



ERGONOMICS AND WORKPLACE SAFETY

BRINGING HEALTH TO LIFE

mohs
workplace health

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INTRODUCTION

HOW TO USE THE TOOLKIT

This toolkit was designed to help managers, employees and business owners gain a better understanding of how ergonomics impacts their workplaces. In the document we look at how to assess risk, the solutions and interventions that can make your workplace safer and how to successfully implement change across your organisation.

You can use this toolkit as a guide for developing your strategy for ergonomic safety and raising awareness of ergonomics throughout your organisation. The toolkit can be distributed among your workforce to help them understand the importance of ergonomics and its impact in the workplace.

WHO ARE WE?

The toolkit was developed by MOHS Workplace health, an occupational health provider based in the West Midlands. MOHS offer a range of services designed to make workplaces safer and workers healthier.



Why ergonomics matters

Ergonomics is a scientific discipline that explores the relationship between people and how they interact with the products, systems and environment around them. In the workplace, the aim is to create safer, more efficient ways of working. This in turn has a range of benefits for organisations, such as:

Better health

Ergonomic thinking reduces the chances of injury or illness in the workplace, which results in healthier, happier workplaces. Flawed design however, can easily lead to long-term health conditions that cause extended periods of absence.

Increased productivity

When employees are comfortable, they are more likely to focus on their work and produce better results. Ergonomically designed workflows reduce inefficiencies, which speeds up output and reduces costs.

Morale and job satisfaction

Creating a more efficient work environment improves the quality of life for employees. Staff who feel valued work harder, have a more positive attitude and help drive an organisation to higher levels of achievement.

Cost savings

Injuries and illnesses often increase an organisation's sick pay, compensation and recruitment bill. Preventing injuries reduces absenteeism, which in turn improves an organisation's ability to deliver its good and services.

Compliance and legal considerations

Some industries have strict rules and regulations that directly relate to workplace safety. Prioritising ergonomics can help organisations avoid costly fines and legal complications.

What does the law say?

- ✓ The Health and Safety at Work Act 1974 requires employers to protect the welfare of their workforce.
- ✓ The Display Screen Equipment (DSE) Regulations 1992 safeguard employees who regularly use computers, laptops and tablets.
- ✓ The Manual Handling Operations Regulations 1992 ensure employers assess the risk of moving heavy objects.
- ✓ The Workplace (Health, Safety and Welfare) Regulations 1992 oblige employers to design workplaces that minimise the risk of musculoskeletal injuries.

PRINCIPLES AND GUIDELINES

CORE PRINCIPLES

Comfort

Ergonomics encourages the development of environments and tools that help people work free of discomfort. By providing appropriate equipment and machinery, employers can promote good working practices and reduce stress on each worker's musculoskeletal system.

Efficiency

Ergonomic interventions boost productivity by minimising unnecessary or repetitive movements. Designing tasks and tools with optimal human performance in mind makes the tasks easier to perform and reduces the risk of hazardous situations.

Safety

Ergonomics makes workplaces safer. When design choices take into account the risk of injury and illness, the rate of accidents and illnesses within the workforce decreases. Ultimately, creating optimal work environments reduces negative health outcomes.

ERGONOMICS IN DIFFERENT WORK SETTINGS



Manufacturing

- In manufacturing, special consideration must be given to the positioning and design of tools and machines. Lifting support is also important as workers are often required to move heavy goods.



Construction

- Construction workers use scaffolding and harnesses to work at height. It's imperative that any mechanical aids are designed to protect safety and reduce the risk of injury.



Professional services

- Office settings might seem inconspicuous, but they are a common source of conditions like repetitive strain injury, eye strain and musculoskeletal disorders.



Hospitality

- Cleaners often carry out tasks that involve a lot of bending and twisting. Ergonomically designed cleaning tools can minimise these injury-prone movements. While for service staff, trolleys and carts reduce heavy lifting.

ASSESSING RISK

What are workplace inspections?

An ergonomic inspection is an assessment that looks for ergonomic hazards in the workplace. These inspections involve reviewing workstations, tools and work practices to ensure that they are designed for the physical capabilities and limitations of workers.

