

Designing work to manage psychosocial and physical risks

Principles and practices

Persons conducting a business or undertaking (PCBUs) need to move beyond a reliance on policies, education and employee assistance programs and change the way work is designed to prevent psychological (and physical) harm.

This is part of their legal obligations.* Wherever it is reasonably practicable, PCBUs must apply the hierarchy of controls to either eliminate or minimise risk of exposure to workplace stressors.

In principle, it is reasonably practicable for any PCBU to design work in some way to reduce sources of stress for workers – even through small-scale modifications to tasks and work processes. Treat workers like trusted partners through the process, and you can find ways of designing out sources of stress in your workplaces.

**Work Health and Safety Act 2012 (SA) and the Work Health and Safety Regulations 2012 (SA)*

What is work design?

Work design (or work re-design) refers to organising tasks, systems of work and organisational structures to create safe systems of work. A safe system of work is one in which:

- work tasks, work environments, and processes are designed such that they are unlikely to result in physical or psychological harm to the people within them;
- foreseeable health and safety risks are identified and controlled to acceptable levels;
- harm is minimised when it occurs; and
- return to work processes are facilitated.ⁱ

Why is work design a good way of reducing the risk of psychological harm and musculoskeletal disorders?

Many preventative psychosocial and manual handling risk controls are, in essence, work design interventions. This is because they are a way of designing out sources of stress and physical strain in the workplace that can arise from poor:

Task design	This may result in excessive physical, mental or emotional load
Work organisation	This may result in excessive workloads and inefficient communication, decision-making, and time utilisation
Work environments	This may result in exposure to excessive noise and temperatures or harmful behaviours
Relationships & responsibilities	This may result in harmful behaviours, role conflict, poor support and poor role clarity

Work design interventions can reduce the risk of musculoskeletal disorders when they are effective at:

- reducing time pressure to complete tasks;
- improving worker's control over the nature, volume and pace of their work, social support, sense of reward and recognition for their efforts and perceived fairness over how decisions are made; and
- reducing the risk of interpersonal conflict and harmful workplace behaviours (e.g. by improving role clarity and reducing role conflict).ⁱⁱ

Recent research highlights the preventative value of work design. One systematic review of interventions for healthcare workers found that there is strong evidence to support the benefit of job and task modificationsⁱⁱⁱ for reducing the risk of burnout. There was also moderate evidence to support the benefit of flexible work and scheduling and changes in the physical work environment for reducing burnout for healthcare workers.^{iv}

Of note, the acceleration of technical change in workplaces arising from STARA (Smart Technology, Artificial Intelligence (AI), Robotics, and Algorithms)^v is re-shaping the information workers have access to (e.g., real-time data), where people work (e.g., co-working spaces), collaboration patterns (e.g., increasing interaction with robots), and, most fundamentally, people's work designs. Given such changes can have negative effects on health and safety, competency in work design will remain critical to preventing harm to workers.^{vi}

What are musculoskeletal disorders?

The term 'musculoskeletal disorder' covers any injury, damage or disorder of the musculoskeletal system (that is, muscles, nerves, tendons, ligaments, joints and bones).

This comprises over 100 diseases and syndromes, including carpal tunnel syndrome, arthritis, sciatica, chronic back pain as well as sprains and tears.

MSDs may result from a single event, but more commonly arise from exposure to one or more hazards over an extended period.

A variety of psychosocial and physical hazards can lead to people developing workplace MSDs. This includes workplace environmental factors, work organisation and work design, tasks, equipment and workers' individual factors.



What are some examples of work design?

Providing workers with equipment and technological aids to improve task efficiency and time utilisation and to reduce the risk of injuries, accidents and errors

Workforce planning to ensure the right numbers of people with the right skills, knowledge and attributes are in the right place at the right time

Setting achievable performance standards and workloads for workers

Enabling workers to moderate work pace and load (particularly if work systems are AI or algorithm-enabled)

Breaking down complex tasks into smaller, simpler ones and removing unnecessary steps to improve efficiency and reduce errors

Job rotation to develop workers' skills and knowledge

Providing clear communication about work processes, including key functions, responsibilities, workflows and timeframes

When new services, processes, technology or facilities are designed, ensure the review of physical and psychological stressors on workers before implementation

Modifying the tasks and responsibilities of a worker who has returned to work following injury or illness

ⁱ Caponecchia, C., & Wyatt, A. (2021). Defining a "safe system of work". *Safety and Health at Work*, 12(4), 421-423.

ⁱⁱ Taibi, Y., Metzler, Y. A., Bellingrath, S., & Müller, A., (2021). A systematic overview on the risk effects of psychosocial work characteristics on musculoskeletal disorders, absenteeism, and workplace accidents. *Applied Ergonomics*, 95, 103434; Centre for Work Health and Safety (2021). The link between workplace stressors and physical injury: A systematic review and qualitative study. NSW Government.

ⁱⁱⁱ Interventions that implement enhanced work processes resulting from organisational, administrative and/or technical changes or increased professional competence.

^{iv} Aust, B., Leduc, C., Cresswell-Smith, J., O'Brien, C., Rugulies, R., Leduc, M., ... and Greiner, B. A. (2024). The effects of different types of organisational workplace mental health interventions on mental health and wellbeing in healthcare workers: a systematic review. *International Archives of Occupational and Environmental Health*, 1-38.

^v Brougham, D., and Haar, J. (2018). Smart technology, artificial intelligence, robotics, and algorithms (STARA): employees' perceptions of our future workplace. *Journal of Management and Organization*, 24(2), 239-257.

^{vi} Parker, S. K., and Grote, G. (2022). Automation, algorithms, and beyond: Why work design matters more than ever in a digital world. *Applied Psychology*, 71(4), 1171-1204; Tse, H. H. M., Gu, J., De Cieri, H., and Casey, T. W. (2024). Collaborative Robots and Work Health and Safety (WHS): Final Report. Monash Business School, Monash University: Caulfield East, VIC Australia.



See the [SafeWork SA website](#) for more information about psychosocial risk management



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