

# Manual Tasks

**A manual task refers to any activity requiring a person to use any part of their muscular or skeletal system in their interactions with their work environment.**

**It includes the following activities:**



# Manual Tasks

**It also describes activities  
involving:**



**Repetitive actions**



**Sustained postures**



**Exposure  
to  
Vibration**

# Manual Task Injuries

Manual tasks can lead to injury through the development of Musculoskeletal Disorders (MSD).

An MSD is an injury affecting the bones or soft tissue structure (other than organs) of the body that is caused by manual handling at work.

Examples include sprains of ligaments; strains of muscles or tendons; injuries to the spine, joints, bones or nerves and abdominal hernias.

# Symptoms

- Back or neck pain
- Pain in wrists shoulder or arms
- Stabbing pains in arms or legs
- Painful joints
- Pain, tingling or numbness in hands or feet



- Weakness or clumsiness
- Heaviness
- Burning sensations
- Stiffness
- Swelling

**If you start to experience any of these symptoms don't ignore them!**

# Responsibilities for Manual Tasks

- The Institute has a legislative requirement to eliminate risks related to manual tasks.
- In meeting this obligation, the Institute requires that managers and supervisors and those employees who design, manufacture or supply plant, premises, equipment or systems of work identify, assess and eliminate (or control) the range of hazards associated with manual tasks at the Institute.

# Three Steps to Reducing Manual Task Injuries

## The three steps are:

- 1) Identifying manual task hazards
- 2) Assessing the risk of those manual task hazards identified causing injury
- 3) Eliminating the risk, or if not practicable reduce the risk to the lowest practicable level

# Hazard Identification

Identify all the plant, materials, equipment, premises, systems of work, the work environment and individual tasks which have the potential to contribute to a musculoskeletal disorder



# Hazard Identification

Manual task hazards can be identified in different ways:

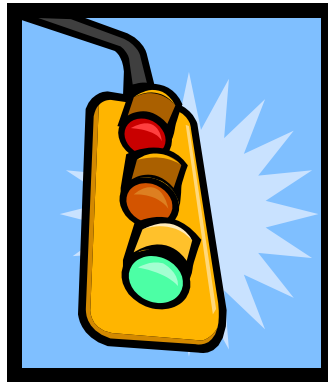
- Walk through the workplace and look for potential hazards
- Talk over risk factors with co-workers
- Reviewing previous accidents and near misses



# Assessing the Risks

**The next step is to assess which factors are contributing to the risk of injury. Risk factors to be considered:**

- **Body posture**
- **Force**
- **Repetition of movements**
- **Speed of movements**
- **Vibration**
- **Duration**



