Construction industry
Sprains and strains prevention fact sheet

High risk construction industry occupations[1]

- construction assistant (e.g. bricklayer's assistant and builder's labourer)
- carpenter
- labourers and related worker
- general electrician
- concreter
- painter and decorator

Common manual task injuries

- sprains and strains to the back, knees and shoulders
- spinal disorders
- hernias

Common cause of manual task injury

- moving tools and materials onsite (e.g. plaster board, electrical cable rolls and windows)
- gripping hand tools forcibly (e.g. using tools to hammer)
- bending and reaching when performing tasks (e.g. formwork, block laying, shovelling and screeding)
- repeated hammering and use of tools (e.g. sanders)
- falls from scaffolding or roofs
- slips, trips and falls due to poor housekeeping or uneven ground surfaces
- falls from trucks, plant or equipment

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

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Moving materials onsite – a case study

A worker carrying sheets of plasterboard onto a construction site is required to unload the material from the back of a truck, and carry it across the site, up one flight of stairs and into a unit currently being built. The worker lifts the plasterboard over piles of materials and workers. When he lifts the plasterboard over a worker tiling the stairs he feels excessive pain in his lower back. The worker receives a herniated disc and requires surgery. This results in six weeks off work before the worker can return to light duties.

Identify the problem

An analysis of the task shows:

- workers reach and stretch above shoulder height to lift the plasterboard over obstacles
- the weight of the plasterboard was 25 kg and the size (3 m X 1.2 m) makes it awkward to handle
- the ground surface from the plasterboard stack to the stairs is slippery and uneven
- only one worker is used to move 30 sheets of plasterboard.

Assess the risk

Are any risk factors present?

- Working postures: the worker reaches away from the body, stretches and twists to carry sheets upstairs and around obstructions
- Forceful exertions: the worker holds and lifts large sheets, which require a high amount of effort
- Duration: the worker has performed the task for more than two hours.

What are causing these risk factors?

- Work area design: the load is stored at ground level, is carried over uneven ground surface and carried in a limited work space (stairs)
- Nature of the load: the sheets are large and awkward, have no handles and can be difficult to grip
- Load handling: the sheets are carried over a rough surface and obstacles.

Find the solutions

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

- Change the work area and place sheets closer to where they will be used
- Raise pallets off the ground to between mid thigh and waist height and ensure when lifting that the worker is close enough to minimise reaching and twisting
- Use handling aids such as straps and handles
- Clear access ways so that materials and equipment can be easily accessed.

Can administrative controls be used to minimise risk?

- Task rotation
- Rest breaks
- Team lifting
- Training in use of aids.

Review the controls

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