning within the Whitehall II study. *Occupational & Environmental Medicine*, 59, 777–784.
- LaMontagne, AD 2010. Precarious employment: Adding a health inequalities perspective. *Journal of Public Health Policy*, 31, 312–317.
- LaMontagne, AD, Keegel, T, Louie, AM & Ostry, A 2010. Job stress as a preventable upstream determinant of common mental disorders: A review for practitioners and policy-makers. *Advances in Mental Health*, 9, 17–35.
- LaMontagne, AD, Keegel, T, Louie, AM, Ostry, A & Landsbergis, PA 2007a. A systematic review of the job stress intervention evaluation literature, 1990–2005. *Intl J Occup & Environ Health*, 13, 268–280.
- LaMontagne, AD, Keegel, T & Vallance, DA 2007b. Protecting and promoting mental health in the workplace: Developing a systems approach to job stress. *Health Promotion Journal of Australia*, 18, 221–228.
- LaMontagne, AD, Keegel, T, Vallance, DA, Ostry, A & Wolfe, R 2008. Job strain-attributable depression in a sample of working Australians: Assessing the contribution to health inequalities. *BMC Public Health*, 8, 9.

LaMontagne, AD & Keegel, TG 2009. Work environments as a determinant of health. In: Keleher, H & MacDougall, C (eds) *Understanding Health: A Determinants Approach*, 2nd Ed. Oxford: Oxford University Press.

LaMontagne, AD, Louie, A, Keegel, T, Ostry, A & Shaw, A 2006. *Workplace Stress in Victoria: Developing a Systems Approach*. Melbourne: Victorian Health Promotion Foundation. [www.vichealth.vic.gov.au/workplacestress](http://www.vichealth.vic.gov.au/workplacestress).

LaMontagne, AD, Sanderson, K & Cocker, F 2010. *Estimating the economic benefits of eliminating job strain as a risk factor for depression*. Melbourne: Victorian Health Promotion Foundation [VicHealth]. See [www.vichealth.vic.gov.au/jobstrain](http://www.vichealth.vic.gov.au/jobstrain) for full (37pp) and summary (13pp) versions.

LaMontagne, AD & Shaw, A 2004. *Evaluating OHS Interventions: A Worksafe Victoria Intervention Evaluation Framework*. Melbourne: University of Melbourne & Worksafe Victoria.

LaMontagne, AD, Smith, PM, Louie, AM, Quinlan, M, Ostry, AS & Shoveller, J (in press, accepted 4 Feb 2011). Psychosocial and other working conditions: Variation by employment arrangement in a sample of working Australians. *Am J Ind Med*.

LaMontagne, AD, Smith, PM, Louie, AM, Quinlan, M, Shoveller, J & Ostry, AS 2009. Unwanted sexual advances at work: Variations by employment arrangement in a sample of working Australians. *Australia New Zealand J Public Health*, 33, 173–179.

Landsbergis, PA 2003a. The changing organization of work and the safety and health of working people: a commentary. *Journal of Occupational and Environmental Medicine*, 45, 61–72.

Landsbergis, PA 2003b. Work organization and CVD. *New Solutions*, 13, 149–152.

Landsbergis, PA, Schnall, PL, Pickering, TG, Warren, K & Schwartz, JE 2003. Lower socioeconomic status among men in relation to the association between job strain and blood pressure. *Scandinavian Journal of Work, Environment & Health*, 29, 206–215.

Landsbergis, PA, Schnall, PL, Warren, K, Pickering, TG & Schwartz, JE 1999. The effect of job strain on ambulatory blood pressure in men: does it vary by socioeconomic status? *Annals of the New York Academy of Sciences*, 896, 414–416.

Leka, S & Cox, T (eds) 2008a. *The European Framework for Psychosocial Risk Management: PRIMA-EF*, Nottingham (UK): Institute of Work, Health & Organisations.

Leka, S & Cox, T (eds) 2008b. *PRIMA-EF: Guidance on the European Framework for Psychosocial Risk Management*, Geneva: WHO.

Leka, S, Vartia, M, Hassard, J, Pahkin, K, Sutela, S, Cox, T & Lindstrom, K 2008. Best practice in interventions for the prevention and management of work-related stress and workplace violence and bullying. In: Leka, S, Cox, T (ed), *The European Framework for Psychosocial Risk Management: PRIMA-EF*. Nottingham, UK: Institute of Work, Health & Organisations.

Lindstrom, K & Mantysalo, S 1987. Physical and chemical factors that increase vulnerability to stress or act as stressors at work. In: Kalimo, R, El-Batawi, M & Cooper, C (eds), *Psychosocial factors at work*. Geneva: World Health Organization.

Matthers, CD, Vos, ET, Stevenson, CE & Begg, SJ 2000. The Australian Burden of Disease Study: measuring the loss of health from diseases, injuries and risk factors. *Med J Aust*, 172, 592–596.