Inspections usually include direct observation, employee interviews and checklists as part of a comprehensive review. The goal is to spot areas where improvements can be made to remove factors that contribute to injury or fatigue.

It's important to schedule regular inspections throughout the year, because as workplaces evolve, so should the ergonomic solutions that underpin them. This approach reminds employees that safety is at the heart of what they do.

What to watch out for

Often the signs of an ergonomic failure will present in illnesses that employees are experiencing. Therefore, it's always important to find if employees are symptomatic.

- **Physical symptoms:** Fatigue, headaches, muscle tension and frequent illnesses.
- **Emotional symptoms:** Anxiety, irritability, mood swings and feeling overwhelmed.
- **Behavioural changes:** Decreased productivity, absenteeism, changes in work habits, withdrawal from social interactions and arguments between staff.
- **Cognitive issues:** Difficulty concentrating, making decisions or remembering things.



CATEGORISING HUMAN FAILURE

In every business there is a risk of injury or illness being caused by the way we work. The first step in understanding how to improve these processes is to look at why people make mistakes at work. We can categorise mistakes into two groups, unintentional failure and intentional failure.



Unintentional Failure

- Unintentional failures are the result of human error.
- Some of these errors are due to 'slips', for example pressing the wrong button on a machine or reading the wrong gauge.
- Other errors are caused by 'lapses' which are things like forgetting to complete a step in a procedure.
- These type of failures are typical in routine or repeat tasks where little attention is needed.
- The third type of human error is 'mistakes'. This is when someone does something wrong, despite believing they are right.
- These errors usually occurs in new, unfamiliar situations.
- Slips and lapses can be reduced by improving task design and introducing error-tolerant processes.
- Mistakes are best prevented through training and communicating procedures correctly.



Intentional Failure

- Intentional failures are known as 'violations'.
- A 'violation' is when a person deliberately doesn't follow a correct procedure.
- This isn't necessarily a malicious act, it often it's often a case of somebody trying to do a task more efficiently.
- These types of failures tend to happen when equipment or tasks have been poorly designed.
- Peer pressure, impractical rules and poor communication can also contribute to violations.
- To stop intentional failures employers should focus on better task design, improved detection and monitoring, and communicating procedures correctly.

USING AN ASSESSOR

Ergonomic assessors identify workplace tasks and equipment design that could cause harm to workers. They then provide recommendations for how the workplace could be made safer. Some companies hire their own internal assessor, whereas others will work with a supply partner.

What is an internal assessor?

- An internal assessor is someone who has been trained or hired by a company to manage their ergonomic risk.
- They typically are a Health and Safety officer, HR professional or team leader.
- Internal assessors must be fully versed in all aspects of ergonomics and will often undergo formal training or certification before starting the role.
- The benefit of an internal assessor is that they can provide ongoing support in real-time situations.

What is an external assessor?

- An external assessor is a specialist hired from outside an organisation to provide expert advice.
- They usually have a deep understanding of regulations and how they apply to ergonomic practices.
- They provide a fresh pair of eyes that can identify the risks that may have been overlooked.
- External assessors tend to have industry-specific knowledge and know what to look for before visiting a site.

BENEFITS OF WORKING WITH AN EXTERNAL ASSESSOR

- ✓ **Objective evaluation:** Unbiased assessment can reveal issues that may have been missed by internal assessors.
- ✓ **Regulatory compliance:** Thorough understanding of the legal obligations you need to meet.
- ✓ **Latest information:** Knowledge of the latest ergonomic research, tools and best practices.
- ✓ **Cost effectiveness:** Getting things right first time reduces the cost of absenteeism, compensation claims and regulatory fines.
- ✓ **Expert insights:** Solutions based on real-life examples, tailored to your workplace and workflow.