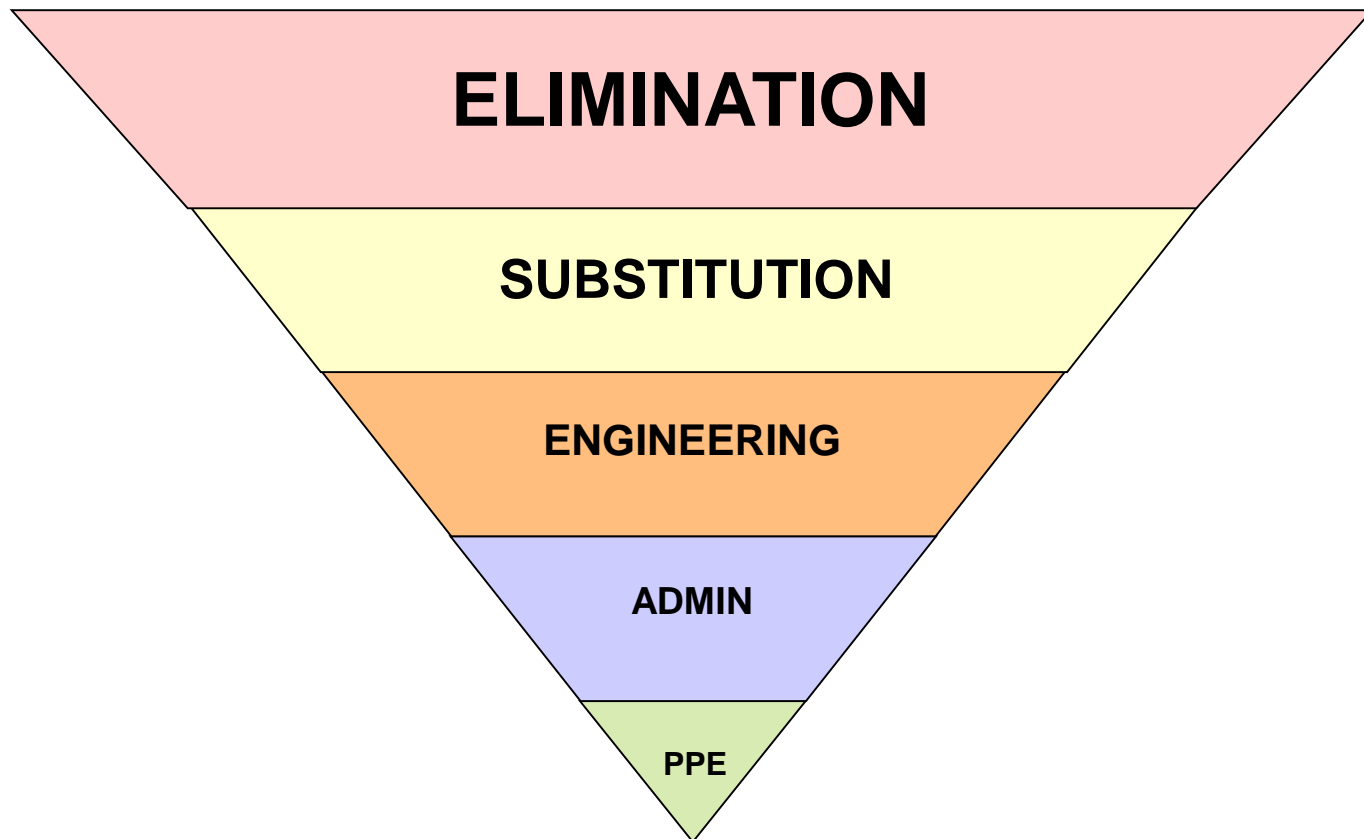
- **Workplace or workstation layout**
- **Other work conditions**
- **Characteristics of the item**
- **Location of objects and distances moved**
- **Work organisation and systems of work**

# Assessing the Risks

- **Type of work** - some tasks require fixed postures for long periods of time
- **Layout of the work space** - a poorly designed workspace may force people to maintain awkward postures, such as bending or twisting repetitively
- **Handling time** - the more often an object has to be handled, the greater the chance of injury
- **Weight of the object** - heavy objects that have to be lifted awkwardly, such as from ground level are more likely to cause injury than objects lifted from waist level
- **Equipment** - more effort may be required to manipulate badly designed or poorly maintained equipment
- **The degree of effort** - simply restraining an object such as an animal, can cause sprains and other injuries

# Eliminating (or Controlling) the Risk

## Hierarchy of Controls



# Common Risk Control Measures

- **Change the task** - does this task need to be carried out? If so, does it have to be done this way?
- **Change the object** - for example, repack a heavy load into smaller, more manageable parcels
- **Use mechanical aids** - like wheelbarrows, trolleys, conveyor belts, cranes or forklifts

**Change the workspace** - for example, use ergonomic furniture and make sure work benches are at optimum heights to limit bending or stretching

