Critical risk: Manual tasks – involving repetitive tasks

Identifying the risk:

Manual tasks used to be referred to as ‘manual handling’. The term ‘manual task’ refers to physical activity, and is defined in the National Standard for Manual Tasks 2007 as ‘any activity requiring a person to use any part of their musculoskeletal system in performing their work’.

In the meat industry, injuries resulting from manual tasks account for over 55% of all workplace injuries.

Hazardous manual tasks can include the following characteristics:

- repetitive or sustained application of force
- repetitive or sustained awkward posture
- repetitive or sustained movement.

In the meat industry these characteristics can involve:

- **lifting** – i.e. live animals, carcases, cartons or cuts of meat
- **lowering** – i.e. cartons and pallets in the load-out area
- **pushing** – i.e. sides or carcases on a rail or cartons along a belt
- **pulling** – i.e. pelts and hides
- **carrying** – i.e. tubs of meat, parts of carcases and cuts of meat
- **holding or restraining** – i.e. live animals.

Potential impact of the risk:

Performing some manual tasks can be hazardous, potentially causing musculoskeletal disorders which can lead to death, injury or disease. Performing repetitive tasks can lead to a number of injuries including:

- repetitive strain injury (RSI), of the shoulder, back and arms
- occupational overuse syndrome
- muscle fatigue.
Supervisor Responsibilities:

The National Standard for Manual Tasks 2007, requires that persons with control (usually employers, but can include supervisors and employees) must, as far as is reasonably practicable, identify hazardous manual tasks, assess the risks, and where possible eliminate the risks. If elimination is not possible then persons with control must minimise the risks as far as is reasonably practicable.

Preventing the risk:

Risk control follows the standard application of the hierarchy of controls for the management of a hazardous manual task. In terms of applying the hierarchy of hazard management to manual handling, the three elements are as follows:

1. **Can the repetitive task be eliminated?**

   This is clearly the most effective approach but will not always be possible. Automation and technology eliminate the need for some manual tasks. Examples of these are hide and pelt pulling, Y-cutting and kidney fat removal. However, their implementation is not widespread and is inhibited by factors such as high cost, the amounts of space required in existing work areas by robots and machinery and the limited knowledge of how to maintain such equipment.

2. **Can the risk factors associated with the repetitive task be eliminated or minimised?**

   Possible ways of eliminating the risk to consider.
   
   - Can the workplace design or layout be changed?
   - Can the nature of the load be changed?
   - Can the working environment be altered?
   - Can the items used during the task be altered?
   - Can work organisation or work practices be altered?

   Some examples of eliminating or minimising the risks associated with repetitive tasks include:

   **Task rotation.** By rotating tasks you are giving your body a break from one repetitive task and moving to a different task which might use a completely different set of muscles. It is important to realise that task rotation may not be appropriate at your company. Some jobs are paid different rates, require different skill levels and training, or are too similar that rotation would probably not make a difference. For more information on task rotation click here (hyperlink this to the MINTRAC manual handling resource)

   **Microbreaks.** Work in the meat industry can often require you to perform repetitive manual tasks for hours at a time. Studies suggest that as well as longer breaks, shorter and more frequent breaks, called ‘microbreaks’, throughout the day can help to maintain healthy muscles and tendons and prevent manual task injuries. The meat
industry is an ideal environment to make use of microbreaks. Every plant relies on machinery of some kind, and almost all plants have a ‘chain’ that transports the carcases around the work area. It is likely that there will be stoppages from time to time and workers can use this down time to rest the muscles they have been using. You can use these short breaks as an opportunity to do a few stretches and bends, change or adjust your position, or maybe even go for a short walk to another part of the area.

Microbreaks can be more effective if you also perform stretching exercises to help relax muscles. For more information on microbreaks click here (hyperlink this to the MINTRAC manual handling resource)

Stretching exercises. Stretching exercises can help to move muscles and maintain circulation. Parts of your body that might benefit the most are your back, shoulders and hands, wrists and forearms. Stretches should be performed gently and at a steady pace. Sudden jerky movements or stretching to the end of your range of motion should not be performed. Each stretch can be performed 2 or 3 times for 10 to 15 seconds per time. To see some stretching exercises click here (link to the manual handling CD).

3. Can the risk factors be minimised?

If the risk factors cannot be eliminated then it must be taken to try to minimise the risk. These controls include providing information, instruction, training, supervision and personal protective equipment. They are often used in combination with one another.


**Hierarchy of control measures**

<table>
<thead>
<tr>
<th>Effectiveness</th>
<th>Types of control</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most effective</td>
<td>Elimination</td>
<td>Redesign the workplace to remove the need for inappropriate work practices e.g., using a knife to transfer meat by piercing and levering</td>
</tr>
<tr>
<td></td>
<td>Substitution</td>
<td>Replace old, blunt knives with well-designed and sharpened knives</td>
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<tr>
<td></td>
<td>Isolation</td>
<td>Redesign the workplace to minimize distractions from the task, reduce additional stressors and minimize fatigue e.g., reduce noise, provide comfortable working temperatures and reduce uncomfortable working postures</td>
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<tr>
<td></td>
<td>Engineering controls</td>
<td>Provide sufficient work space for each worker to reduce the risk of one worker stabbing or cutting another</td>
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</tbody>
</table>
Administrative controls

Staff training in knife safety and sharpening knives, provide training to allow safe and effective rotation, where appropriate, to minimise risk of occupational overuse injuries. Ensure SOPs and work instructions for knife safety are discussed during induction

Least effective

Personal Protective Equipment

Wear cut-resistant gloves on the knife hand and a mesh gauntlet (or a combination of a mesh glove and arm guard) on the non-knife hand. Mesh aprons must also be worn

Supplementary material:

Hazard Identification Checklist for manual handling

<table>
<thead>
<tr>
<th>HAZARD</th>
<th>Result of inspection</th>
<th>Action required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Evident</td>
<td>Not evident</td>
</tr>
<tr>
<td>All tasks involving manual handling and occupational overuse have been identified, assessed and controls put in place so far as is reasonably practicable, and this process is documented</td>
<td></td>
<td></td>
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<tr>
<td>Where ever possible heavy manual handling tasks (e.g. beef head removal, punching out of sheep) are eliminated through mechanisation or automation</td>
<td></td>
<td></td>
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<tr>
<td>Hazards involved in evisceration have been identified assessed and controlled</td>
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Australian Meat Industry Manual Handling Resource, MINTRAC
National Standard for Manual Tasks, Safe Work Australia