Melchior, M, Caspi, A, Milne, BJ, Danese, A, Poulton, R & Moffitt, TE 2007. Work stress precipitates depression and anxiety in young, working women and men. *Psychol Med*, 37, 1119–1129.

Michie, S & Williams, S 2003. Reducing work related psychological ill health and sickness absence: a systematic literature review. *Occup Environ Med*, 60, 3–9.

Mino, Y, Shigemi, J, Tsuda, T, Yasuda, N & Bebbington, P 1999. Perceived job stress and mental health in precision machine workers of Japan: a 2 year cohort study. *Occup Environ Med*, 56, 41–45.

Moodie, R & Verins, I 2002. To whom does mental health belong? *Australian e-Journal for the Advancement of Mental Health*, 1.

Netterstrom, B, Conrad, N, Bech, P, Fink, P, Olson, O, Rugulies, R & Stansfeld, S 2008. The relation between work-related psychosocial factors and the development of depression. *Epidemiological Reviews*, 30, 118–132.

Niedhammer, I, Goldberg, M, Leclerc, A, Bugel, I & David, S 1998. Psychosocial factors at work and subsequent depressive symptoms in the Gazel cohort. *Scand J Work Environ Health*, 24, 197–205.

NIOSH 1999. *Stress at Work*. Cincinnati: National Institute for Occupational Safety and Health (NIOSH), US Centers for Disease Control and Prevention. Available: [www.cdc.gov/niosh/docs/99-101/](http://www.cdc.gov/niosh/docs/99-101/) [Accessed 7 March 2011].

Noblet, A & LaMontagne, AD 2006. The role of workplace health promotion in addressing job stress. *Health Promot Int*, 21, 346–353.

Noblet, A & Murphy, C 1995. Adapting the Ottawa Charter for health promotion to the workplace setting. *Health Promot J Aust*, 5, 18–22.

- Nobrega, S, Champagne, NJ, Azaroff, LS, Shetty, K & Punnett, L 2010. Barriers to workplace stress interventions in employee assistance practice: EAP perspectives. *Journal of Workplace Behavioral Health*, 25, 282–295.
- Nurminen, M & Karjalainen, A 2001. Epidemiologic estimate of the proportion of fatalities related to occupational factors in Finland. *Scand J Work Environ Health*, 27, 161–213.
- O'Campo, P, Eaton, WW & Muntaner, C 2004. Labor market experience, work organization, gender inequalities and health status: results from a prospective analysis of US employed women. *Soc Sci Med*, 58, 585–594.
- Ostry, A, Maggi, S, Tansey, J, Dunn, J, Hershler, R, Chen, L, Louie, AM & Hertzman, C 2007. The impact of psychosocial work conditions on attempted and completed suicide among western Canadian sawmill workers. *Scand J Public Health*, 35, 265–271.
- Ostry, A, Radi, S, Louie, AM & LaMontagne, AD 2006. Psychosocial and other working conditions in relation to Body Mass Index in a representative sample of Australian workers. *BMC Public Health*, 6(1), 8 pages.
- Parkes, KR, Mendham, CA & Vonrabenau, C 1994. Social support and the demand-discretion model of job stress – Tests of additive and interactive effects in 2 samples. *Journal of Vocational Behavior*, 44, 91–113.
- Peter, R & Siegrist, J 2000. Psychosocial work environment and the risk of coronary heart disease. *International Archives of Occupational & Environmental Health*, 73 Suppl, S41–45.
- Quinlan, M & Bohle, P 2009. Overstretched and unreciprocated commitment: reviewing research on the occupational health and safety effects of downsizing and job insecurity. *Int J Health Serv*, 39, 1–44.
- Quinlan, M, Bohle, P & Mayhew, C 2001. The health and safety effects of job insecurity: an evaluation of the evidence. *The Economic and Labour Relations Review*, 12, 33–60.
- Radi, S, Ostry, A & LaMontagne, AD 2007. Job stress and other working conditions: Relationships with smoking behaviors in a representative sample of working Australians. *Am J Ind Med*, 50, 584–596.
- Rosengren, A, Hawken, S, Ounpuu, S, Sliwa, K, Zubaid, M, Almahmeed, W, Blackett, K, Sitti-amom, C, Sato, H & Yusuf, S 2004. Association of psychosocial risk factors with risk of acute myocardial infarction in 11,119 cases and 13,648 controls from 52 countries (the InterHeart study): case-control study. *Lancet*, 364, 953–962.
- Rugulies, R, Bultmann, U, Aust, B & Burr, H 2006. Psychosocial work environment and incidence of severe depressive symptoms: Prospective findings from a 5-year follow-up of the Danish work environment cohort study. *Am J Epidemiol*, 163, 877–887.
- Russell, GM & Roach, SM 2002. Occupational stress: a survey of management in general practice. *The Medical Journal of Australia*, 176, 367–370.
- Sapp, AL, Kawachi, I, Sorensen, G, LaMontagne, AD & Subramanian, SV 2010. Does workplace social capital buffer the effects of job stress? A cross-sectional, multilevel analysis of cigarette smoking among U.S. manufacturing workers. *J Occup Environ Med*, 52, 740–750.
- Schnall, PL, Belkic, K, Landsbergis, P, Baker, D & guest editors 2000. The workplace and cardiovascular disease. *State of the Art Reviews: Occupational Medicine*, 15, 1–334.
- Shields, M 1999. Long working hours and health. *Health Rep*, 11, 33–48 (Eng); 37–55 (Fre).
- Siegrist, J 1996. Adverse health effects of high-effort/low-reward conditions. *Journal of Occupational Health Psychology*, 1, 27–41.
- Siegrist, J, Peter, R, Junge, A, Cremer, P & Seidel, D 1990. Low status control, high effort at work and ischemic heart disease: prospective evidence from blue-collar men. *Social Science and Medicine*, 31, 1127–1134.
- Siegrist, J & Rodel, A 2006. Work stress and health risk behavior. *Scand J Work Environ Health*, 32, 473–481.
- Smulders, P & Nijhuis, F 1999. The job demands-job control model and absence behaviour: results of a 3-year longitudinal study. *Work & Stress*, 13, 115–131.
- Stansfeld, S, Bosma, H, Hemmingway, H & Marmot, M 1998. Psychosocial work characteristics and social support as predictors of SF-36 functioning: The Whitehall II study. *Psychosomatic Medicine*, 60, 247–255.
- Stansfeld, SA & Candy, B 2006. Psychosocial work environment and mental health – a meta-analytic review. *Scand J Work Environ Health*, 32, 443–462.
- Stansfeld, SA, Clark, C, Caldwell, T, Rodgers, B & Power, C 2008. Psychosocial work characteristics and anxiety and depressive disorders in midlife: the effects of prior psychological distress. *Occup Environ Med*, 65, 634–42.
- Stansfeld, SA, Fuhrer, R, Head, J, Ferrie, J & Shipley, M 1997. Work and psychiatric disorder in the Whitehall II Study. *J Psychosom Res*, 43, 73–81.

