



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Health & Safety, Manual Handling



What attitudes cause avoidable injuries or damage?

'It's easier doing it like this.'

'Don't give me all that H&S cobbles. Let's just get it done!'

'We've always done it this way.'



What is Health & Safety all about ...?



Protecting you,
your
colleagues, the
organisation &
others who
may be
affected
(visitors etc)



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Who is responsible for H&S when we are in work

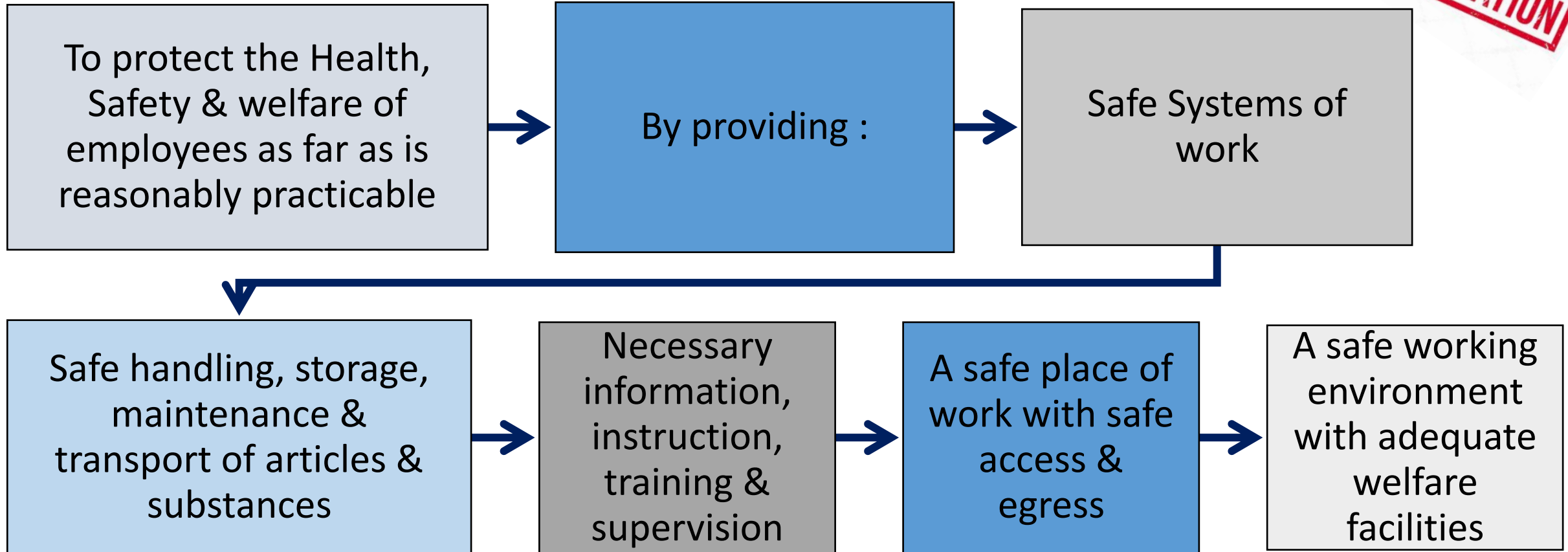
Both the Employer and Employee



Legislation: HASAW Act 1974

Employer Responsibilities:

LEGISLATION



Legislation: HASAW Act 1974

Employee Responsibilities:

To take reasonable care of their own Health & Safety & that of others who may be affected by their acts or their omissions



Co-operate with their employer with regards to any duty imposed



Health & Safety

An introduction to
Manual Handling &
Kinetic Lifting

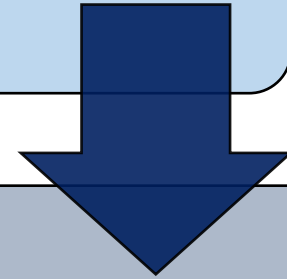


What impact would a serious back injury have on your life and career?



Disclaimer

On a day-to-day basis you must decide for yourself the safest way to carry out any Manual Handling tasks that you undertake. *You also need to recognise your own limitations.....*



To minimise the risk of injury you need to put this training into practice both at work & at home



What is Manual Handling?

Any transporting or supporting of a load, (including **lifting, putting down, pulling, pushing, carrying or moving**) by hand or bodily force.

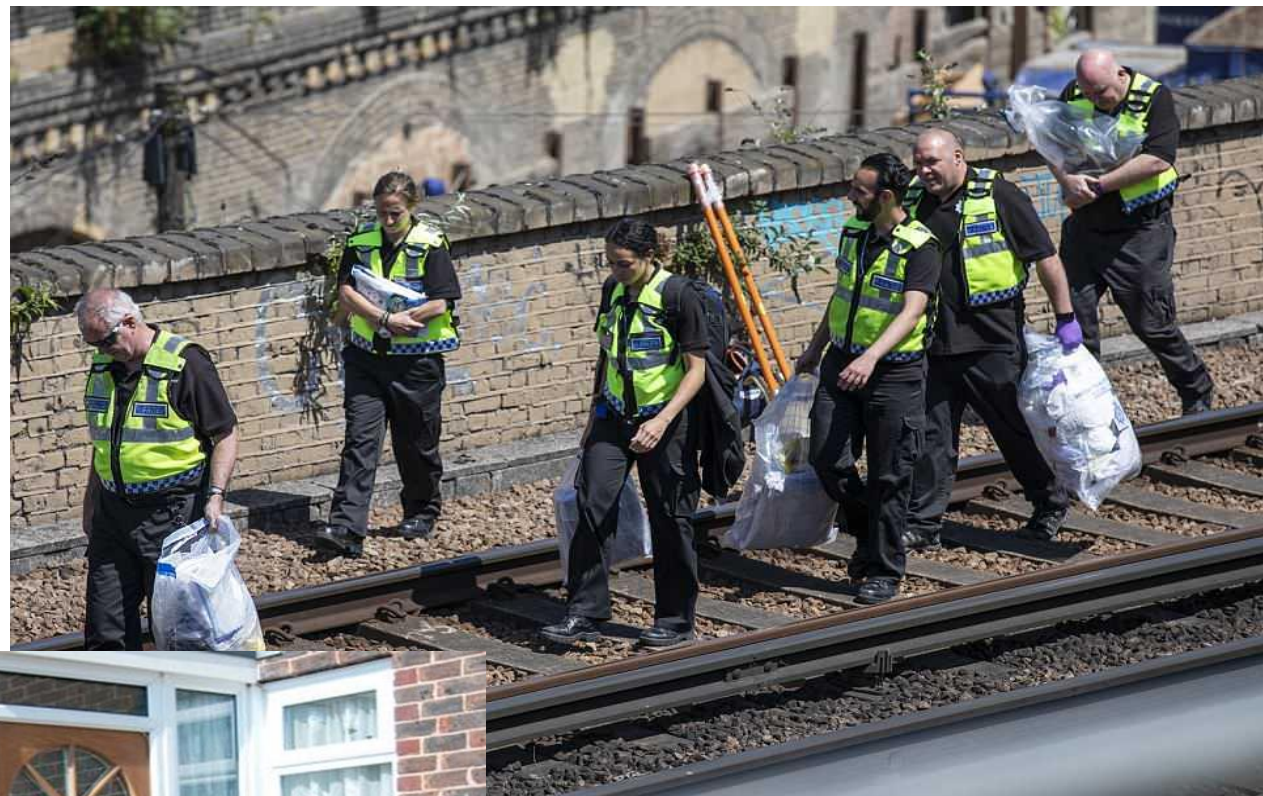
This includes the use of handling aids such as trolleys or sack trucks.

