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Work Health and Safety

Manual Tasks Risk Management

INTRODUCTION

Manual tasks are activities where a worker has to physically use their body to perform a task. The back, shoulder, hands and knees are the most frequently affected parts of the body and sprains and strains are the most common injury.

Most injuries are due to wear and tear over a long period of time but some musculoskeletal disorders are caused by strenuous handling or awkward lifts. Musculoskeletal disorders account for over 40% of the serious injuries where 5 or more days are lost from work. It is therefore vital to secure the health and safety of workers by undertaking adequate risk management.

This film will show you how to **identify** hazardous manual tasks, how to **assess** risks arising from hazardous manual tasks, and how to **control** the risk.

So that the day-to-day experiences and knowledge of workers can be utilised, risk management must be done in consultation with the relevant supervisor, the person doing the job and, where there is one, the relevant health and safety representative. Those involved will require training in the risk management approach.

HAZARD IDENTIFICATION

Let's see how hazardous manual tasks can be identified. This should be done before work involving a new task commences.

At Goodwill Engineering, before we take on any new task, we have a contract review process which goes through the whole process of manufacture from delivery of the raw material right through every stage to the end product to ensure there is no manual handling or occupational health and safety issue.

For existing tasks, ongoing monitoring and review is important to help identify hazardous manual tasks and this must be done when an incident or hazard is reported or when any change alters the risk.

Review incident reports

Check hazard and incident reports for those associated with manual tasks and review any previously conducted assessments.

Consult

Consult with workers, supervisors and the relevant health and safety representative about whether there are any manual tasks of concern, for example, tasks that are difficult to perform or associated with physical strain, discomfort, numbness or tingling. Early reporting of problems and issues by workers and prompt action by management are important.

Here the health and safety coordinator has received a worker's hazard alert form indicating that pulling pieces of metal from the storage rack is hazardous. At the next toolbox meeting the reported hazard and the potential risk factors are discussed by the workers.

Observation / walk-throughs

It is important to observing manual tasks and note those that may require assessment.

Analyse data

From the information collected as part of monitoring and review, look for patterns related to specific manual tasks, jobs or locations. Identifying areas of particular concern will help decide which manual handling tasks should have priority for assessment.

Risk Assessment

The next step is to determine the risk factors that make the task hazardous. Gain a more detailed understanding of the task by observing and discussing the task in greater detail with workers, supervisors and the relevant health and safety representative. Breaking the task into steps and taking photographs of the critical steps can be helpful. Note any adverse postures such as twisting or excessive reaching; and collect relevant information, for example, dimensions, reach distances, load weight, duration of task, frequency of handling and the number of staff involved.

The code of practice includes a checklist to help ensure all risk factors are considered, and recorded.

Manual tasks that have the potential to stress the body will usually have one or more risk factors:

- high, repetitive or sustained force, for example, heavy lifting, pushing or carrying;
- awkward or sustained postures, for example, bending forwards or twisting;
- repetitive movements, for example, repeating an action frequently, without breaks; and
- exposure to sustained vibration, for example, going over rough terrain exposing the driver's body to vibration that may result in shock; or using certain vibrating power tools, which can result in damage to nerves and tendons of the hand.

As the magnitude of a risk factor increases, the risk itself will also increase, for example, the greater the force exerted, the more bent or twisted, or the longer a posture is held, the greater is the risk.

The impact of the key risk factors may be increased or modified by:

- the organisation of work, for example, the duration and frequency of repetitive tasks, and lack of break out areas to encourage breaks;
- worker characteristics, for example, young workers are at greater risk because they are still developing physically and their spine and other joints are more easily damaged; and
- the working environment, for example, excessive heat leading to increased fatigue.

The risk assessment must clearly outline the risk factors that make the manual task hazardous. Its also important to work out what is causing the risk factors, by examining the source of the problem including the layout of the workplace, the type of equipment and load, the environment, and the way the work is organised. This will help determine what needs to be done to eliminate or minimise the risk.

Risk Control

ELIMINATION

Risk control addresses the cause of the risk factors. When determining how the risk can be controlled, elimination of the manual task must be considered first before any other measures.

REDESIGN

Its important to focus redesign efforts on the source of the problem causing the risk factors, therefore, the layout, the type of equipment and load, the environment, and the way the work is organised need to be examined.

The layout of this workplace was designed to minimise confined postures, so, bending and twisting, by installing racking that allowed us to get product up off the floor and also ensuring that walkways are wide enough to prevent those confined postures so that the storeman can access product without having to bend and twist.

An additional design change was to install a dual hoist crane to reduce the need to handle and guide the load.

Reducing the force required is a common way of addressing risk factors, for example, by using vacuum lifts, gantry hoists and magnet lifts; and providing mechanical aids such as scissor lift tables so that workers can transfer loads at just below waist height.

Let's look at some examples which illustrate how good design can help eliminate manual task risk factors:

- A metal strap cutting task has been designed to reduce handling and repetitive bending and reaching. A large roll of sheet metal is forklifted onto a specially-designed frame, which is then mechanically moved to the cutting machine. After cutting, the metal strap cuttings are captured in a container, which is then mechanically moved to the sorting area table. Repetitive bending and reaching is reduced by having the container items emptied onto the table. The remaining manual tasks are rotated amongst workers to further reduce manual task risks.

- The workstation for the production of brick ties has been designed to ensure that tasks are within easy reach and completed without strain. A supervisor feeds metal through the cutting machine and a worker collates, weighs and bundles the ties after the cutting process has been completed.

- This trolley was designed to reduce the amount of handling. Sheet metal rollers remove the need to hold the metal sheets while they are fed into the machine.

- A bracket stabilises each box while it is folded and stapled. This reduces handling and the risk of awkward postures or staple lacerations.

Redesigning the job to include a variety of tasks, providing rest breaks, and employing adequate staff for peak periods are some other ways of reducing the risk.

To tackle the source of the problem its also helpful to focus on the working environment, for example, installing a gentle slope rather than steps so a trolley can be used, or improving floor surfaces so trolleys can be more easily moved.

ADMIN CONTROLS

Administrative controls, such as work practices to reduce the risk of injury, are the least preferred method of risk control because the worker must still work in the presence of a hazard.

Task-specific training should relate to the risk factors identified in the risk assessment process; and workers must be properly supervised to ensure that tasks are carried out safely and according to the training provided.

Conclusion

Risk assessment and control measures should be clearly documented and an Action Plan presented to the health and safety committee. The plan should include the agreed time by which actions will be completed and the person responsible for implementation. These will help demonstrate that you have been actively working to ensure that manual tasks in your workplace are as safe as is reasonably practicable. It is important to follow-up the introduction of control measures in order to check that they have been successful and to ensure that new risks have not been introduced.

Hazardous manual tasks are the most common workplace hazard. Make sure that your workers know about the **hazardous** manual tasks, and make sure that the **risks** have been assessed and are being properly **controlled**. If you're not sure if controls are adequate, get advice from an ergonomist, or from your regulatory authority.

