

## BACK CARE

Every year over 100,000 Australians injure their backs at work. They are a major cause of industry in all occupational categories and they constitute a third of compensation claims.

These injuries cost our community up to a billion dollars each year and almost all of them could have been avoided with good manual handling techniques and back care management.

Back injury hazards and risks can be reduced by:

- keeping heavy equipment on trolleys or slides so that it can be pushed to where needed
- fitting castors or slides to furniture and fittings so that lifting is eliminated
- using special equipment to move heavy boxes, pallets, drums and gas cylinders
- choosing furniture and equipment of the right size and ergonomic functions for the person using it
- avoiding placement of power points behind heavy obstructions to prevent strain injuries from bending and twisting
- keeping heavy items on shelves at waist height to make transferring loads safer
- using safe steps and ladders to reach high workspaces to avoid stretching injuries and falls
- being mindful of ladder safety to prevent falls
- keeping the floor spaces unobstructed and clean of spills to prevent trip and slip injuries
- following safe manual handling practices at all times
- following safe handling and lifting procedures at all times, especially when lifting clients
- following a good back care program
- training in safe lifting and handling techniques

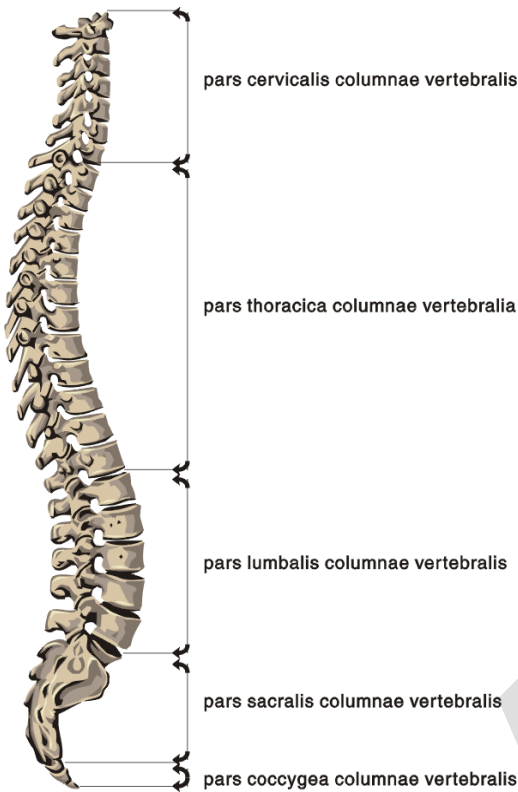
The aim of every workplace should be:

- identify manual handling and lifting hazards
- assess risks to individuals
- minimise and control risks by providing training and lifting equipment



## THE BIOMECHANICS OF YOUR BODY

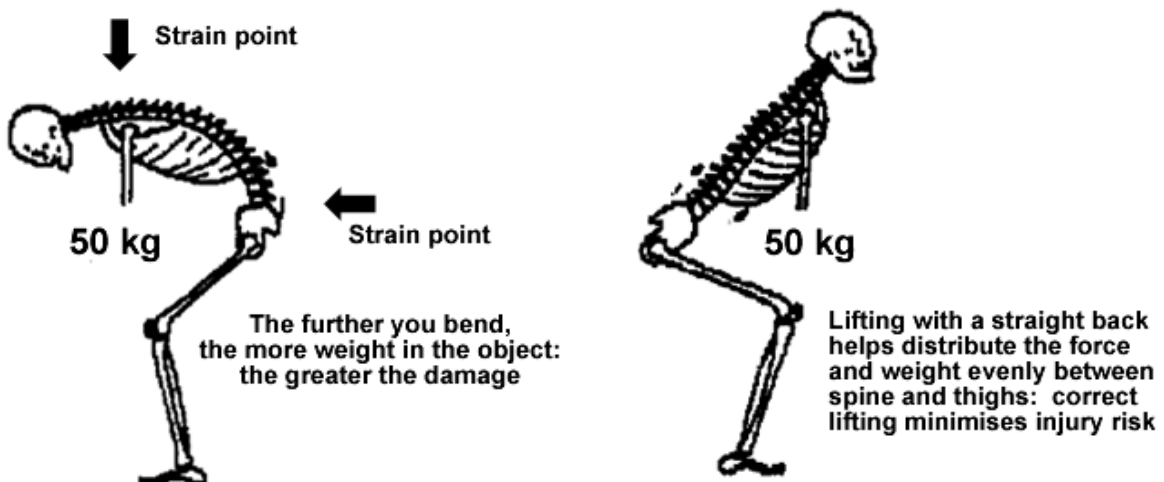
Your body is a miracle of natural engineering and is amazingly versatile, but in its versatility there are some inherent risks, particularly to your spine.