But does not include tools or machinery.



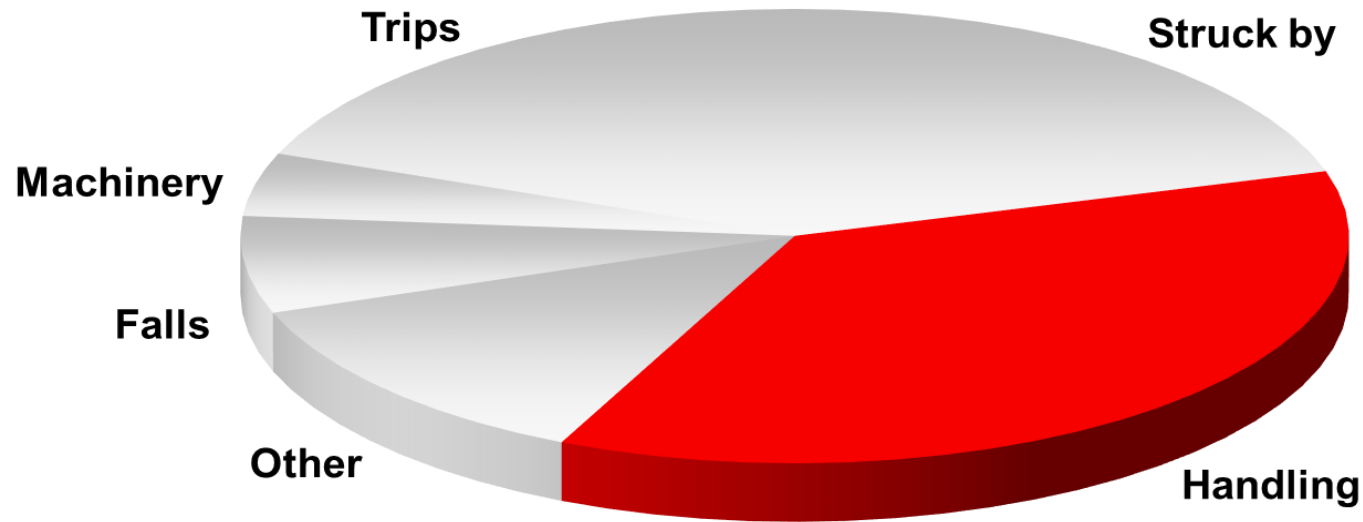
What manual handling tasks do we carry out as part of our role?





