Manufacturing industry
Sprains and strains prevention fact sheet

High risk manufacturing industry occupations[1]

- meatworks labourer
- labourer
- engineering production process worker
- metal fabricator
- fitter
- welder
- meat boner and slicer
- storeperson

Common manual task injuries

- sprains and strains to the back, shoulders, knees and wrists (e.g. Carpel Tunnel Syndrome)
- overuse injuries
- ruptured discs
- hernias

Common cause of manual task injury

- lifting and carrying loads
- handling large and awkward sheet metals
- sustaining awkward postures repeatedly for long periods (e.g. packing products)
- excessive hand tool use and process line work activities
- slips, trips and falls from contaminants on factory floors such as fats, water and dust

[1] *Queensland Workplace Health and Safety Strategy Health and Community Services Industry Action Plan 2004–07*

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Operating a power press – a case study

A worker operating a power press for long periods of time complains of constant lower back pain and has had a number of days off work for rest and physiotherapy. The business's Workplace Health and Safety Officer consults injury records and realises there are a number of press operators having time off for the same reason.

Identify the problem

An analysis of workers operating power presses shows:

- workers bend, reach and stretch into bins on the floor to obtain material to be pressed
- workers sit on chairs and upturned drums, and lean forward to place material on presses
- workers perform this task for long periods (i.e. five to six hours a day)
- some workers press items once every 25 seconds
- workers stay on the same task until an order is finished.

Assess the risk

Are any risk factors present?

- Working postures: press operators are reaching away from the body, bending and twisting to obtain materials from bins. They are constantly bending when operating machines.
- Forceful exertions: press operators are lifting and supporting large pieces of metal during pressing
- Repetition: press operators are undertaking tasks more than once every 30 seconds
- Duration: operators are undertaking tasks for more than two hours during a shift of five to six hours.

What are causing these risk factors?

- Work area design: the loads are stored at ground level, work is viewed at waist height and chairs and drums used for sitting
- Nature of the load: materials are awkward and weigh 10 kg or more
- Load handling: the loads are lifted and placed into the pressing area.

Find the solutions

Can you eliminate the risk by redesigning the task or elements of the task?

- Change the work area by adjusting presses so operators can see the press area and use adjustable seats
- Raise the work off the floor to waist height and place materials close to the worker to minimise reaching and twisting
- Use mechanical aids such as trolleys or scissor pallets.

Can administrative controls be used to minimise risk?

- Task rotation by varying pressing tasks where workers can vary muscle use (e.g. standing presses)
- Rest breaks
- Preventative maintenance program (e.g. tools and trolleys).

Review the controls

- Consult with workers regularly to ensure controls have minimised risk and have not introduced new risks.