**Change the nature of the work** - offer frequent breaks or multi-task

**Seek proper training** - inexperienced workers are more likely to be injured

# Evaluation & Record Keeping



## Evaluation

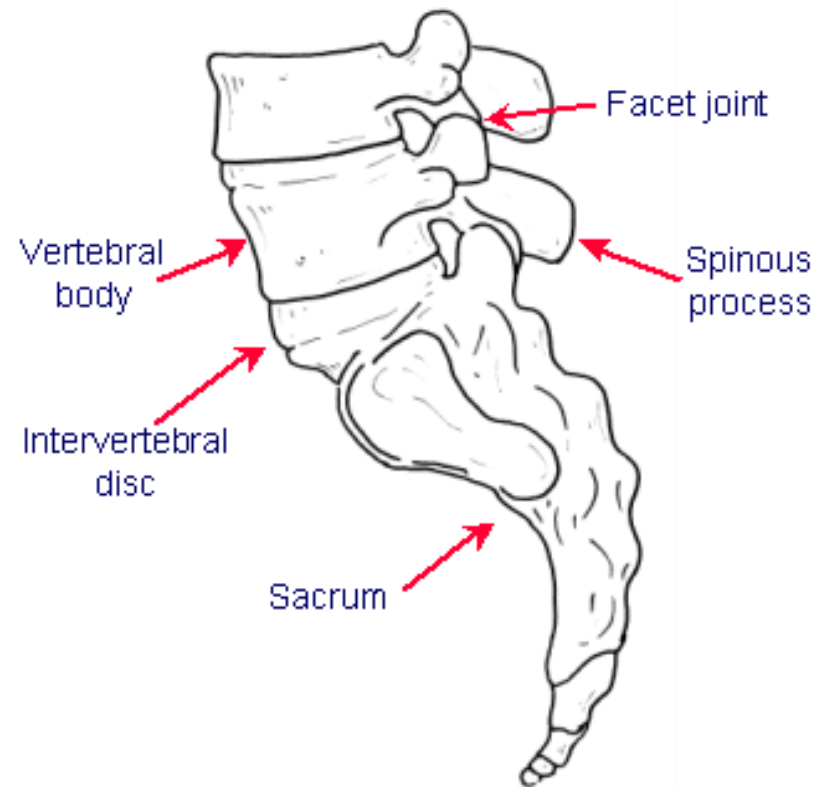
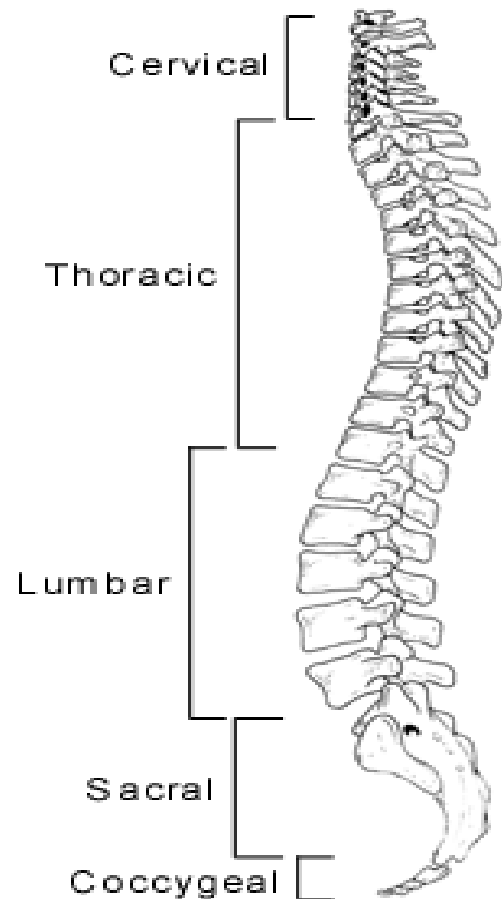
Check the effectiveness of control measures in place and ensure no new hazards have been introduced

## Record Keeping

Records should be kept of hazard identification, risk assessment and control measures including training records



# The Spine



# Protecting Your Back

Your back is particularly vulnerable to manual task injuries.

## **Suggestions to protect your back include:**

- Warm up cold muscles thoroughly before engaging in any manual work
- Lift and carry heavy loads correctly, by keeping the load close to the body and lifting with the thigh muscles
- Never attempt to carry or lift loads in excess of the recommended maximum limit for one person
- Maintain correct posture and the natural curves of the spine
- Take frequent breaks
- Organise the work area to reduce the amount of bending, twisting and stretching required
- Get help to lift or carry a heavy load whenever possible, using another worker or appropriate mechanical aids
- Cool down after heavy work with gentle, sustained stretches
- Exercise regularly to strengthen muscles & ligaments
- Lose any excess body fat

# Safe Lifting Technique

- Plan the lift
- Keep the load close to your body
- Maintain the natural curves of your spine





# Stretching

**Following are some tips on how you can prevent manual task injuries.**

- ➡ Stretch prior to doing any manual handling tasks.
- ➡ Exercise and take short breaks frequently
- ➡ Cool down after any heavy lifting/manual handling.
- ➡ Prevention is better than cure! You can do just a few of the exercises anytime during the day. Try some of them before you get stiff and sore.
- ➡ Include a variety of movements in your workday.
- ➡ Some stretches may cause you pain or discomfort. If this occurs, stop the stretch immediately.

