

WMSDs: why an ergonomist's approach works.
Understanding the HFESA Position Paper
- by Augustine Zycher

In post Covid19 Australia, our challenge is not only to re-build the economy, but also to seize the opportunity to improve our productivity and efficiency.

One of the most serious drains on our productivity is the high number of workdays lost due to work injuries. This is estimated to be costing the economy over \$22 billion each year. The highest category of serious workers' compensation claims for Australian workers, representing 36% of all claims in 2017-18, are for 'Body Stressing'. This is the term used to describe Work-related Musculoskeletal Disorders (WMSDs). From 2013 to 2017 the median time lost from work for 'Body Stressing' claims has increased from 5.8 to 6.2 weeks, and the median cost per claim has increased by 32% to \$12,900 per claim.

Therefore the prevention of WMSD is critical to the productivity of the economy, as it is the largest occupational health problem in Australia.

What is particularly important to recognise is that a significant number of these WMSD injuries can be prevented. There are readily available solutions for workplaces, and primary prevention is a very effective strategy.

How can employers know if their workplace is best suited to promote both worker safety and productivity?

This is where the intervention of ergonomists is vital. There is a fairly vague understanding of the role of ergonomics with most people thinking it is about unusually designed office seats. In fact, the role of ergonomists is to design solutions in a workplace that maximise productivity and efficiency, while at the same time optimising the health and safety of employees.

The **Human Factors and Ergonomics Society Australia (HFESA)** is the peak body that oversees the professional standards and the accreditation of ergonomists who seek recognition and wish to practice as professionally qualified ergonomists and members of the HFESA.

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The HFESA recently published a landmark Position Statement on ***Risk Factors and Workplace Prevention regarding Work-related Musculoskeletal Disorders (WMSDs) in Australia***. Its purpose is to address this complex issue in the most evidence based way in order to achieve practicable and sustainable outcomes to prevent WMSDs. In other words, how can the intervention of professionally qualified ergonomists best reduce risk in the workplace?

Ergonomists have to be part detective and part designer. When they are called in to a workplace, they initially have to detect and identify the hazards both physical and psychosocial. This means they have to apply a holistic systems approach to see if there is a good 'fit' between the workers, the work job/task design, the workplace and equipment design, and work organisation factors. From the risk assessment perspective, although each section can be evaluated on its own, **it is the combination of all four elements which is the key issue**

Ergonomists basically have to examine the complex interactions between humans, the environment, tools, products, equipment, and technology, as well as work design including work systems, communication and cognitive demands.

Then, they must design a comprehensive risk management strategy. WMSD prevention starts with good work design where the hazards and risks are eliminated or minimised so far as is reasonably practicable. 'Good work' is also where the work design optimises human performance, job satisfaction and productivity matching what people can do.

WHAT ARE WMSDs?

WMSDs may affect any worker, not just manual labourers. They are evident in a wide range of workplaces whether it is an office, a supermarket, a hospital, air traffic control or below the sea in a submarine. The overall affect of this type of injury can be debilitating life-changing, involving a significant loss in physical capacity to live a healthy lifestyle and perform activities of daily living that we often take for granted.

Work Health and Safety Regulations 2011 define a musculoskeletal disorder as 'an injury to, or disease of, the musculoskeletal system, whether occurring

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suddenly or over time'. It does not include accidents with mechanical operations.

WMSDs may include disorders such as 'repetitive strain injuries', 'occupational overuse syndrome', 'back injury', 'osteoarthritis', 'backache', 'sciatica', 'slipped disc', 'carpal tunnel syndrome', 'tendinitis'.

The majority of claims for compensation (80%) are attributed to handling (including lifting, carrying or putting down) objects with most claims involving the back (38%) and shoulder (19%).

But it's not about training workers in lifting techniques. This will not prevent back injuries for example, as it does not address the cause of these injuries. It is the design of the actual task that must address the WMSD risk.

Furthermore, studies have revealed that 'Body Stressing' is often closely connected to mental stress. WMSDs are not just the result of physical hazards in the workplace. They also involve psychological or psychosocial hazards such as high job demands, low job control, high job strain, low social support, low job satisfaction and low job security. These psychosocial hazards are recognised as important workplace risk factors in terms of direct and indirect costs and contribution to poor health outcomes.

This is why the holistic approach of ergonomists is best suited to finding solutions to WMSDs.

ERGONOMIST INTERVENTIONS

Finding the 'optimum' solution often includes the provision of equipment or aids to reduce physical loads and WMSD risk.

Let's take an example of specific ergonomist interventions that have supported workers in the frontline of the Covid19 period. Ambulance workers have been greatly assisted by the powered height-adjustable stretchers used to reduce the ergonomic risks associated with moving patients to and from stretchers, ambulances and hospitals.

Checkout operators in supermarkets, not so long ago, would have to fill the shopping bags and heave them to the customers. Now we see carousels that support customer bags and rotate to ease their removal and placement in the

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trolley. This reduces repetitive lifting movements and cumulative loading on neck, shoulder and lower back.

To be effective, the ergonomist must work collaboratively with all stakeholders in the workplaces throughout the process. Workers are given the opportunity to have a say over how work is to be done. And this enables the ergonomist to determine whether a particular work situation is contributing to a stress response which in turn increases the risk of WMSDs. So the active involvement of workers in developing and implementing workplace changes will improve productivity.

This 'participatory ergonomics' also facilitates on-going monitoring of workplace changes to ensure that the improvement continues and is both successful and sustainable.