

Preventing Manual Handling Injuries

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Manual handling injuries are relatively common form of injury: typically between 30% and 50% of all injuries. Usually these injuries are relatively trivial, a muscle strain that quickly goes away. Less frequently, medication and physiotherapy are required to assist in the healing process. For Deakin over the last 3 years 35% of all WorkCover Claims have been from manual handling. However once or twice a year a more severe manual handling injury occurs, where prolonged or intensive medical treatment is required. These are almost always back injuries.

Anybody who has had back pain knows how extremely painful such a condition can be. Up to 50% of the adult population will have back-pain at one time or another. Fortunately for most people it quickly passes without any long term effect.

Prevention of back injury, especially severe back injury, in a relatively safe environment such as the University is not straightforward. Training and awareness programs can address high risk jobs such as portering, maintenance and grounds work. However significant numbers of this type of injury are occurring in relatively low risk areas such as office work.

Although severe manual handling injuries are usually associated with over exertion, they can occur from relatively innocuous events such as bending over to pick up a pencil from the floor. Most manual handling injuries are directly caused by:

- overexertion associated with an one-off job such as moving furniture or computer equipment
- overexertion associated with a sudden movement from a fixed (possibly awkward) posture that has been maintained for long period of time (e.g. sorting materials on the floor).
- prolonged repetitive activities without a break (e.g. keyboard work)
- poor posture over a period of time (e.g. using a laptop without separate keyboard and monitor for long periods)

The factors directly associated with the injury event include weight of the object, technique, work posture (and how long it is held) and repetition rate (how frequently the movement is occurring). Underlying these factors are a number of "personal" risk factors that means one person will get an injury whilst another will not. These risk factors can include: age, personal fitness, personal health, and the presence of past injury.

Prevention focuses on addressing the risk factors associated with injury. It is very hard to come up with "hard and fast" rules to reduce the risk of injury. Legislation in this area has moved away from such rules to risk assessments. However risk assessments are most practical where the job is well defined and involves a set series of movements. Most office jobs involve a huge range of activities including a wide range of manual handling activities. To address this situation a number of manual handling guidelines have been developed to address the risk factors.

(1) Posture: the "10 minute break in the hour" now widely accepted for keyboard work applies to all work where there is a constrained posture. For example any jobs that involve standing in the one spot for periods of time, or repetitive activities such as sorting. If the awkward posture can be avoided by spending a few minutes in adjusting the chair or rearranging the layout, it is a wise investment.

(2) Weights: individuals who have not received manual handling training should not be lifting over 12 kilograms. This includes objects such as computer monitors as well as more typical objects such as files. The risk of injury is increased if the object is large or difficult to grip. For the office environment the following points are relevant:

- The most common heavy objects in the office are boxes of photocopier paper that typically weigh 16 kilograms. These should not be moved without a trolley. If you have not got a trolley, open the box and move by individual block. Where photocopiers use large amounts of paper get the boxes delivered to a location next to the copier.

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- A number of injuries have been caused by people moving desks and filing cabinets: leave these to professional movers.
- Similarly, get professionals such as couriers to move computer equipment.
- If you have materials such as files or packages over 12 kilograms, break the load down and make two trips, or get a trolley. The extra time spent is a worthwhile investment in maintaining your back.
- Paper recycling bins should not left until they are overflowing before being changed over.

(3) Planning the move: even if an object is not particularly heavy, you can injure yourself through not planning the move. Make sure you have a clear path and make sure you have a clear space where you want to put the object down. A number of injuries have been caused by people tripping over whilst carrying because they cannot see where they are going. Equally trying to clear a spot with one hand whilst balancing the object with the other, is a risky exercise. If you are wheeling a trolley or bin, avoid going over curbs or steps: use ramps where possible.

(4) Avoid extreme movements: this means simply planning your workplace. Some general principles are:

- keep frequently used objects in easy reach.
- store frequently used objects such as books and files between knee and shoulder height.
- if you find yourself going up on your toes, it is time to invest in a secure/stable step or rearrange your office. Never stand on an office chair.
- similarly if you find yourself bending all the time, it is time to rearrange your workplace

(5) Technique: there is still some argument about lifting technique, but the more you bend your back lifting the more likely you are to injure yourself. Keep your back straight when lifting or bending, even when tying your shoe laces. It should become an automatic habit.

(6) Use the equipment available: even if it takes a few minutes to locate the trolley, it is a worthwhile investment.

(7) Avoid sudden jolts or movements: if you are getting up from a constrained posture, take it slowly and smoothly. Similarly if you are applying force to move or shift an object, do not apply excessive force and try to avoid the object suddenly moving and catching you off balance.

(8) Work Environment: As the work environment diverges more from the ideal in terms of temperature, humidity and so on, the more important are the risk factors. In a cold environment, it is more important to warm up before carrying out manual handling. In a hot environment, especially where it is humid as well, the more quickly you will get tired. Adjust your work regime to meet the work environment.

(9) Personal Risk Factors: each person needs to take a realistic view of their own state of health and fitness. This is especially true if you have already had a back injury, even where you have had a full recovery. Similarly the older you are the more careful you need to be even if you are as "fit as a Mallee bull". Firstly exercise and diet will slow down the ageing process but will not stop it. Secondly, many injuries are the result of cumulative damage over many years: the last, sometimes trivial event was just the "straw that broke the camel's back". The older you are the more likely you are to have accumulated this damage to the back that increases your susceptibility to injury. If you need to modify your work regime due to a medical condition (for example a back condition) or past injury, talk to your supervisor, but don't wait until you suffer another injury. Work modifications may involve, for example, taking longer breaks or restrictions on the weight you can lift.

Almost all people recover well from manual handling injuries. Of manual injuries, back injuries are the most likely to lead to long term or permanent impairment or pain. The risk of injury can be minimised by recognising the risk factors and realistically assessing your own state of fitness.

For more information on safe manual handling, please go to the [OHS Website](#). If you want assistance in carrying out manual handling risk assessments please contact the [OHS Unit](#).