# Further Information

<http://www.worksafe.vic.gov.au/pages/safety-and-prevention/health-and-safety-topics/manual-handling>

# Manual Handling and Stretching

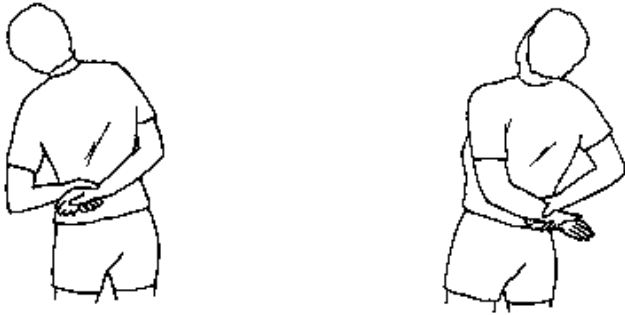
## Simple stretches to reduce the risk of suffering an injury

**By completing the following stretches prior to undertaking any manual handling task, you are reducing the risk of injury.**

If any of the following stretches cause you pain or discomfort, STOP the stretch immediately.

# Stretches

## Neck & Shoulders



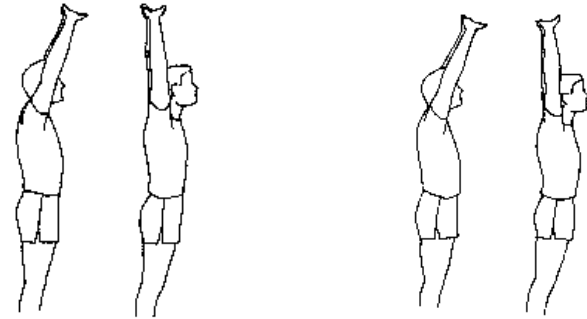
### Position

Stand with the feet shoulder width apart and the arms behind the body

### Action

Grasp the left wrist with the right hand. Pull the left arm down and to the right. Tilt the head to the right. Hold this position for 10-15 seconds. Repeat the action with the right wrist, pulling the right arm down and to the left. Tilt the head to the left.

## Abdominal



### Position

Stand and extend the arms upward and over the head. Interlace the fingers with the palms turned upward.

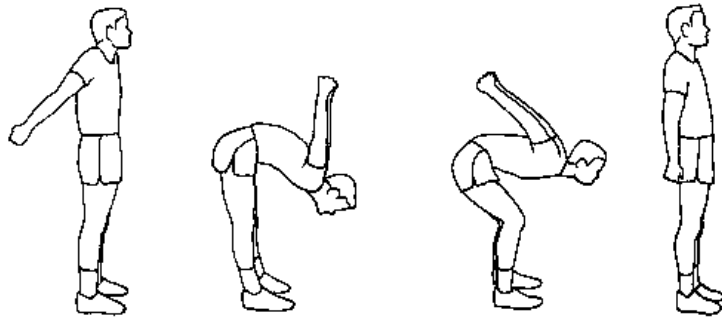
### Action

Stretch the arms up and slightly back. Hold this position for 10-15 seconds.

### Variation

This stretches the rectus abdominous muscles. Stretch to one side, then the other. Return to the starting position.

## Chest



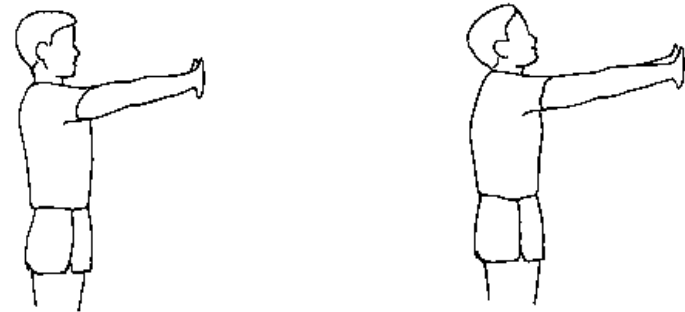
### Position

Stand and interlace the fingers behind the back.

### Action

Lift the arms behind the back so that they move outward and away from the body. Lean forward from the waist. Hold this position for 10-15 seconds. Bend the knees before moving to the upright position. Return to the starting position.