- ◀ Very vulnerable to side blows and side extensions, especially reaching behind to pick up or push loads. Damage can mean a lifetime of severe migraines.
- ◀ Very vulnerable to twisting injuries, especially pushing and pulling while twisting. Damage can mean a lifetime of shoulder pain.
- ◀ Very vulnerable to twisting injuries.
- ◀ Very vulnerable to lifting injuries, particularly when lifting heavy weights. Damage can mean a lifetime of severe back pain, sciatica or even eventual paraplegia.
- ◀ Very vulnerable to falls and crush injuries

Your body is made to bend in many directions, but add a load and your vulnerability increases. The less flexible and less fit you are, the more in danger of spinal damage.

**Never extend the back forward more than 45 degrees**



*Adapted from A Worker's Guide to Back Care, QLD Division of WHS, 1997  
This publication can be sourced at [www.dir.qld.gov.au](http://www.dir.qld.gov.au)*

### **How posture and activity can affect your fitness on the job:**

When most people think of posture, they think about standing, moving and sitting correctly. Certainly, being 'in your body' and aware of how it feels when used properly and how it feels when you ignore the little warning signs is part of the answer.

Back care starts with understanding how your body reacts to certain types of activities and the effects of force, exertion and fatigue in determining whether shifting a load will injure you..

#### Muscles have two types of activity:

*Dynamic:* When they are working – how flexible you are will determine the amount of stretch and strain exerted on them. Constantly repeating the same activity without variation can cause various types of Occupational Overuse Syndrome (OOS):

'Tennis elbow' – constant unvaried arm movements

'Violinist's kneck' – constant position of the head in a twist position, such as holding a phone between ear and shoulder

'Mouse shoulder' constant movement of one arm with shoulder raised (the bane of my life as a writer!)

Carpal tunnel syndrome and hand/wrist RSI - constant use of a keyboard or other repetitive movements with hand/wrist bent upwards

*Static:* When they are not working – how much strain they suffer is affected by how long you hold still in one position:

Lower back pain from long periods of inactive standing

Sore neck muscles from head forwards when reading or using a computer

Both of these actions can affect your stamina and determine how much fatigue you will feel. The more tired your muscles are, the more they are prone to damage. Tired muscles hold lactic acid and this must be dissipated by gentle movement such as walking and stretching at regular intervals.

When muscles are in dynamic state they have increased blood flow, giving them more oxygen and energy for work. Muscles in static state have decreased blood flow. If the static position is held for more than a short period of time, the muscles and their supporting tendons can also shorten and structural imbalance results. Tight muscles damage more easily. This, in turn places more strain on your skeletal system and things just go downhill from there.

People who use computers for extended periods are in danger of shortening certain muscle groups (across the collarbone, over the sternum and down the inside of the arms). If this is not counteracted with regular exercise to lengthen these muscles, serious long term problems can arise, causing migraines and loss of mobility.

#### The role of emotions in determining muscle condition:

Nothing causes more fatigue and strain than emotional holding of muscles. Stress, tension and anger all affect certain muscle groups, switching them to static, even if they are required to help a dynamic motion. This increases the likelihood of strain injuries.

Strong negative emotions also drain your energy as you tend to focus on the problems, not your present tasks. The inability to focus can lead to accidents through inattention.

The degree of force and the direction of movement:

Force and weight all increase the workload of muscles, particularly if they are applied in situation where the body is overextended and the weight not able to be held in front of, and close to, the body.

These are the forceful movements that increase the likelihood of injury:

Twisting to pick up a weight that is beside you, rather than facing it and using correct posture

Lifting a weight above shoulder height, particularly if twisting or pushing at the same time

Twisting to push or pull a weight

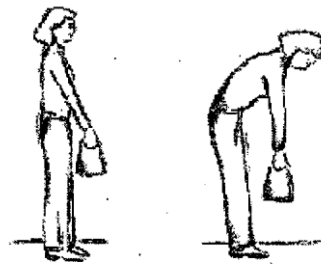
Twisting to place a lifted weight in the final location, rather than turning with the weight

Bending down to pick up a weight from the floor without distributing the strain evenly

All of these movements exert the muscles, making them fatigued and place them under strain. In other words, working incorrectly makes your body work much harder than it needs to.