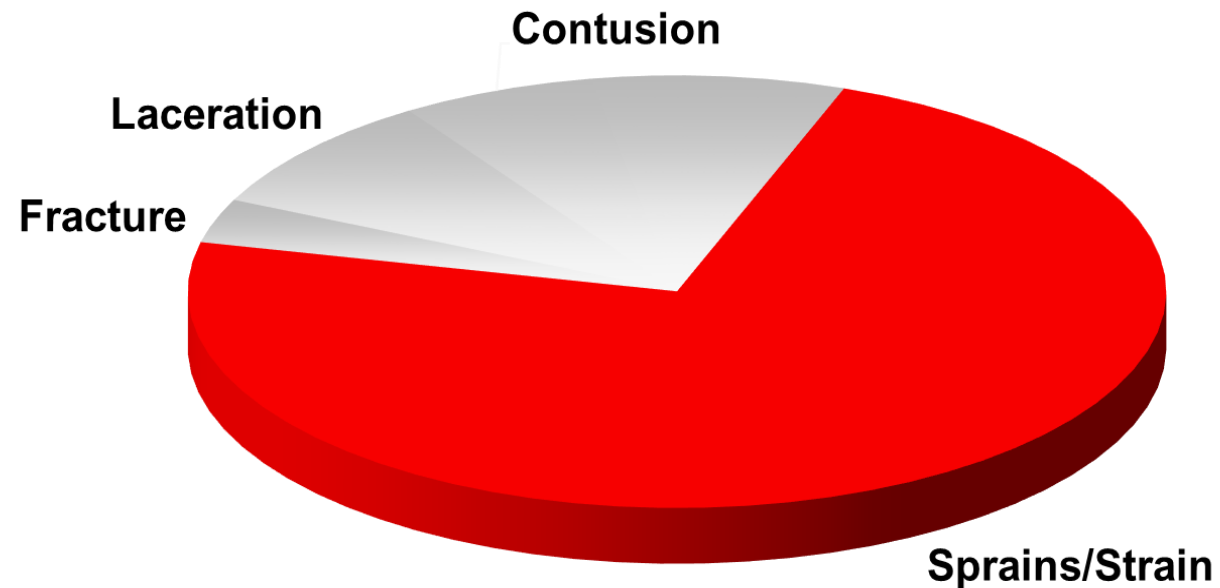
Injury Potential

Manual Handling is the cause of 36% of workplace injuries

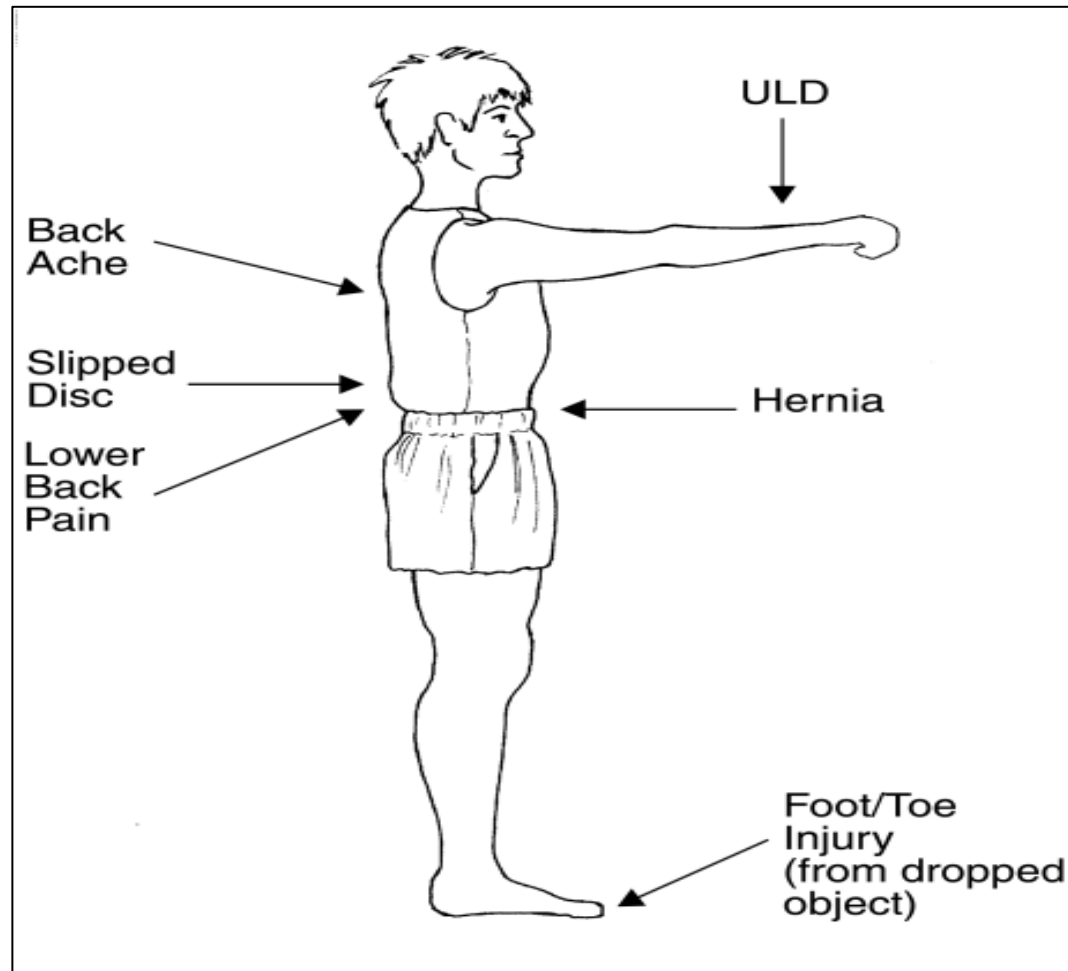


Injury Potential

73% of Manual Handling incidents result in sprains or strains

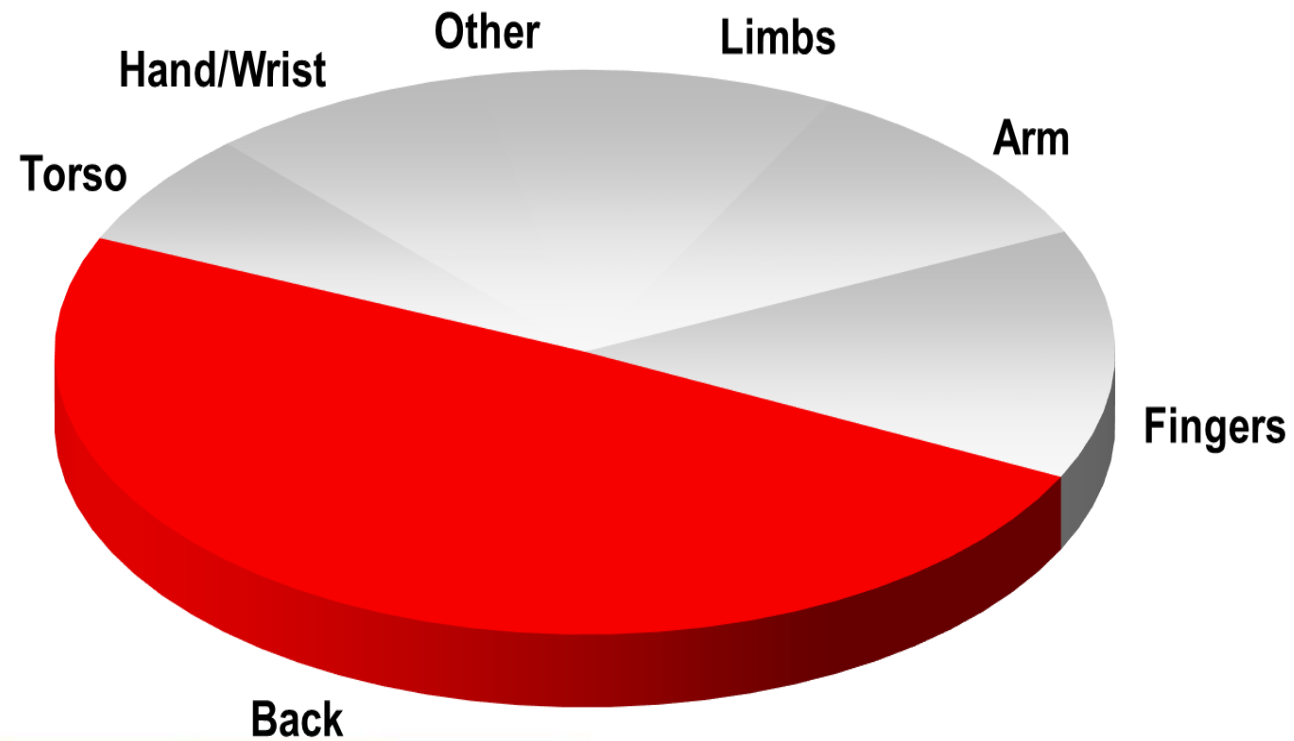


Injury Sites and Types



Injury Potential

50% of Manual Handling injuries are to the back



Most Common Manual Handling Injuries

Injury	Description
Lower back pain	Strain of ligaments connected to the vertebrae
Sciatica	Pain caused by irritation of the main nerve into the leg
Tension neck/shoulder	Inflammation of the neck/shoulder muscles and tendons
Bursitis	Inflammation of soft tissue between bone and tendon at knee, elbow or shoulder
Carpel Tunnel Syndrome	Pressure on the nerves which travel up the wrist
Tendonitis	Inflammation of the area where muscle and tendon join



