



نظام الشارقة للسلامة والصحة المهنية
Occupational Safety & Health Sharjah

حكومة الشارقة
هيئة الوقاية والسلامة
Government of Sharjah
Prevention And Safety Authority



Code of Practice

Manual Handling and Ergonomics

OSHJ-Cop-12

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1 Introduction

A range of injuries and ill-health conditions, notably Work Related Musculoskeletal Disorders can be caused where work equipment, environment and task imposed postures and movements upon the body and stresses upon the muscles, ligaments and joints.

2 Purpose and Scope

This Code of Practice (CoP) has been developed to provide information to entities to assist them in complying with the requirements of the Occupational Safety and Health System in Sharjah.

This Code of Practice (CoP) defines the minimum acceptable requirements of the Occupational Safety and Health System in Sharjah, and entities can apply practices higher than, but not lower than those mentioned in this document, as they demonstrate the lowest acceptable level of compliance in the Emirate of Sharjah.

3 Definitions and Abbreviations

Entities: Government Entities: Government departments, authorities or establishments and the like in the Emirate.

Private Entities: Establishments, companies, enterprises and economic activities operating in the Emirate in general.

Risk: Is the combination of likelihood of the hazard causing the loss and the severity of that loss (consequences).

Risk Assessment: The systematic identification of workplace hazards and evaluation of the risks associated. This process takes existing control measures into account and identifies and recommends further control measures where required.

Hazard: Anything that has the potential to cause harm or loss (injury, disease, ill-health, property damage etc).

Competence: The combination of training, skills, experience and knowledge that a person has and their ability to apply all of them to perform their work.

Musculoskeletal Disorders: Are injuries and disorders that affect the human body's movement or musculoskeletal system, including muscles, tendons, ligaments, nerves, discs, blood vessels, etc.

Ergonomics: The science of fitting the work environment and / or equipment to employees, so that they reduce or prevent stress, and eliminate potential ill health.

Manual Handling: Means transporting or supporting a load by hand or bodily force. It includes lifting, putting down, pushing, pulling, carrying or moving loads.

4 Roles and Responsibilities

4.1 Entity Responsibilities

- Identify and assess manual handling and ergonomic risks to employees and introduce control measures to eliminate or reduce those risks;

- As far as reasonably practicable, have arrangements in place to avoid the need for manual handling;
- As far as reasonably practicable, where manual handling cannot be avoided, reduce the risk of injury from manual handling;
- Monitor any procedures in place or introduced to reduce the risk from manual handling and act upon any findings to implement further improvements;
- Ensure adequate information, instruction, supervision and training is provided to employees on specific manual handling and ergonomic risks;
- Ensure adequate resources are provided to implement control measures.

4.2 Employee Responsibilities

- Not endanger themselves or others;
- Follow precautionary control measures to ensure work activities are performed safely and without risk to health;
- Cooperate with the entity and receive safety and health information, instruction, supervision and training;
- Report any unsafe work activity, ill health condition or defective equipment which they know is likely to endanger the safety and health of themselves or that of any other person.

5 Requirements

The entity shall manage the risks and introduce the following minimum requirements, including:

- Avoid manual handling, so far as is reasonably practicable;
- Assess the risk of injury from any manual handling operations that cannot be avoided;
- Reduce the risk of injury from manual handling to as low as reasonably practicable.

5.1 Planning

The entity shall take all reasonable precautions to ensure the safety and health of employees, planning includes the elimination of manual handling wherever possible. Where elimination is not possible the entity shall consider the introduction of automation or mechanisation.

5.1.1 Eliminate Handling the Load

Eliminate manual handling by assessing if the work could be conducted in a different way, including but not limited to:

- Revising the safe system of work to conduct the work activity without moving the item;
- Products or materials are delivered directly to where they will be used-

5.1.2 Automation or Mechanisation

Where manual handling of the load cannot be avoided, the operations could be automated or mechanised to eliminate the manual part of the handling. These decisions should be made when plant or systems of work are being designed and taking into account the following factors, including but not limited to:

- The use of materials handling equipment or mechanical aids to eliminate or reduce the risks identified in the risk assessment;
- The use of a conveyor, a chute, an electric-powered pallet truck, an electric or hand-powered hoist, or a lift truck to reduce the risk of injury;
- The use of robotics technology in production lines;
- Ensure new risks are not introduced when automation or mechanisation is introduced;
- Ensure employees are trained to use any equipment introduced.

5.2 Risk Assessment

Where manual handling activities cannot be avoided, the entity shall assess the risks associated with manual handling and ergonomics and take all reasonably practicable precautions to ensure the safety and health of employees and others who could be affected by work activities.

