

Key elements for managing Ergonomic risk in the workplace

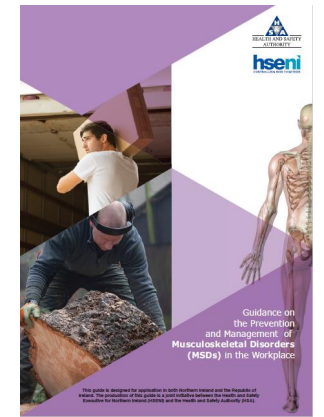
Frank Power

Senior Ergonomist (Inspector)

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Objectives

- 1 The Human in the context of work activity involving physical effort
- 2 The Legal context
- 3 Relevant Research
- 4 Key elements for managing ergonomic risk to work towards the prevention and management of Musculoskeletal Disorders (MSDs) in the workplace



1 The Human in the context of work activity involving physical effort

There are a range of variables to consider when we think about human interaction in the context of physical work activity

The actual work activity

What does it involve? (e.g. Lifting loads, pushing patient trolleys, handling baggage, repetitive upper body work in a meat plant, computer work)



The work environment

For example; very cold, very noisy, lack of space, crowded, wet floor,



Key Variables such as the type of work carried out, the work environment, the materials and equipment used, the individuals involved are determined by different stakeholders and will require the input of stakeholders to effect positive change where needed.

Example

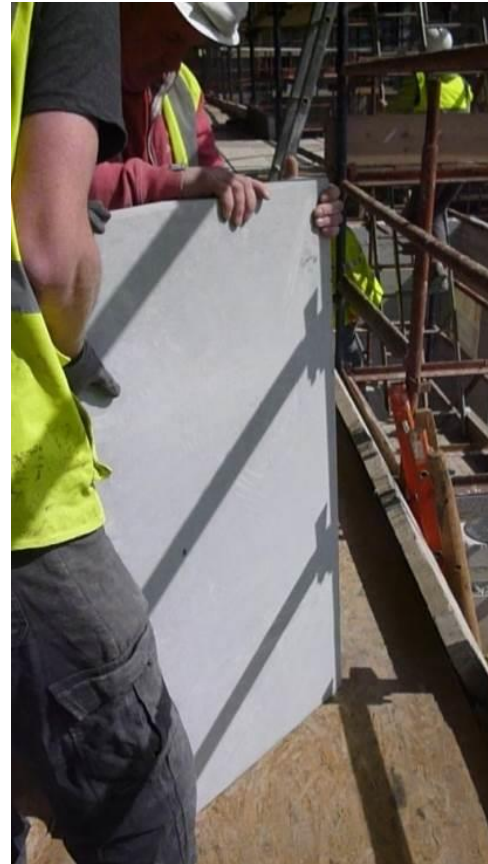
Task: Stone Cladding on a construction site

Issue: Very High risk exposure to physical ergonomic risks including excessive force and sustained awkward postures

Intervention: Inspector stops the work, employer engages a project team to address and an engineering system is put in place to avoid lifting

Stakeholders involved: PSCS/PSDP/Sub contractors/Scaffold contractor/
engineers certifying equipment, equipment supplier, stone cladding suppliers

Examples of Risk Exposure (Heavy load and awkward posture)



Example of Good Practice (No handling of large heavy loads and neutral posture)



2 The Legal context for managing ergonomic risk (Manual Handling Of Loads , Display Screen Equipment Regulations, *Hierarchy of Principles of Prevention in Safety, Health and Welfare at Work Act 2005*)



Definition of a management system

“A management system is the way in which an organisation manages the interrelated parts of its business in order to achieve its objectives”

(International Standards Organisation)

“Interrelated parts”

In a legal context ergonomic risks need to be managed and all the variables/interrelated parts including the type of work activity being carried out, the work environment, the stakeholders involved, etc. need to be managed in order to work towards the prevention and management of musculoskeletal injury and ill health

3 Relevant Research

“Work-related musculoskeletal disorders: prevalence, costs and demographics in the EU” (EUOSHA Report 2021)

Key recommendations:

- The systematic planning and implementation of policy initiatives should be ensured, including the formal impact evaluation of any interventions.
- The focus on risk assessment should be changed to a focus on risk assessment and prevention activities in workplaces; sharing good practice examples may promote this
- The range of prevention activities should be broadened to focus on work design and ergonomics as a means of removing risks at source, taking a systems approach to prevention and job design
- Workers should be involved in risk assessment and prevention activities to increase the relevance of assessments and improve acceptance of any prevention activities identified

4 Key elements for managing ergonomic risk to work towards the prevention and management musculoskeletal injury and ill health



Element 1

Ergonomics risk management/Management of musculoskeletal disorders policy

- This can be a statement of intent on how regulatory requirements will be achieved to mitigate ergonomic risk exposure
- It can outline the main activities that take place in the workplace with examples of areas where work activity will involve lifting or repetitive upper body work, etc.
- It can outline the risk assessment process that will be used and may reference training needs for those who will carry out the risk assessments
- It can outline how any measures to mitigate risk will be implemented and reference the need for method statements/SOPs and/or instruction for those who carry out the work
- It can outline how consultation with staff will take place during the risk assessment process
- An explanation that there will be a monitoring and review process in place to flag the need for new risk assessments where required.