Anatomy of the Spine

The Vertebrae

Protect the spinal cord

Provide flexibility

The Discs

Act as shock absorbers

Provide flexibility

Connect the vertebrae

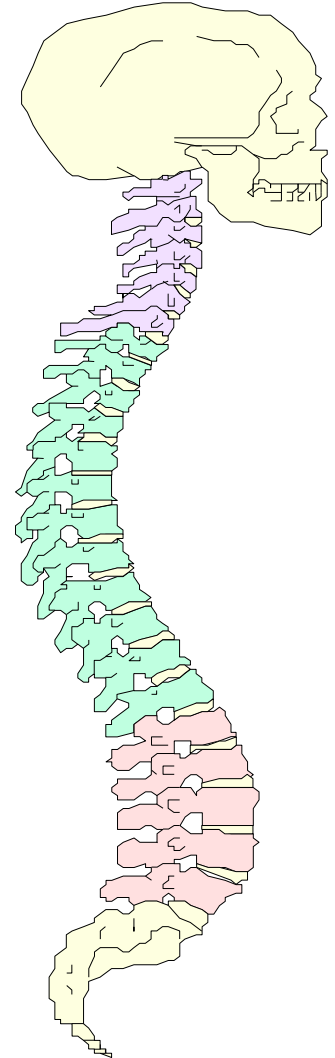
Minimise bone wear

Cervical Curve (7)

Thoracic Curve (12)

Lumbar Curve (5)

Sacrum & Coccyx

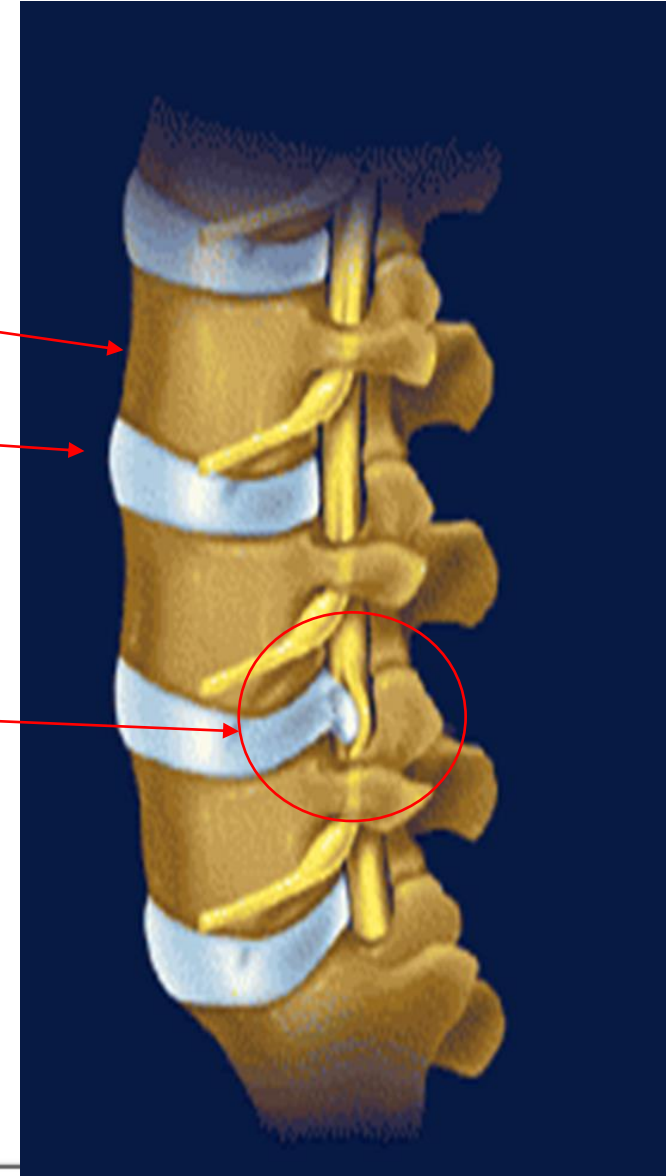


Anatomy of the Spine

Vertebrae

Disc

Prolapsed(slipped)
Disc



Manual Handling

Muscles

- Are constructed from bundles of fibre
- Operate in pairs
- Can be injured by straining