The manual handling risk assessment shall take into consideration the following factors, including but not limited to:

- The load;
- The task;
- People;
- The environment;
- Any materials handling equipment or handling aids used;
- The pace, frequency and duration of the work;
- Information, instruction, supervision and training;
- Provision of personal protective equipment.

Ensure the individual requirements of employees who may be especially at risk are considered, including but not limited to:

- New or expectant mothers;
- Persons of Determination;
- Employees returning to work after a recent manual handling injury, or who may be on a phased return to work;
- Inexperienced new, young or temporary employees;
- Older employees;

- Contractors, homeworkers or employees conducting lone working;
- Workers who may not understand instructions provided in English, Arabic or other languages provided in the workplace.

The entity shall consider psychosocial risk factors. These may affect employees' psychological responses to their work and workplace conditions. High workloads, tight deadlines and lack of control over the work and working methods, may expose employees to risks of developing Work Related Musculoskeletal Disorders.

Further information on risk assessment can be found in OSHJ-CoP-01: Risk Management and Control.

5.2.1 Hazards Associated with Manual Handling

The hazards related to manual handling are derived from different aspects of work activities.

The Load:

- The load is too heavy and/or bulky, placing unreasonable demands on the person;
- The load has to be lifted from the floor and/or above the shoulders;
- The load cannot be gripped properly.

The Job:

- The job involves frequent repetitive lifting;
- The job requires awkward postures, such as bending or twisting;
- The job is performed on uneven, wet, or sloping floor surfaces;
- The job is performed under time pressures and doesn't include enough rest breaks.

Workstation layout:

- Items that are used frequently are out of convenient reach;
- Inadequate space under work surface for legs;
- Work surface height inappropriate for the tasks causing awkward and uncomfortable postures;
- Lighting inadequate causing eyestrain when inspecting detail on work items;
- Chair not properly adjusted to fit the person and workstation.

Design of tasks:

- Work demands are too high or too low;
- The employee has little say in how they organise their work;
- Badly designed machinery guards - awkward to use or requiring additional effort - slowing down the work;
- Conflicting demands.

The workday:

- Not enough recovery time between shifts;
- Poor scheduling of shifts;
- Juggling shifts with domestic responsibilities;
- Employees working excessive overtime.

5.3 Reduce the Risk of Injury or Ill-health

The entity shall reduce the risk of injury or ill-health from manual handling operations where the risk cannot be avoided. Where possible, provide mechanical help, where this is not reasonably practicable, explore changes to the load, environment, task, people and the management of manual handling.

5.3.1 Load Control Measures

Control measures, include but not limited to:

- Make the load lighter or reduce the force being applied;
- Split the load or make it less bulky;
- Make the load easier to grasp;
- Improve load stability;
- Make changes to reduce load hazards, introduce better packaging or labels.

5.3.2 Environment Control Measures

Control measures, include but not limited to:

- Reduce slips by improving flooring or using better footwear;
- Remove clutter, rough surfaces and obstacles;
- Avoid steps and slopes, or make them less hazardous;
- Reduce extreme temperatures;
- Cover outdoor areas and protect employees from direct sunlight and wind;
- Reduce noise levels;
- Improve lighting.

5.3.3 People Control Measures

Control measures, include but not limited to:

- Provide training specific to the tasks being performed;
- Consult and inform employees about hazards, and how to avoid them;
- Motivate people to carry out the tasks as safely as possible;

- Consider the task requirements with respect to age, fitness or other special needs;
- Provide appropriate personal protective equipment and make sure it is used correctly;
- Plan for supervision of new starters and those returning to work after illness or injury.

5.3.4 Task Control Measures

Control measures, include but not limited to:

- Improve layout to keep the load close to the body;
- Reduce handling distances and twisting actions;
- Avoid repetitive actions and vary the work to rest different muscle groups;
- Provide sufficient space to perform the task;
- Provide mechanical aids where they reduce hazards, and train employees to use them correctly and safely;
- Reduce vibration, for tools and for seating;
- Provide sufficient rest breaks;
- Limit the duration of any handling, and particularly if standing or sitting;
- Avoid the need for squatting, kneeling or crouching.

5.3.5 Management Control Measures

Control measures, include but not limited to:

- Provide sufficient staff to cover sickness, deadlines and holidays;
- Schedule regular rest breaks and rotate staff between different activities;
- Ensure good maintenance systems;
- Provide information and incentives to encourage safe work practices.