How much damage you can suffer is directly proportional to the distance you have to move to complete the action and the weight of the object. For example, lifting a box of cornflakes onto a high shelf is likely to cause minimal damage: lifting a box of paper onto a high shelf is high risk.

The more you bend or stretch during the movement, the greater the strain and force. Muscles fully extended cannot work properly. If you add a load to them in the extended position, this triples the force of the weight. This can not only damage the muscles, but also the damage to the ligaments.



Source: Manual Tasks Advisory Standards, page 70.  
QLD Division of Workplace Health and Safety

The Codes of Practice for Manual Handling and for the Movement of People have all been worked out to ensure that employers and employees can design work flow to decrease the dangers from force and extension.

You have a part to play in this by being aware of the way you move at all times and self-correcting any actions that can lead to injury.

It is very important for you to know the general principles of manual handling, because they have direct relevance to the way you need to move to keep yourself safe when lifting and carrying or assisting with client movements.

## GENERAL LIFTING AND MANUAL HANDLING

The how and how much of this is generally well established under legal guidelines. Safe loads are sometimes stated in Manual Handling Codes of Practice.

However, **what is perfectly safe for one person is totally unsafe for another.**

Therefore, all the Codes of Practice come with a warning that this is just a guideline and must be varied to suit the circumstances. Some Codes leave these weights out altogether.

The safe upper limits which are sometimes stated are:

Up to 4.5 kg from a seated position

Between 16-20 kg for adolescents and small framed adults in standing position

Up to 20-30 kg for large framed adults from standing position

Joint lifts and mechanical assistance required for weights above 55kg

No person should be required to lift, lower or carry loads above 55kg

How much weight an individual can lift is dependent upon factors like your age, physical health, body weight, your physical frame proportions and the size, shape and weight of the object to be lifted or carried.

You know from experience whether you are able to carry a 5kg. bag of potatoes easily, or with a struggle, and whether the 15kg. box of kitty litter or the 20kg. bag of potting mix has you calling for assistance.

If you can't manage the load easily in your everyday life, you certainly should not be attempting it in your workplace.

Our parents and grandparents did far more heavy labour than we do, now that we use labour saving devices for the heavy work around the home and at work. They all had a level of muscle tone and body conditioning which we would have to spend hours at the gym to achieve.

Most of us are just not that well equipped to deal with any kind of lift strain, because we work in sedentary jobs. The more we have relied on labour saving devices, the more at risk we have become when faced with situations which can impose sudden and severe strains on our bodies.

It is not **macho** to lift or move heavy objects without help.

Use all the assistance you can:

- Other people to team lift
- Protective gear to take the strain
- Special equipment to move very heavy or awkward objects

At all times, common sense should prevail. **Never be tempted to take risks**, it only takes a few seconds to receive injuries severe enough to cause you years of pain and disability.

The basic common sense guidelines for lifting and carrying are:

- check all items for weight before lifting;
- consider the size and type of object to be lifted. Bags odd shaped parcels require different techniques to box lifts;
- drums and gas cylinders should be edge rolled, never lifted or be moved using special handling equipment (and only if you have been properly trained to do so);
- if the weight of the object is more than 10% of your body weight, use lifting equipment or get another person to share the load;
- never carry items in such a manner that you cannot see over them;
- distribute the load evenly down your centre of balance (top to bottom and side to side);
- never stoop or twist when lifting or carrying;
- use your body correctly when lifting objects above or below waist height.

Some people in the developing world seem to carry heavy loads (including drums of water) for miles without apparent sprain and strain because they:

- *balance the load correctly on their heads or backs*
- maintain natural and balanced postures
- have muscles that are conditioned to hard work
- never rush when performing heavy tasks



If you follow their example and develop a well-balanced and conditioned body through attention to general fitness and to posture and balance, your back will love you for it!

You would never think of doing a hard exercise routine without warming up and stretching your body – do the same before performing any lifting, stretching or twisting movements in daily life:

Take a ten minute walk before going to work (or get off the bus two stops early and walk the rest of the way).