Tendons

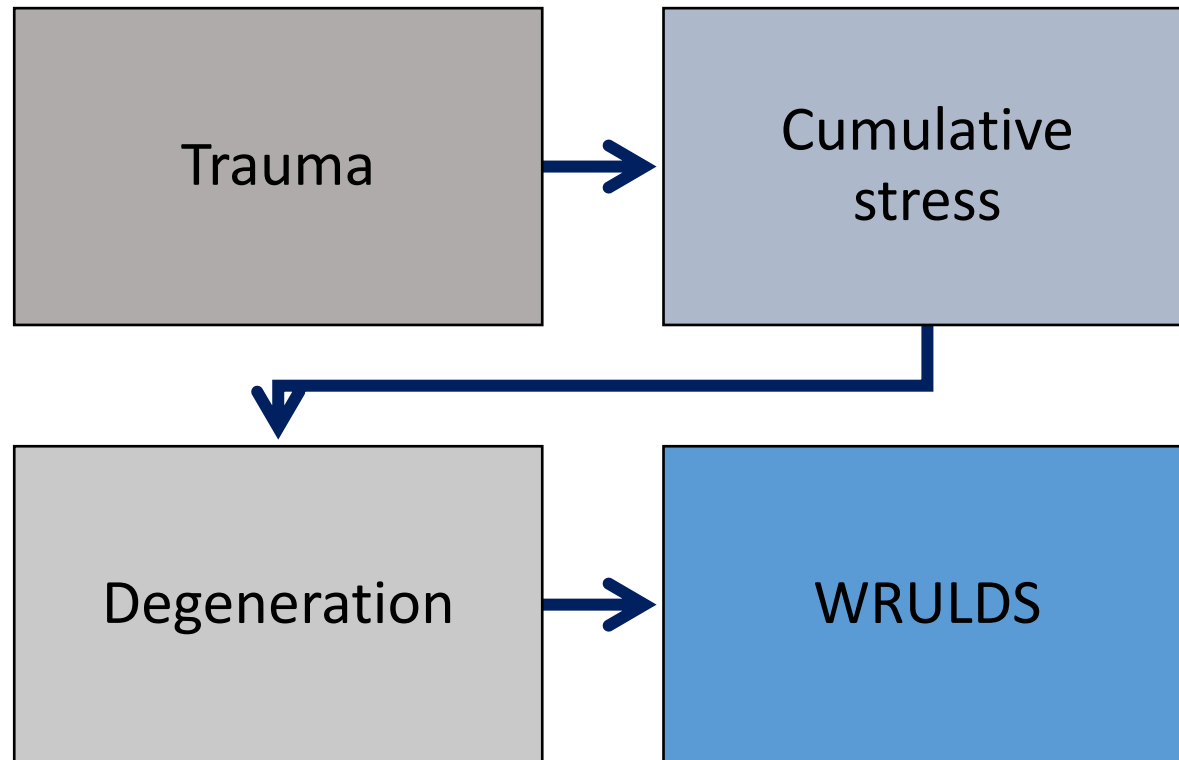
- Attach muscle to bone
- Can be injured through spraining

Ligaments

- Wrap around joints to prevent over-flexing
- Can be injured through spraining

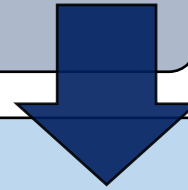


Back Related Pain

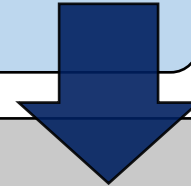


Back Care

Keep your back fit & healthy through appropriate, regular exercise



When starting any new exercise programme, it is recommended you get advice from professionals



If in doubt obtain medical advice first



Manual Handling Regulations 1992

These regulations require employers to:

AVOID

- Hazardous MH operations, so far as reasonably practicable

ASSESS

- Any hazardous MH tasks that cannot be avoided

REDUCE

- The risk of injury, so far as reasonably practicable

All **employees** must make proper use of safe work systems introduced by the employer to reduce risks from MH



Manual Handling Risk Assessment



TASK

i.e. the type of manual handling activity, such as pushing, pulling, lifting or carrying etc.



INDIVIDUAL

i.e. the capabilities of the person carrying out the manual handling activity.



LOAD

i.e. the size, shape, surface-type and weight of the object being moved.



ENVIRONMENT

i.e. the area in which the object is being moved.



Risk Factors: TASK



TASK

i.e. the type of manual handling activity, such as pushing, pulling, lifting or carrying etc.

- Excessive lifting or lowering
- Excessive distance or prolonged effort
- Placement of hands and feet
- Twisting
- Stooping
- Pulling or pushing
- Combined factors



Risk Factors: INDIVIDUAL

Requirements

- Does the task require unusual strength, height etc?
- Is the task within your capability

Underlying Health Problems

- Are there health problems which may affect the individual's capability
- Pregnancy

Personal Protective Equipment (PPE)

- Does PPE interfere with the handling task?



INDIVIDUAL

i.e. the capabilities of the person carrying out the manual handling activity.



Risk Factors: LOAD

Movement & Instability

Is the load prone to internal movement?

Is the weight distribution even?

Weight

Is the load heavy?

Bulk & Grasp

Is the load bulky or unwieldy? Can you grasp it easily?

Vision

Is the load so large that it restricts your vision

Harmful

Is the load hot, sharp or potentially dangerous?



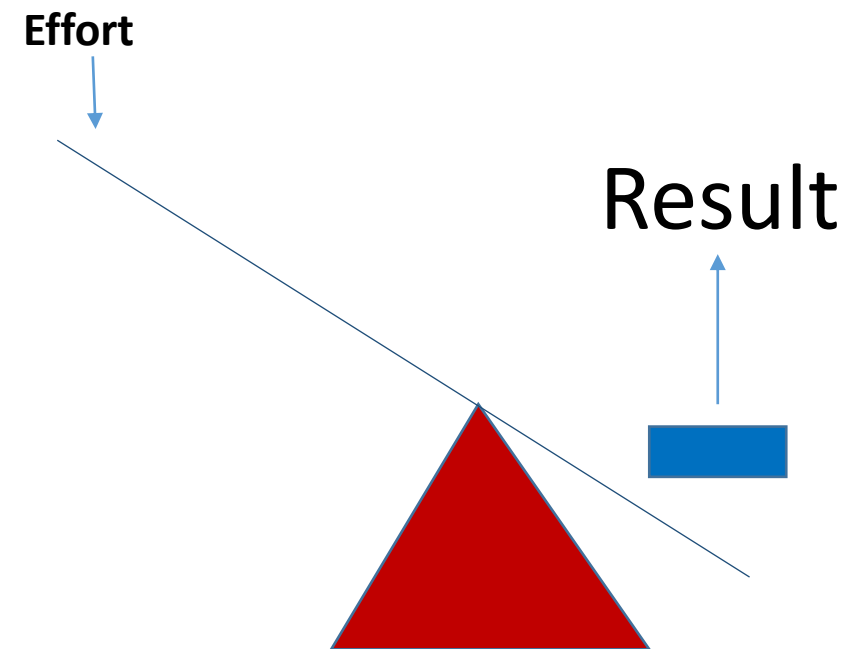
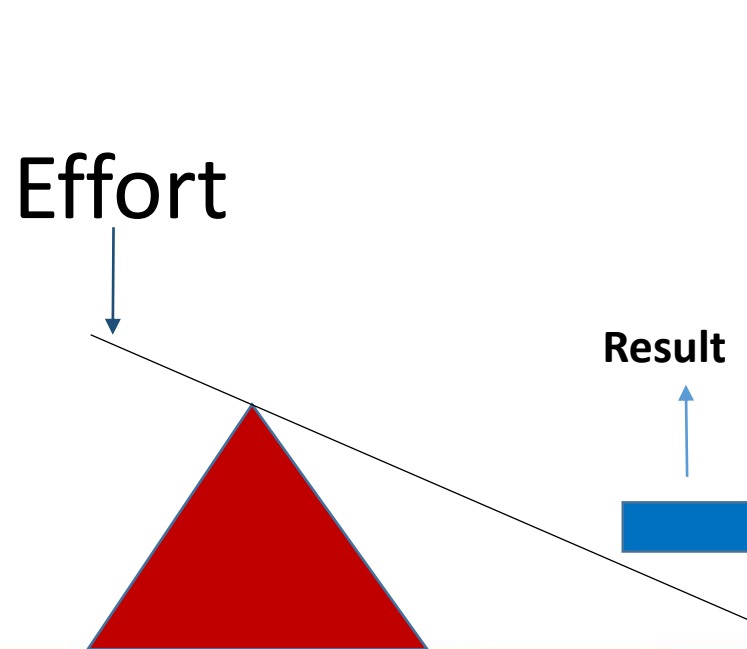
LOAD