## Upper Back Stretch



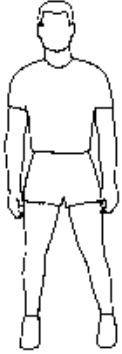
### Position

Stand with the arms extended to the front at shoulder height with the fingers interlaced and palms facing outward.

### Action

Extend the arms and shoulders forward. Hold this position for 10-15 seconds. Return to the starting position.

## Overhead Arm Pull



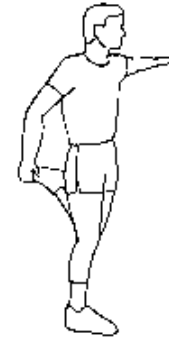
### Position

Stand with the feet shoulder width apart. Raise the right arm, bending the right elbow and touching the right hand to the back of the neck.

### Action

Grab the right elbow with the left hand, and pull to the left. Hold this position for 10-15 seconds. Return to the starting position. Do the same stretch, and pull the left elbow with the right hand for 10-15 seconds.

## Thigh Stretch



### Position

Stand. (For variation, lie on the stomach.)

### Action

Bend the left leg up toward the buttocks. Grasp the toes of the left foot with the right hand, and pull the heel to the left buttock. Extend the left arm to the side for balance. Hold this position for 10-15 seconds. Return to the starting position. Repeat with the right leg. Extend the right arm for balance. Hold this position for 10-15 seconds. Return to the starting position.

## Hamstring Stretch



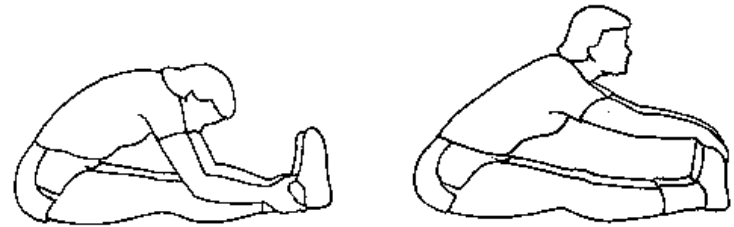
### Position

Stand with the knees slightly bent.

### Action

Bend forward keeping the head up, and reach toward the toes. Straighten the legs, and hold this position for 10-15 seconds.

## Hamstring Stretch Seated



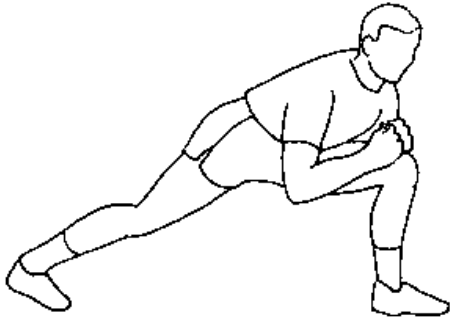
### Position

Sit on the ground with both legs straight and extended forward with the feet upright about 15cm (6") apart. Put the hands on the ankles or toes.

### Action

Bend from the hips, keeping the back and head in a comfortable, straight line. Hold this position for 10-15 seconds. (Variation for greater stretch: Stretch and pull back on the toes.)

## Groin Stretch Standing



### Position

Lunge slowly to the left while keeping the right leg straight, the right foot facing straight ahead and entirely on the floor.

### Action

Lean over the left leg while stretching the right groin muscles. Hold this position for 10-15 seconds. Repeat with the opposite leg.

## Groin Stretch Seated



### Position

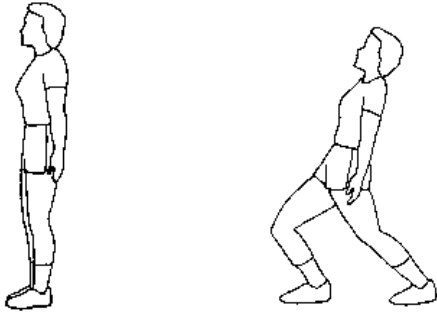
Sit on the ground with the soles together. Place the hands on or near the feet.

### Action

Bend forward from the hips, keeping the head up. Hold this position for 10-15 seconds.



## Calf Stretches



### Position

Stand straight with the feet together, arms extended downward, elbows locked, palms facing backward, fingers extended and joined, and head and eyes facing front.

