Office ergonomics

By: Tom Barton

Keep your workers happy, healthy and productive! Find out why ergonomics is important and then use our top ten tips to improve workplace wellness.

The role of ergonomics is not just important when it comes to rehabilitating injured workers.

Ergonomics – the process of fitting a workstation to the physical requirements of its user – plays a vital role in injury prevention and improved productivity.

Why ergonomics?
If you haven't actively addressed ergonomics in your workplace, chances are your business is being adversely affected. Aside from your legal obligation to provide a safe and healthy workplace, inappropriately set-up workstations can lead to employees developing work-related musculoskeletal disorders (MSDs).

When MSDs become involved, so too does decreased productivity, lost-time, higher compensation costs, increased absenteeism, lower morale and higher staff turnover. Why leave those all unchecked?

Musculoskeletal disorders

Musculoskeletal disorders are the most common and costliest form of occupational disease, accounting for around 40 per cent of compensated work-related injuries. The umbrella term of MSD refers to injuries affecting the muscles, tendons, ligaments, nerves and blood vessels.

The physical symptoms of MSDs include pain and discomfort, stiffness, fatigue, numbness and swelling. Chronic MSDs can also lead to psychological difficulties.

MSDs can be a silent time bomb in the workplace. They can develop simply through normal, everyday work that doesn't necessarily need to involve heavy manual labour. MSDs can worsen over time to become more serious, longer lasting injuries, which is why it's so important to engage with ergonomics in the workplace.

What to avoid:

- **Repetition** - performing repeated physical motions, however light they may seem.
- **Static loading -** maintaining a particular position for extended periods of time. This lack of movement inhibits circulation, which causes muscle tension and pain. **Sustained**

exertions are another form of this, where force is applied for a continuous amount of time

- **Awkward postures -** forcing the joints into uncommon, unnatural positions, such as typing with bent wrists or reaching above the shoulders.
- **Mechanical contact stress -** allowing hard or sharp surfaces to press into the body's soft tissues, i.e. tendons, nerves and blood vessels. Examples are resting the wrists on the hard edge of the desk while typing or leaning elbows on the arms of a chair.
- **Force** - perhaps the most commonly understood risk factor for MSDs. While the obvious ones include lifting heavy objects, there are subtler versions such as gripping the mouse too hard or punching the keyboard.

Top ten 10 tips for improving office ergonomics

Correctly adjusting an office chair

1. **Chair height** should be set so that a person's thighs are horizontal to the floor, with their feet resting comfortably on the floor.

2. **Desk surface** should be positioned at elbow height. This can be achieved through adjustments to the chair or desk, incorporating a footrest to maintain thigh position.

3. **Backrest** should be adjusted so that it fits the curve of the spine. Pivot the hips fully forward and then fully backward to ascertain the ideal centre position. Bring the backrest in to support this position.

4. **Armrests** should be avoided if the role mostly involves keying, and should only be used if employees are regularly getting in and out of a chair. The armrests should not restrict the chair from moving underneath the desk.

* Don't replace office chairs with kneeling chairs or physio "fit-balls" unless directed to by an ergonomics assessor or rehab specialist. The adjustment options are limited and these sitting arrangements can actually increase the risk of strain.

Desks and workstations

5. **Reaching**. Frequent reaching can commonly to MSD complaints. While working at any surface – sitting or standing – all work items should be positioned close to hand. Arm movement above shoulder height should be discouraged.

- *Easy reach zone.* This is where your hands fall when you extend them and forearms outwards, while keeping the elbows at your sides and shoulders relaxed. Keep heavier and frequently used items here.

- *Maximum reach zone.* This is how far you can move your arms without leaning forward, i.e. just by pivoting the shoulders. It is usually between 60 to 90cm away, depending on body type. Keep the maximum reach zone on workstations reserved for infrequently used and lighter items.

6. **Standing-height benches** should be adjustable, so that workers can perform tasks with lowered elbows and upper arms to their sides.

- *Precision work* should be done with the workstation positioned at around 5cm below the worker's elbow height, with elbow support provided.
- *Light mechanical or assembly-line work* should be done with workstations positioned 5-10cm below elbow height;
- *Heavy work* that requires exerted downward force should be carried out on a workstation positioned 20-40cm below elbow height;
- If you can't adjust the workstation, provide a platform to raise either the worker or their workstation;
- Providing an adjustable high chair allows standing workers to change their body position, reducing strain. Also provide a rubber floor mat to minimise body shock and fatigue.

Peripherals

7. **Monitor** should be positioned at arm's length from the user's properly adjusted seated position. The top of the monitor should be at eyebrow height, propped by an adjustable stand (or phone books). To minimise glare, avoid placing the monitor behind or adjacent to windows.

8. **Keyboard** should be aligned with the monitor so as to minimise body twisting or rotation. Ideally, the keyboard should be flat, without the small legs at the back opened out. Documents should be placed on a document holder rather than flat on the desk.

Mouse should be big enough to comfortably fit the hand. The person's arm should be able to rest comfortably on the desk for support, resting their fingers on the buttons when not in use. Ideally, the hand should be taken off the mouse whenever possible, also learning to alternate heavy mouse use with either hand.

9. **Telephone** should be placed within the easy reach zone. If the person has a lot of phone conversations, it is best to use a headset. They should avoid the habit of wedging the receiver in between the head and shoulder.

10. **Breaks and stretching.** Provide a chair for those who do their work standing up, or provision work that can be done standing up for those who usually work seated. Periodic rests and changes in body position reduce the risk of MSDs. Encourage some form of break every

20-30 minutes where people get up and move around - or sit down, stretch and refocus.

Final word – education

Buying new furniture and equipment alone won't reduce your risk of workplace injury. Train managers and employees to understand the importance of ergonomics and teach them how to adjust their equipment properly. You'll reduce your claims rate, improve wellbeing and boost productivity.