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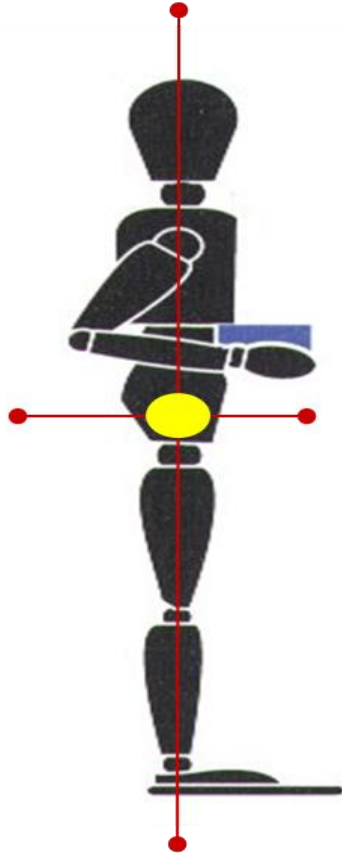


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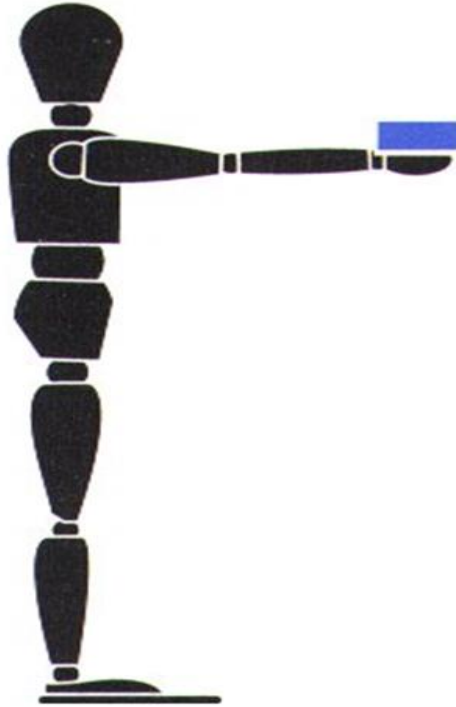
Leverage Effects



Centre of Gravity (CoG) is your 'balancing point'