March on the spot at regular intervals during the day to keep your heart rate steady

Try to go for a walk in the fresh air at lunch times

Learn some simple stretching routines and use them before you lift

**ASSESSMENT RECORD**

Student Name:

Student Number:

Postcode:

e-mail:

Assessor/Trainer:

Telephone:

e-mail:

1. Make up examples of OH&S files		
2. Assessing safety risks		
3. Hazard and risk identification		
4. Making a simple hazard report		
5. WHSO report		
6. Establish the requirements for an organisational safety plan		
7. Plan a safety induction program		
8. Prepare a safety training session <u>plus</u> mentoring worksheets		
9. Prepare a simple safety manual and an action plan		
10. Prepare a safety budget		

Assessor's comments:

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Assessor Signature: \_\_\_\_\_

Student Signature: \_\_\_\_\_

**Sign-off date:** \_\_\_\_\_

### **ONE: MAKE UP EXAMPLES OF OH&S FILES**

For this assignment, you will need to assemble the following items:

- 3 Manilla folders
- A hole punch
- 2 metal or plastic file clips (the kind that have two prongs to go through folder and records)
- A stapler

The task:

1. Using either the case study below as the example, or a case study from your own recollection, compile an individual Worker's Compensation file (supply the case study in the form of case notes if you submit your own).
2. The second file will be an OH&S record file for your risk and hazard identification reports.
3. The third file will be your OH&S training file

You may file your other assessment evidence on the appropriate file, unless you are submitting your evidence by email. In this case, you will only put the documents indicated on the exemplar files.

Your reader contains proformas for Queensland Government reporting forms which you can use to make up files. You should also use any forms that are required in your workplace.

Forms for Worker's Compensation are available from: [www.workcover.qld.gov.au](http://www.workcover.qld.gov.au) or from your local WorkCover or Worker's compensation insurance agency.

#### **File conventions:**

It is common practice to staple the Personnel Record to the inside front cover of the individual files. This enables you to find contact details or current leave/pay status without having to search through the file contents.

It is usual to place older items first and the more recent on top in date order. Some employers use a File Content List form, which is always kept on the top of the file records in order to locate the date and name of each item on the file. Make up examples of OH&S files

#### **Case study:**

Tanya works as a secretary/receptionist for a small alternative health practice. She is also responsible for keeping the stores in good order. One day, when she was at lunch, the supplier dropped off some large cartons of paper towels and disposable gowns and gloves. These were left in an inconvenient spot and Tanya was anxious to get them put away as soon as possible.

To get the goods to the store she had to carry them through the waiting room and down a long passage to the back of the building. She picked up the first load, which was not too heavy but in a very large carton, which she could not see over. It was a dull day but she had not switched on the passage lights and so tripped over a trailing telephone cord and hit her head on a display table. A fax/answering machine was damaged in the accident. Tanya was concussed and needed stitches to a gash on her forehead.

An ambulance was summoned and one of the staff went with her to the emergency ward. Tanya was kept in hospital overnight for observation and told to take a week off of work to be sure that she suffered no lasting effects.



**TWO: ASSESSING SAFETY RISKS**

**Part A:** In order to complete the following examples of risk assessment methodologies, you will need to review pages 76-77 of your resource book.

Score the priorities for the following defined events. Score them using both charts given in this module and then compare the listings. Which chart would help you plan risk management better in your business? How would you respond to the risk?

Event	Frequency of exposure	Incidence of injury	Chart 1 Score	Chart 2 Score	Must act when?	Control Hierarchy	Control Solution
Lifting heavy waste bins	Everyday hazard	25% of all reported injuries are from manual handling					
Slipping on wet floors	Every second day	10% of reported injuries are slip and trip					
Fingers caught in machines/doors	Everyday hazard	All workers at risk but less than 1% hurt require medical aid					
Lightning strike to outside workers	Undefined	Undefined					

Extract from 'Safety is your business'

Event	Frequency of exposure	Incidence of injury	Chart 1 Score	Chart 2 Score	Must act when?	Control Hierarchy	Control Solution
Car accidents affecting mobile workers	Everyday hazard	Over a quarter, the rate is 1 minor and 1 severe accident reported in region					
Aggression from customers/clients/client family members	Everyday hazard	1 violent incident reported each day in region					
Fire	Undefined	Undefined					
Infectious or contagious diseases (including food-borne diseases)	Everyday hazard	3% of reported injuries are from disease vectors					