

HEALTH AND SAFETY

MANUAL HANDLING

OF LOADS



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More than 80% of the adult population has ever had back pain.

It is considered that the manual handling of any load weighing more than 3 kg, even a light one, if handled in unfavourable ergonomic conditions, away from the body, with inadequate posture, very frequently, in unfavourable environmental conditions, with unstable floor, etc., may cause an unacceptable potential back-lumbar risk.

RISK FACTORS THAT ENTAIL A RISK DORSOLUMBAR

CHARACTERISTICS OF THE LOAD

- Excessive weight or volume.
- An unstable equilibrium or shifting centre of gravity.
- The morphology and physical aspects of the load (shape, consistency, edges, etc.) which may cause mechanical injuries to the person handling it (blows, cuts, etc.).

MAXIMUM WEIGHT VALUES UNDER IDEAL CONDITIONS

- Generally: **25 kg.**
- Women, youth and older people: **15 kg.**
- Trained people in isolated situations: **40 kg.**



PHYSICAL EFFORT

- A level of strength in excess of the person's physical capacity.
- An unstable body position (imbalance) or a forced posture (torsion or flexion of the trunk, asymmetry of the body).
- A sudden movement of the body as a result of the displacement of the load, or by a change in the position of the attachment points.

MAXIMUM THRUST OR TENSILE FORCE VALUES OF LOADS UNDER IDEAL CONDITIONS

- Do not exceed **25 kg** to initiate movement.
- Do not exceed **10 kg** to maintain movement.



CHARACTERISTICS OF THE WORK SYSTEM

- Handling the load with insufficient free space to carry out the activity.
- A floor that is uneven and can lead to tripping or slipping.
- The conditions of the workstation make it difficult to place the load at a safe lifting/lowering height and with a correct posture.
- The location of the material in case it involves: bending or twisting of the trunk and holding at a distance from the body.
- The inadequate environmental setting (lighting, temperature, ventilation, humidity, air speed or noise).
- Distribution of breaks insufficient to allow recovery from accumulated fatigue.
- Excessive work pace that cannot be regulated by the exposed person.

MAXIMUM WEIGHT TO BE LIFTED IN A SEATED POSITION: **5 KG.**

INDIVIDUAL CHARACTERISTICS

- Inadequate physical fitness.
- Insufficient training or information.
- Presence of previous dorsolumbar pathologies.
- Inadequate work clothes and footwear.

Highly sensitive persons who must be protected when handling loads:

- People with a history of back injury.
- Pregnant women.
- Young people.
- People over 45 years of age.

CORRECTIVE MEASURES TO AVOID A RISK DORSOLUMBAR

Use mechanical aids for lifting, pulling or moving loads whenever possible.

WHERE IT IS NOT POSSIBLE TO AVOID MANUAL HANDLING, EFFORTS SHOULD BE

- handle the load close to the body by flexing the legs
- with a straight back
- no twisting or bending
- holding the load firmly
- lifting should be smooth and spaced out
- avoiding handling at ground level or above the shoulders
- favourable environmental conditions

DESIGN OR REDESIGN OF WORKPLACES

- Adapt the height of the work plan to the physical dimensions of the person.
- Avoid awkward postures depending on the depth of the handling areas.



SITUATION OF LOADS

- The most favourable place to place the load is in front of the person, close to the body and at waist height.

POSITIONING OF THE LOAD RELATIVE TO THE BODY

- Keep the load as close to the body as possible.
- Avoid twisting the trunk during manual handling of loads, increasing the risk of injury to the lower back.



VERTICAL DISPLACEMENT OF THE LOAD

- The vertical distance the load travels from the start of lifting to the end of handling must not exceed 25 cm and must be located between shoulder height and mid-leg.

LOAD SECURING

- It is important to hold or support the load by means of handles or similar, with a shape, size and texture that allows a comfortable grip with the whole hand.
- Keep hands and wrists in a comfortable and neutral position.
- If the load does not have handles, an opening that allows the load to be held comfortably would be correct, as long as it can be held with a 90° flexion of the hand.

SIZE, VOLUME AND DURATION OF HANDLING

- Manually handled loads larger than 60 cm wide and 35 cm deep should be handled by more than one person.
- In case the exposed population are: women, young or elderly people, or if it is desired to protect 95% of the population, it is recommended not to handle more than 15 kg.
- In sporadic situations, healthy and physically trained people could handle up to 40 kg.
- Avoid continuous work in the same posture by alternating tasks in different postures with different intensity of effort.