SOLUTIONS AND INTERVENTIONS

Ergonomic Tools

Ergonomic tools are equipment and software that help workers do their job with more comfort. There are a variety of different tools for different work settings. The most common ones you will find in the workplace are:

- Ergonomic chairs
- Sit-stand desks
- Keyboard trays
- Monitor risers and arms
- Ergonomic keyboards and mice
- Trolleys and carts
- Lifting aids and hoists
- Adjustable-height workbenches
- Anti-vibration gloves
- Powered hand tools with ergonomic grips
- Exoskeletons
- Tool balancers or holders
- Posture and incident monitoring software
- Visual monitoring software
- Break reminder apps
- Wearable and handheld safety tech



SAFE LIFTING TECHNIQUES



Plan your lift. Know the weight and shape of the object and find a clear path with no tripping hazards.



Position your feet. Stand close to the object with your feet shoulder width apart.



Lift with your legs. Bend at the hips and knees, not the waist. Keep your back straight and head up as you rise.



Body position. Keep the load close to your body and near your waist. Keep the load as close to your centre of gravity as possible.



Avoid twisting. Turn with your feet, not your torso. Keep your shoulders and hips aligned if you have to change direction.

Posture

When the body is misaligned, uneven pressure on the musculoskeletal system can turn harmless tasks into dangerous health hazards. Bad habits are usually developed unconsciously over time and are influenced by factors like prolonged sitting, poorly designed workstations and repetitive movements.

The body gives subtle signals before pain becomes too obvious to ignore, so when employees begin to highlight concerns, it's time to take action. Look out for symptoms like persistent discomfort in the neck and back, as well as conditions involving nerve compression and recurring headaches.

Surprisingly these symptoms can also have an impact on mental health. Employees who feel under constant discomfort often have a higher stress response and are more prone to burnout. Beyond mental and physical health, poor posture can lead to reduced productivity.



Ergonomic workplace design

- Ergonomically sound workstations and equipment prevent poor posture in everyday work tasks.

Correct posture training

- Training sessions increase awareness and provide a feedback loop for employees, highlighting areas for improvement.

Movement and microbreaks

- Prolonged sitting is a major contributor to poor posture. Encourage employees to take regular breaks.

Tools and technology

- Simple tools such as footrests, ergonomic keyboards and lumbar cushions can improve posture without major investment.

Organisational culture

- Leadership that models good habits and promotes health-focused policies generates trust among their employees.

HOW TO BUILD BETTER WORKSTATIONS

- **Purchase suitable equipment:** Choose adjustable ergonomic chairs that support the natural curve of the spine. Desks should accommodate seated and standing positions where possible, so that workers can switch postures throughout the day.
- **Position screens correctly:** Monitors should be directly in front of the user, about an arm's length away, with the top of the screen at or slightly below eye level. If multiple monitors are used, the primary screen should be centered, while secondary screens should be angled to minimise head rotation.
- **Align hand tools:** Workers should place their keyboard and mouse at elbow height, which will help them to keep their arms comfortably at their sides and elbows bent at around 90 degrees. The mouse should be positioned close to the keyboard to avoid overreaching.
- **Implement suitable lighting:** Good lighting reduces eye strain and helps workers stay focused. Workstations should be lit with a combination of ambient and task lighting. Always remember to position screens to avoid glare from windows or overhead lights, and consider using monitor hoods and screen filters when necessary.
- **Encourage movements and breaks:** Sedentary work increases the risk of a number of different health conditions like diabetes, obesity and musculoskeletal disorders. Encourage staff to take short breaks every 30 to 60 minutes to stretch, walk or stand.
- **Customise solutions:** Ergonomic assessments help you identify each worker's specific needs. For example one worker may need a footrest to maintain correct posture, whereas another might need a standing desk. Tailoring the workspace to the individual means nobody is left behind.



NEW TECHNOLOGIES FOR SAFER WORKPLACES

Visual monitoring

Modern camera monitoring systems use AI to identify hazards in real time. These systems specifically focus on ergonomic lifting, vehicle control, behavioural safety, area control, housekeeping and PPE detection. They can plug into existing CCTV infrastructure, making it very easy to implement. Managers can tailor their safety rules and dashboards to their facility, instantly unlocking insights into unsafe behaviours.