- Stansfeld, SA, Fuhrer, R, Shipley, MJ & Marmot, MG 1999. Work characteristics predict psychiatric disorder: prospective results from the Whitehall II Study. *Occup Environ Med*, 56, 302–307.
- Steenland, K, Burnett, C, Lulich, N, Ward, E & Hurrell, J 2003. Dying for work: the magnitude of US mortality from selected causes of death associated with occupation. *American J Industrial Medicine*, 43, 461–482.
- Steven, ID & Shanahan, EM 2002. Work-related stress: care and compensation. *The Medical Journal of Australia*, 176, 363–364.
- Strazdins, L, D'Souza, RM, Lim, LL, Broom, DH & Rodgers, B 2004. Job strain, job insecurity and health: rethinking the relationship. *Journal of Occupational Health Psychology*, 9, 296–305.
- Tomba, E, Scott-Marshall, H, Dolinschi, R, Trevithick, S & Bhattacharyya, S 2007. Precarious employment experiences and their health consequences: towards a theoretical framework. *Work*, 28, 209–224.
- Tsutsumi, A & Kawakami, N 2004. A review of empirical studies on the model of effort-reward imbalance at work: reducing occupational stress by implementing a new theory. *Soc Sci Med*, 59, 2335–2359.
- Wang, J, Schmitz, N, Dewa, C & Stansfeld, S 2009. Changes in perceived job strain and the risk of major depression: results from a population-based longitudinal study. *Am J Epidemiol*, 169, 1085–1091.
- Wege, N, Dragano, N, Erbel, R, Jockel, KH, Moebus, S, Stang, A & Siegrist, J 2008. When does work stress hurt? Testing the interaction with socioeconomic position in the Heinz Nixdorf Recall Study. *J Epidemiol Community Health*, 62, 338–341.
- WHO 1999. *Regional Guidelines for the Development of Healthy Workplaces*, WHO, Regional Office for the Western Pacific.
- WHO 2001. *World Health Report 2001. Mental health: New Understanding, New Hope*. Geneva: World Health Organization.
- WHO 2003. *Social Determinants of Health: The Solid Facts*. In: Wilkinson, RG & Marmot, M (eds). Geneva: WHO.
- WHO 2010. *Healthy Workplaces: A Model for Action for Employers, Workers, Policymakers and Practitioners*. Geneva: WHO.
- WorkSafe Victoria 2009. *Preventing Work-Related Stress for Employers in the Private Sector*.







**Victorian Health Promotion Foundation**  
PO Box 154 Carlton South 3053 Australia  
T. +61 3 9667 1333 F. +61 3 9667 1375  
[vichealth@vichealth.vic.gov.au](mailto:vichealth@vichealth.vic.gov.au)  
[www.vichealth.vic.gov.au](http://www.vichealth.vic.gov.au)

ISBN: 978-1-921822-09-4  
March 2012  
Publication Number: P-032-GEN\_A