### Action

Move the right foot to the rear about two feet, and place the ball of the foot on the ground. Slowly press the right heel to the ground. Slowly bend the left knee while pushing the hips forward and arching the back slightly. Hold for 10-15 seconds. Return to the starting position. Repeat with the left foot. Return to the starting position.

## Calf Stretches



### Position

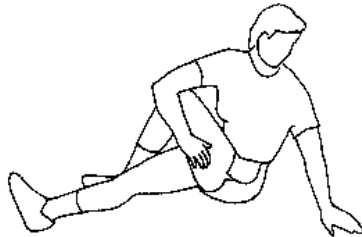
Stand with the feet shoulder width apart and the left foot slightly forward.

### Action

Bend forward at the waist. Slightly bend the right knee, and fully extend the left leg. Reach down and pull the toes of the left foot toward the left shin. Hold this position for 10-15 seconds. Return to the starting position. In a similar manner, pull the toes of the right foot toward the right shin, and hold for 10-15 seconds.

# Hip & Back Stretch

## Seated



### Position

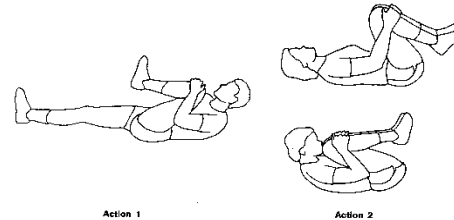
Sit on the ground with the right leg forward and straight. Cross the left leg over the right while sitting erect. Keep the heels of both feet in contact with the ground.

### Action

Slowly rotate the upper body to the left and look over the left shoulder. Reach across the left leg with the right arm, and push the left leg to your right. Use the left hand for support by placing it on the ground. Hold this position for 10-15 seconds. Repeat this stretch for the other side by crossing and turning in the opposite direction.

# Hip & Back Stretch

## Lying Down



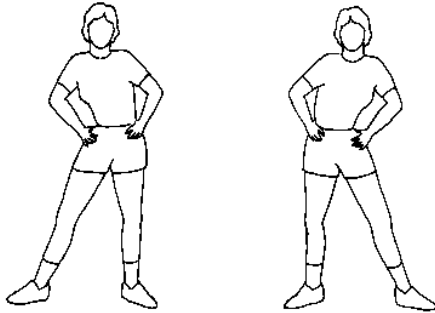
### Position

Lie on the back with the arms straight beside the body. Keep the legs straight and the knees and feet together.

**Action 1-** Bring the left leg straight back toward the head, leaving the right leg in the starting position. Bring the head and arms up. Grab the bent left leg below the knee, and pull it gradually to the chest. Hold this position for 10-15 seconds. Gradually return to the starting position. Repeat these motions with the opposite leg.

**Action 2 -** Pull both knees to the chest. Pull the head up to the knees. Hold for 10-15 seconds. Return to starting position.

## Hip Stretches



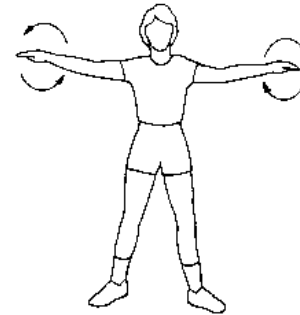
### Position

Stand with your feet shoulder width apart and hands on your hips.

### Action

Rotate the hips clockwise while keeping the back straight. Repeat the action in a counterclockwise direction. Do this three times in each direction

## Arm Stretches



### Position

Stand with the back straight and feet shoulder width apart. Extend the arms outward to shoulder height.

### Action

Rotate the shoulders forward, and make a large circular motion with the arms. Repeat the action in the opposite direction. Do this three times in each direction.

# Remember:

- ☞ Prevention is better than cure! You can do just a few of the stretches anytime during the day. Try some of them before you get stiff and sore.
- ☞ Stretch prior to doing any manual handling tasks.
- ☞ Exercise and take short breaks frequently
- ☞ Cool down after any heavy lifting/manual handling.
- ☞ Exercise is one of the best ways you can improve your posture.
- ☞ Include a variety of movements in your workday.
- ☞ To improve flexibility, strength and endurance, try holding each stretch a little longer or doing more repetitions.
- ☞ When stretching, you will feel a slight pull on the muscle. If this becomes mildly uncomfortable (especially if you feel radiating pain), ease off or stop the stretch.