Collision avoidance

Triomobil Forklift Safety and Collision Avoidance System, and Stanley Haloguard 360 are 2 AI-powered tech devices that reduce the risk of accidents in the workplace. These systems operate in real-time and prevent more than 100,000 injuries per year. Mobileye 8 & Shield+ provide similar systems, but for vehicle collision avoidance.



Exoskeletons

Workplace exoskeletons help prevent musculoskeletal injuries caused by manual handling. Stanley sell a range of models including the Skelex 360-XFR, HAPO Exoskeleton Suit, Laevo Exoskeleton, SoftExo Lift, SoftExo Carry, Japet Exoskeleton and BionicBack Exoskeleton.



Wearables and handhelds

Inteliforz™ pod is a wearable sensor technology for the hand and wrist, that provides real-time data to reduce injuries. Strongarm SafeWork Sensor is a multi-modal auditory and vibration system for ergonomic correction, real time safety data and safety training. Modjoul SmartBelt prevents injury through real-time feedback and data analysis. The device attaches to a belt that is designed to measure risk.





IMPLEMENTATION

TRAINING AND EDUCATION

Ergonomic solutions won't achieve their intended outcome if workers lack awareness of how it affects them and their tasks. That's why education is so important. Proper training gives you piece of mind that workers know how to deploy new equipment, tools or processes correctly.

When workers understand the purpose and benefits of ergonomic changes, they are more likely to support the initiative. Likewise, when their feedback is used to fine-tune ergonomic strategy, they feel more ownership over the changes to their work.

Ultimately, consistent and targeted training leads to safer work habits and safer workplaces. Not only does this drive better health outcomes, but it also improves operational performance, safeguarding the overall success of an organisation.

Benefits of ergonomic training

- Promotes proper use of ergonomic tools and practices.
- Increases employee awareness and early detection of ergonomic hazards.
- Enhances employee engagement and cooperation.
- Empowers supervisors and teams to create safer workplaces.
- Builds a feedback loop for continuous improvement.

CULTURAL LEADERSHIP

The effectiveness of ergonomic strategies often relies on how they are communicated by leadership. When leaders demonstrate a genuine commitment to health and safety, it sets the tone for the rest of the workforce. Many companies see safety practices as an afterthought, but when you put it at the heart of your business, it becomes the norm. Strong cultural leadership can transform workplace ergonomics from ideas to shared values that support the long term health and wellbeing of employees.



HOW TO CHANGE THE CULTURE?

- **Model ergonomic behaviours:** Lead by example and demonstrate safe ergonomic practices in your own work.
- **Include ergonomics in core values:** Integrate ergonomic thinking into your mission statement and values.
- **Recognise and reward ergonomic improvements:** Reward teams or individuals that contribute to ergonomic safety.
- **Engage employees in ergonomic decisions:** Involve staff in design and implementation to promote ownership and responsibility.
- **Provide regular ergonomic training:** Offer ongoing training to reinforce awareness and competence at all levels.
- **Make ergonomics a leadership responsibility:** Include ergonomic outcomes in managerial performance metrics.

Monitoring Interventions

The next step after implementing an ergonomic solution, is to track its effectiveness. Regular follow-up assessments help you find out whether the intervention reduced risk and improved health outcomes, or whether the initiative failed. Some of the metrics that you could consider are absenteeism levels, number of injuries and productivity levels of each worker.

Monitoring allows you to identify any unintended consequences of an implementation and adjust where necessary. This also helps your business adapt quickly and pivot strategies to protect workers in real-time.

Workplaces evolve over time and so should your health and safety strategy. Regularly reviewing and refining ergonomic practices ensures that businesses remain proactive rather than reactive, identifying and mitigating potential problems before they result in injury or illness.

Businesses that prioritise ergonomics in their continuous improvement strategy often benefit from better employee wellbeing, stronger engagement and reduced staff turnover. Ergonomically sound environments also tend to be more productive and create stronger team morale.

Ergonomics can enhance your reputation as a responsible employer. People want to work for organisations that take care of their workers, and what better way to do that than to put ergonomic thinking at the forefront of your workplace safety strategy.





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