

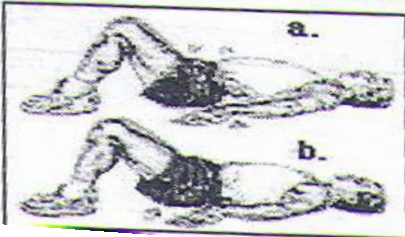
## LOWER BACK EXERCISES:



### Double knee-to-chest stretch

- A) lie down on back.
- B) Pull both knees in to chest until you feel a comfortable stretch in lower back.
- C) Keep the back relaxed.
- D) Hold for 45 to 60 seconds.

### Pelvic tilt exercise



- A) Lie on back with knees bent, feet flat on floor, and arms at sides.
- B) Flatten small of back against floor. (Hips will tilt upwards hold for 10 to 15 seconds then release. Gradually increase your holding time to 60 seconds.



### LOWER TRUNK ROTATION STRETCH:

- A) Lie on back
- B) Keeping back flat and feet together, rotate knees to one side.
- C) Hold for 45 to 60 seconds.



### PRONE LUMBAR EXTENSION:

Purpose: to extend your lower back.

- A) Lie on your stomach and place your hands on the floor near the sides of your head.
- B) Slowly push your upper body off the floor by straightening your arms, but keep your hips on the floor. Hold for 10 seconds, then relax your arms, moving back to the floor.

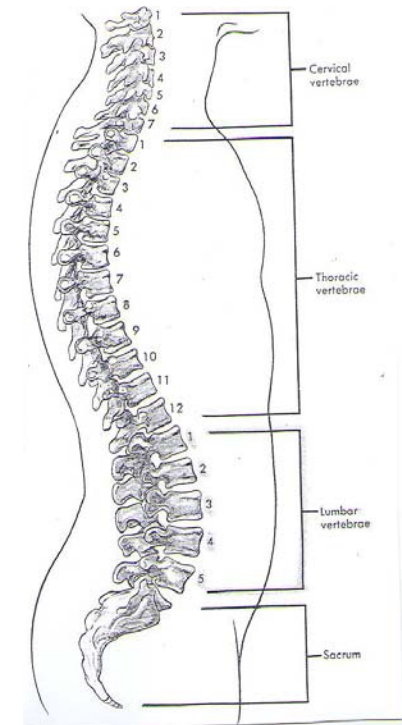
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**Ceza Hospital  
Physiotherapy  
Department**

**PRESENT  
NATIONAL BACK WEEK**

**"FOR THE AWARENESS AND  
PREVENTION OF BACK INJURIES  
AT THE WORK PLACE"**



*Physiotherapy*



# INTRODUCTION:

It has been established that many back injuries occur at the work settings. It is for this very reason that the Physiotherapy Dept. compiled this pamphlet to **educate** people on the specifics of taking care of their backs, to **prevent** injuries and excessive wear and tear of the structures of the back, and **promote** neuro-musculoskeletal health in the uninjured population.

This leaflet provides detail on the correct ways of lifting and sitting posture. Giving various basic practical lifting techniques. Advise as to how to prevent back injuries and exercises to strengthen the back muscles.

## Basic essentials to know when lifting

### The incorrect way of lifting:

When lifting an object from a starting position of bending forwards with straight legs

In this position the Para spinal muscles (known as erector spine) compress the lumbar discs as it extends to the back to raise the load of the trunk, the arms and the child

The centre of gravity of the total load is the same distance from the fulcrum in the lower back, so that the load arm is long.



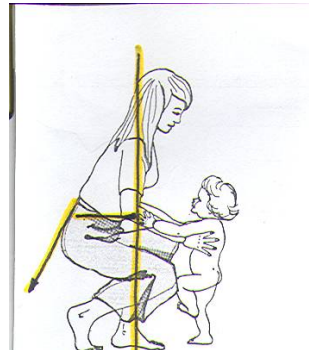
The centre of gravity of the total load is the same distance from the fulcrum in the lower back, so that the load arm is long.

Therefore the back muscles (erector spine), acting on a short lever arm, develop a lot of force or strain to over-

come the movement of force on the trunk.

### The correct way of lifting:

When lifting from a starting position with bent knees – with the load as close to the body as possible.



Reduce the stress on the back by allowing the hip and knee extensors to help with most of the power for the lift.

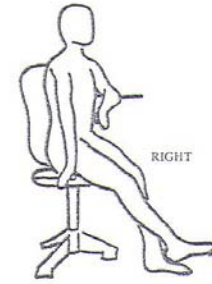
This position shortens the lever arm of the trunk and load

Therefore bending the knees as well as the back before lifting a load puts less stress on the back.

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## Incorrect and correct postures:



How to sit with crossed legs.

How to sit.



How to scrub the floor.



How to lift a bucket.