3:1 = **30kg**



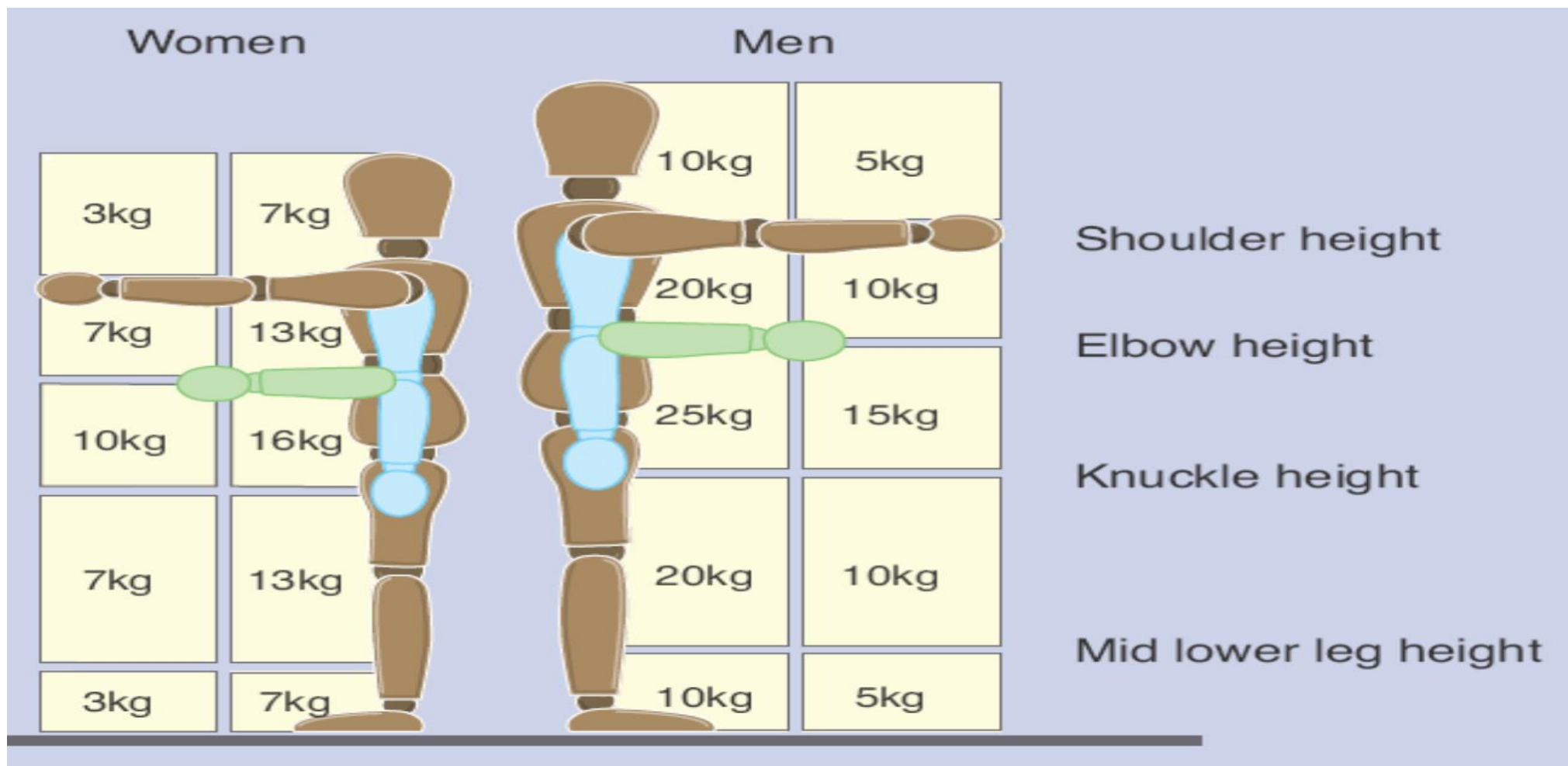
6:1 = **60kg**



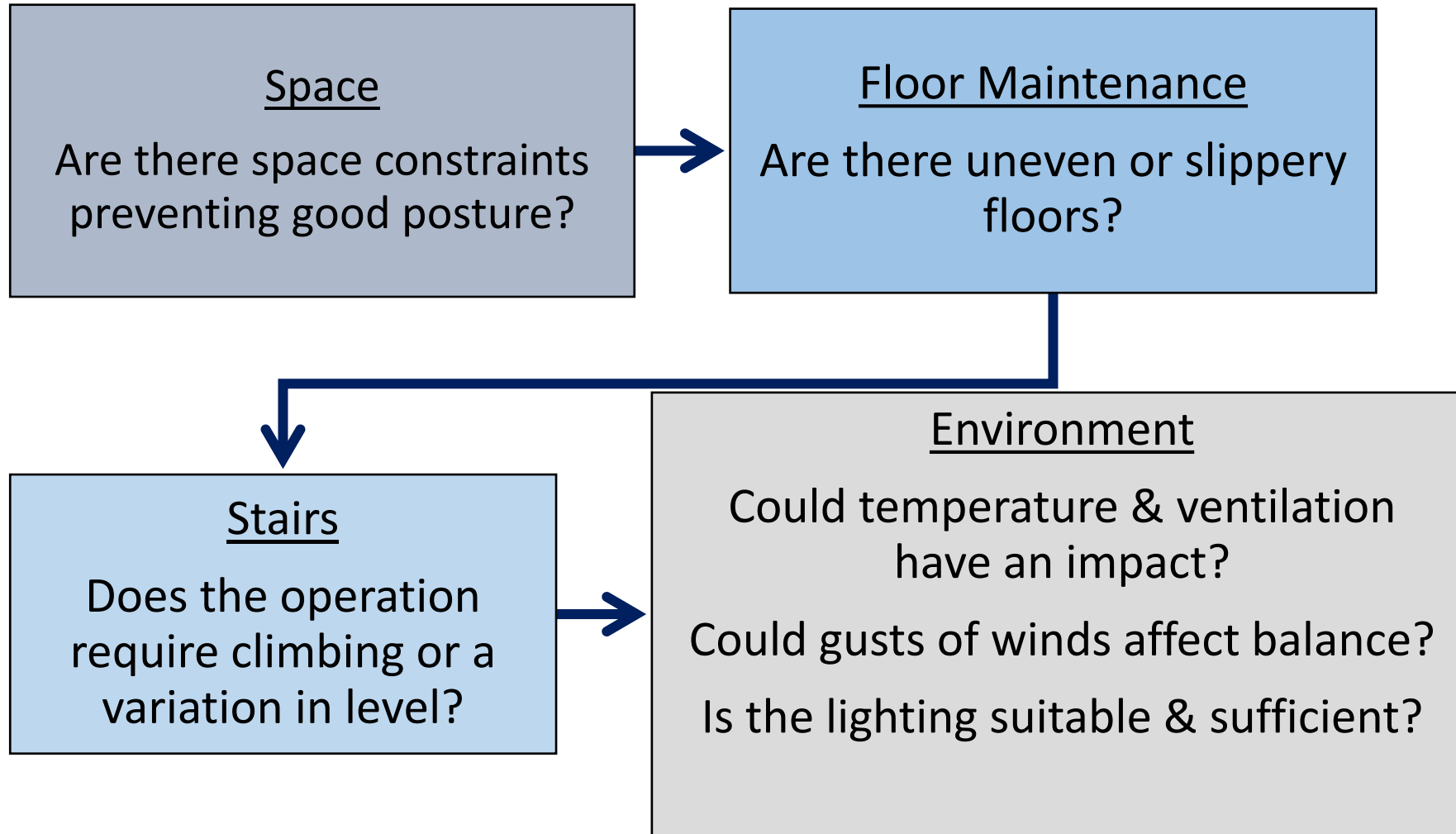
10:1 = **100kg**



Optimum Load Balancing



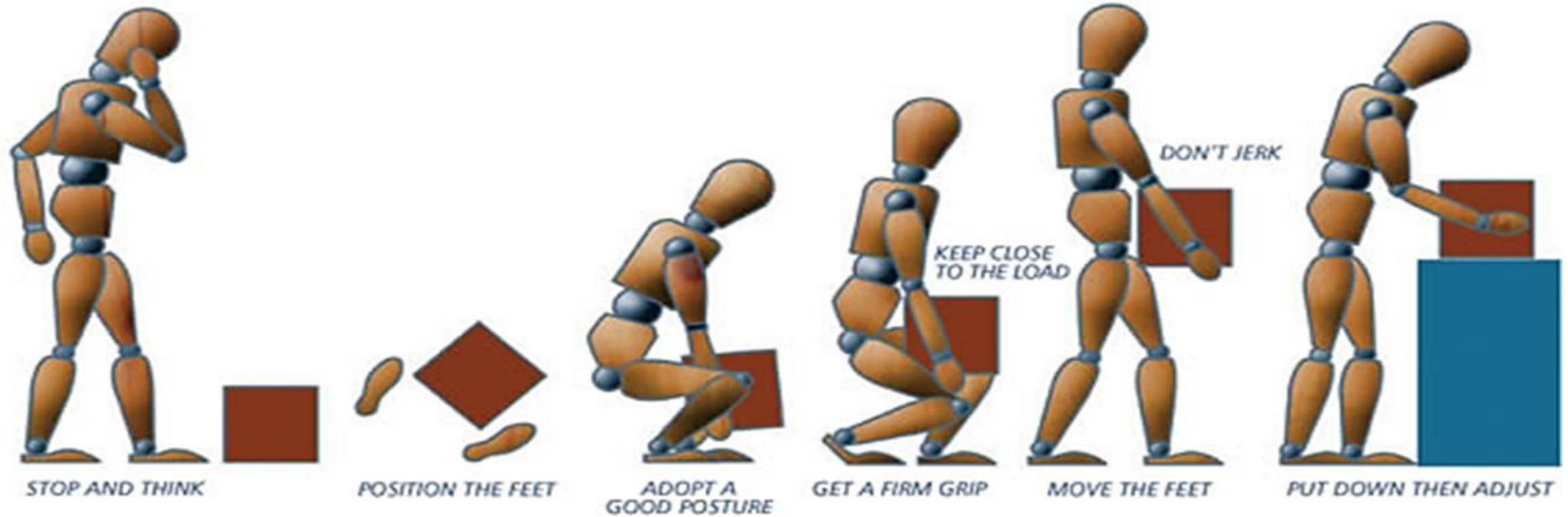
Risk Factors: ENVIRONMENT



Manual Handling



The '6 Point' Lift



1

2

3

4

5

6

Step 1 - Assess



Stop, think, plan and prepare

Use – appropriate handling aids if possible

Help – Do you need the assistance of another person?

Remove – obstructions, open doors etc.

Render – the load safe and stable before lifting

Step 2 – Position Feet



Feet – Apart, balanced and stable

Leg – Leading leg forward as far as possible

Posture – Keep the back straight

Bend the knees (but do not kneel or over- flex the knee)

Keep your shoulders level and facing the direction of your hips

Step 3 – Bend the knees



Test the load – test the load to assess the ease of handling
Arms – keep the arms within the boundary formed by the legs
Grip – a “hooked” grip is less fatiguing than a straight – fingered grip
Safely vary the grip as you lift if necessary

Step 4 – test the load & grip



Lift – lift smoothly, don't jerk
Raise – raise the chin as the lift begins
Control – keep control of the load



Step 5 – lift with the legs



Movement – do not twist your trunk

Weight – keep the heaviest side of the load near your trunk

Slide - slide the load close to you rather than attempt to lift a load away from your trunk

Conditions – Be aware of any environmental conditions that may affect the task