Sector Examples of functional areas and work activities

- Health Sector: Medical Records, Catering, Laundry, Maintenance, Pharmacy, Radiology, Stores, Housekeeping, Laboratory
- Construction: Handling of stone cladding, wall capping, glazing, fire doors,
- Manufacturing: Packing areas, incoming stores, maintenance, production
- Retail: Order picking, pushing/pulling roll cages,

Element 2

Risk Assessment

- Management Commitment to recognise and to manage these ergonomic risks as per policy
- Developing competencies in managing ergonomics risk by using appropriate risk assessment tools (e.g. HSEUK Mac/Rapp/Art Tool)
- Completing good quality manual handling risk assessments which clearly identify high/very high risk ergonomic risk factors (risk exposures) and the appropriate controls
- Developing innovative engineering or organisational interventions to manage ergonomic risk
- Communicating and consulting with employees at all stages of the process
- Providing relevant training in the use of new equipment and new method statements, etc.

Examples of Risk Exposure (Heavy load and awkward posture)





Number of High Risk Exposures

Risk Factors	Colour Band (G,A,R or P)			Numerical Score		
	Lift	Carry	Team	Lift	Carry	Team
Load weight and lift/carry frequency	P			10		
Hand distance form the lower back	R			6		
Vertical lift region	G			0		
Trunk twisting / sideways bending Asymmetrical trunk / load carrying	R			2		
Postural constraints	A			1		
Grip on load	R			2		
Floor surface	G			0		
Other environment factors	G			0		
Carry distance (carrying only)						
Obstacles en route (carrying on)						
Communication and co-ordination (team handling only)						
Other risk factors e.g. individual factors, psychosocial factor, etc.	TOTAL SCORE:			21		

Example of Good Practice (No handling of large loads and neutral posture)



Element 3

Training

- Training needs to be part of an overall risk management strategy which is managed and implemented effectively.
- We need to remember that training alone does not address risk exposure
- Training is most effective when supported by a risk management system that provides for risk assessment and the introduction of control measures which may take the form of safe systems of work plans (SSWPs).

Example

New system of work introduced for installing stone cladding

Cladding Contractor developed a Risk Assessment Method Statement with step by step written instruction with pictures of each stage of the installation process.

Follow up instruction provided for all the operatives involved in this
Installation process



Element 4

Accident and near miss reporting

- Efforts to manage accidents that result in a musculoskeletal injury should be effective in preventing reoccurrence
- Should be a timely investigation of any accident
- Need for robust root cause analysis and ensure that the appropriate information is collected and that all relevant facts are documented
- Identify corrective actions and ensure an action plan for implementing the actions is completed
- Consideration should be given to developing other forms of KPIs such as number of Risk Exposures

Risk Exposure as a Key Performance Indicator

- The nature of musculoskeletal injury or illness is that the symptoms often result in cumulative damage to the musculoskeletal system over time due to exposure to ergonomic risks including excessive force, awkward postures, high repetition and poorly designed work systems.
- The narrative on managing ergonomic risk in the workplace typically focuses on the rate of injury and illness rather than a focus on the risk exposures

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Element 5

Injury Management (retention, rehabilitation and return to work)

- While the Health and Safety Authority (H.S.A.) does not have regulatory remit for how the management of injured employees is addressed at workplace level they do recognise that injury management has an important role to play in reducing lost time and absence from work

“Employers should not underestimate the influence that better management and engagement of staff can have on the well-being and ultimately the productivity of their workforce (Dame Carol Black)”

- A study which looked at workplace-based return to work interventions found evidence that the duration of work disability and absenteeism was reduced through the introduction of interventions including early contact with the employees by the employer, ergonomic risk assessments and the presence of a person to coordinate the return to work programme (Franche et al 2005)

Element 6

Internal Auditing

- An internal audit is a structured process of collecting independent information on the effectiveness of the systems in place for the prevention and management of musculoskeletal disorders (MSDs) in the workplace



Conclusion

1 **The Human in the context of work activity involving physical effort**

Consideration to be given to all variables relating to actual work activity

2 **The Legal context**

Need to consider the legal obligations to address ergonomic risk in the workplace

3 **Relevant Research**

Take account of relevant research and best practice

4 **Key elements for managing ergonomic risk to work towards the prevention and management of MSDs in the workplace**

A six step systems approach towards prevention and management of MSDs



Guidance on
the Prevention
and Management of
Musculoskeletal Disorders
(MSDs) in the Workplace

This guide is designed for application in both Northern Ireland and the Republic of Ireland. The production of this guide is a joint initiative between the Health and Safety Executive for Northern Ireland (HSE NI) and the Health and Safety Authority (HSA).



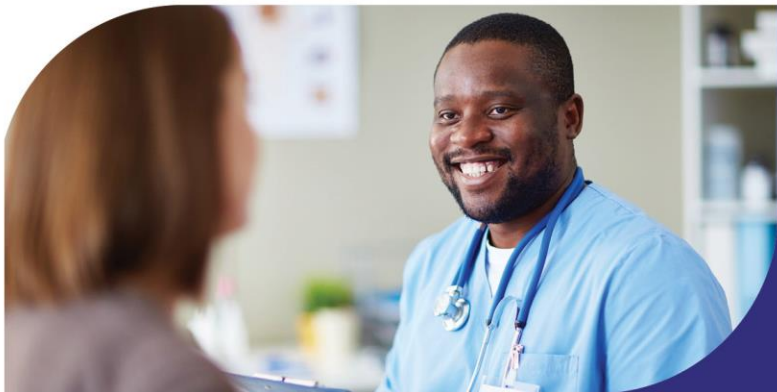
HSA

An tÚdarás Sláinte agus Sábháilteachta
Health and Safety Authority

Go raibh maith agaibh
Thank you

E: francis_power@hsa.ie

W: www.hsa.ie





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Ergonomics and Psychosocial Webinar:

Key elements for managing Ergonomic
and Psychosocial Risk at workplace level