5.4 Ergonomics

Ergonomics is defined as the study of work. It is the science of fitting the workstation and tools to the employee. Adapting the job to fit the employee can help reduce ergonomic stress and eliminate many potential ergonomic disorders. Ergonomics aims to create safe, comfortable and productive workspaces by bringing human abilities and limitations into the design of a workspace, including the individual's body size, strength, skill, speed, sensory abilities and even attitudes.

5.4.1 Design of Tasks

Designing tasks is critical for ensuring that employees perform optimally, the entity shall consider the following when designing tasks, including but not limited to:

- Work demands are neither too high or too low;
- The employee have input in how they organise their work;

- Badly designed machinery guards slowing down the work;
- Conflicting demands between production and quality.

These problems can lead to employees failing to follow procedures or removing guards, causing accidents, injury and ill health.

5.4.2 Manual Handling

Manual handling can lead to physical injuries, such as low back pain or injury to the arms, hands, or fingers. The entity shall ensure the following, including but not limited to:

- The load is not too heavy and/or bulky, placing unreasonable demands on the person;
- That the load is not lifted from the floor and/or above the shoulders;
- That work activities do not involve frequent repetitive lifting;
- That work activities do not require awkward postures, such as bending or twisting;
- That loads can be gripped properly;
- That work is not performed on uneven, wet, or sloping floor surfaces;
- The work is not performed under time pressures and includes sufficient rest breaks.

5.4.3 Workstation Layout

The workstation layout will have a major effect on the working postures. The entity shall ensure a workstation layout is designed to fit a wide range of employees, including but not limited to:

- Ensuring that items that are used frequently are in convenient reach;
- Ensuring there is adequate space under the work surface for legs;
- Ensuring the work surface height is appropriate for the work tasks without causing awkward and uncomfortable postures;
- Ensure adequate lighting is provided to remove the risk of eyestrain;
- Ensure chairs can be properly adjusted to fit the person and workstation.

The entity shall ensure that workstations are assessed and are suitable for the people using them and the tasks undertaken.

5.4.4 Managing the Working Day

The entity shall manage the working day to reduce tiredness or exhaustion, which can increase the likelihood of incidents and ill health, including but not limited to:

- Ensuring sufficient recovery time between shifts;
- The scheduling of shifts;
- Assisting employees to manage shifts with domestic responsibilities;
- Manage employees to reduce working excessive overtime.

5.5 Personal Protective Equipment

The entity shall provide suitable personal protective equipment for employees conducting manual handling work activities, including but not limited to:

- Hand protection;
- Protective clothing for the rest of the body, dependent on the manual handling work activity being conducted;
- Safety footwear shall be worn to protect feet from injury when manual handling heavy materials.

Further information on personal protective equipment can be found in OSHJ-GL-07: Personal Protective Equipment.

6 Training and Competence

The extent of the training that is required will depend on the type of manual handling activities and the needs of the employees being trained.

The entity shall provide employees with training on manual handling in languages and in a format that employees understand, including but not limited to:

- Manual handling risk factors and how injuries can occur;
- How to use mechanical aids;
- How to assess a manual handling task and choose the correct lifting technique;
- How to carry out safe manual handling, including good handling techniques;
- Safe systems of work relevant to employee's tasks and environment;
- Supervisors and managers are trained on identifying unsafe manual handling techniques and know how to perform manual handling tasks safely;
- How to report manual handling injury or illness to management;
- The use of personal protective equipment.

The entity shall provide employees with training on ergonomics in languages and in a format that employees understand, including but not limited to:

- Information on how to request an ergonomic workstation assessment;
- How to set up the workstation to ensure the correct ergonomic position;
- How to recognise signs of ergonomic injury or illness;
- Supervisors and managers are trained on ergonomic related injury and illness;
- How to report ergonomic injury or illness to management;
- Information on what assistance is available to employee's suffering from ergonomic injury or illness.

The content of any training in good handling technique and ergonomics should be tailored to the tasks the employees conduct.

Periodic refresher training shall be conducted to ensure employees competency is maintained, including but not limited to:

- Where training certification has expired;
- Where identified as part of a training needs analysis;
- Where risk assessment findings identify training as a measure to control risks;
- Where there is a change in legal requirements;
- Where incident investigation findings recommend refresher training.

The entity shall record and maintain accurate training records of OSH training provided to employees.

Further information on training can be found in OSHJ-GL-26: Training and Competence.

7 References

OSHJ-CoP-01: Risk Management and Control

OSHJ-GL-07: Personal Protective Equipment

OSHJ-GL-26: Training and Competence

8 Document Amendment Record

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