Step 6 – put down with care

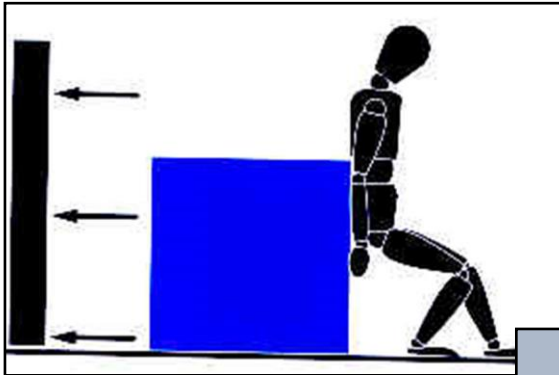


Position – position the load as needed

Lower – put the load down smoothly, don't drop it suddenly

Slide – slide the load into it's final resting position

Pushing and Pulling

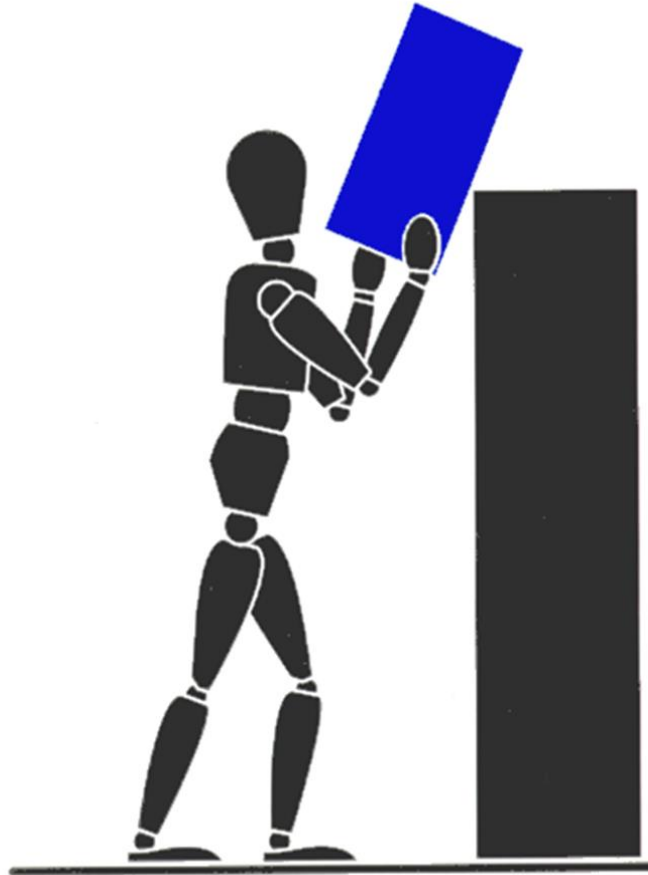


Ensure a secure foothold.

Position your hands on the load
between waist & shoulder
height where possible.

**Where at all possible PUSH the
load using your leg muscles to
exert the force**

Lifting or Lowering from a Height



Dual and Team Lifting

The proportion of the load carried by each person will vary

If steps or slopes are negotiated the weight of the load may shift to one member

Team members may impede each other's vision or movement

Capabilities will vary for group lifts



In summary

MH accounts for **36%** of reported injuries

The **back** is the most vulnerable part of the body to MH related injuries

Sprains & strains are the most common type of injury

The **further** the load is held away from the body, the **greater** the strain on the spine

Poor lifting technique WILL result in back pain & injury

AVOID –ASSESS–
REDUCE

Risk Assess: **TILE**
– **Task, Individual, Load, Environment**

Apply the **Six-Point Lift technique**, both in work & at home

Look after your back through regular exercise, but seek medical advice first



Health and Safety Contact details

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SWP

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