

POSTURAL HYGIENE

Postural hygiene has significant implications for the predisposition, onset, and exacerbation of disorders and injuries in the body, such as vertebral pain syndromes. Many of the back complaints frequently reported by patients occur without any representative radiographic findings, and are often attributable solely to improper postural habits or alterations in the physiological spinal curvatures. These issues result from deficiencies or imbalances in the muscles and ligaments responsible for the mechanical-functional harmony of the various spinal segments.

The adoption of certain postures for extended periods—such as during the workday—must be carefully evaluated from an ergonomic perspective, with the goal of better adapting the individual to their tasks and preventing dysfunctions.

Emotional factors also have a significant impact, often contributing to tense postures and localized muscle contractures, particularly in the cervical region.

From a physiological standpoint, a correct posture is one that is not fatiguing, painful, or disruptive to balance, rhythm, or human mobility.

Anatomically, we distinguish **three main postures**:

- Standing (bipedal posture)
- Sitting (seated posture): anterior, intermediate, and posterior
- Lying down (recumbent posture): supine, prone, and lateral

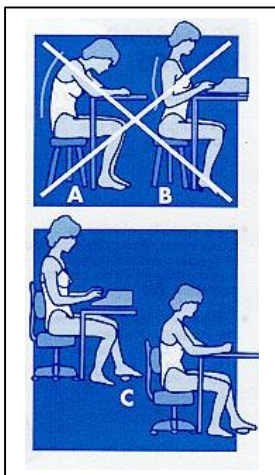
STANDING (BIPEDAL POSTURE)

1.1 STATIC STANDING:

Prolonged standing results in several drawbacks:

- Static overload on the lower limbs and back muscles
- Circulatory stagnation in the lower limbs
- Continuous tension in postural muscles and spinal extensors, especially when trunk flexion is involved
- Reduced precision in tasks requiring fine motor control, which are better performed seated

To prevent spinal injuries or disorders, the following postural guidelines should be followed:



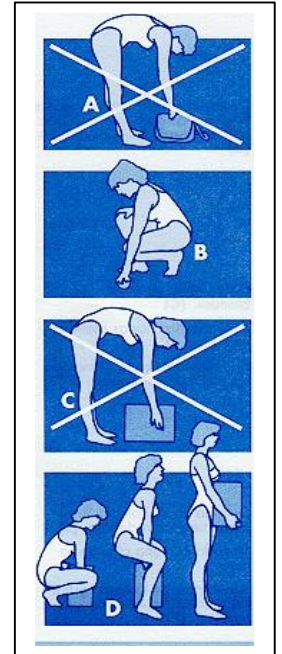
- Keep the head in a horizontal plane or with a slight cervical flexion
- Avoid excessive trunk rotation, as it accelerates fatigue. If turning is necessary, do so using the hips and knees, rather than the lumbar spine
- Body weight should be distributed evenly between both lower limbs to prevent overloading. Maintain feet slightly apart to widen the base of support, and avoid wearing high heels

Lesiones Deportivas. Reemplazo Articular. Artroscopia.

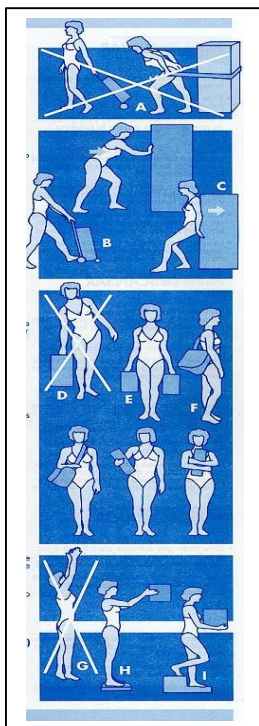
- Avoid shoulder protraction, which contributes to thoracic kyphosis
- Maintain good abdominal and paravertebral muscle tone for anterior-posterior spinal balance
- Alternate resting one foot on an elevated surface to reduce strain
- Avoid standing in the same position for prolonged periods—take occasional steps or lean against a wall

1.2. LIFTING OBJECTS:

- Avoid full spinal flexion when picking up small objects from the floor (A). Instead, squat and support yourself with one hand on the knee (B)
- Avoid bending the back when lifting heavy loads (C).
- Keep the object as close to the body as possible to reduce spinal load (D).
- Keep feet apart to improve balance and base of support.
- Use the knees and hips or upper limbs when lifting, minimizing spinal involvement.



1.3 Moving Objects:



- Avoid dragging objects, as it causes significant lumbar overload (A).
- Prefer pushing objects using your body weight as a forward force (B)
- Ideally, position your back against the object and push with your legs, minimizing spinal effort (C).
- Avoid carrying heavy objects that require trunk bending or rotation (D).
- Replace a single heavy load with two smaller ones, carried symmetrically (E).
- Whenever possible, use straps or harnesses to distribute weight between shoulders and pelvis (F).
- Avoid reaching for objects above shoulder height (G).
- Do not hyperextend the spine to reach high objects (G).

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- Use stools to bring yourself level with high objects (H).
- Keep the object as close as possible to your body (I).
- Never bend with extended legs or twist the spine while holding a weight overhead

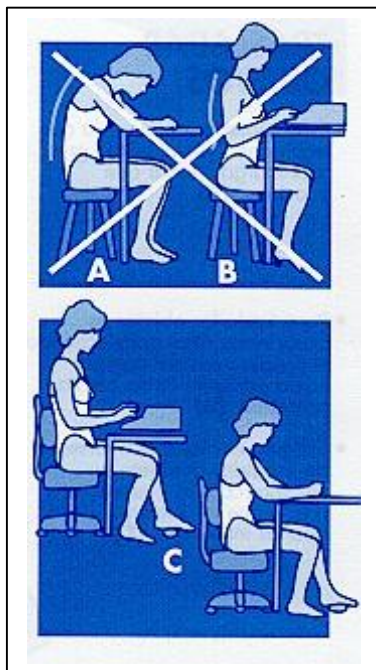
2. SITTING (SEATED POSTURE):

In a seated position, energy expenditure, circulatory demand, and static muscle work are lower than when standing. Here, the weight of the torso is transferred to the **ischial tuberosities** and then to the feet.

There are three variants:

- **Intermediate sitting:** Center of gravity is above the ischial tuberosities; about 25% of body weight is transferred to the feet
- **Anterior sitting:** Center of gravity shifts forward via spinal kyphosis and pelvic anteversion; more than 25% of body weight transfers to the feet—typical for work posture
- **Posterior sitting:** Center of gravity moves behind the ischial tuberosities; less than 25% of body weight transfers to the feet. There is increased lumbar lordosis or pelvic retroversion—typical for resting posture.

2.1. FOR WORK:



- Avoid leaning forward or arching the back (A).
- Avoid reclining and exaggerating spinal curvature (B).
- Avoid small, hard, or non-swiveling chairs that require trunk rotation
- Desk height should be approximately at elbow level to avoid excessive trunk flexion (C).
- A wooden footrest can improve comfort and alleviate chronic low back pain.
- The seat should be padded but firm, horizontal, and at a height that allows feet to rest flat on the floor
- The ideal chair should swivel and have an adjustable backrest to support the natural curvature of the spine.

2.2 FOR RESTING:

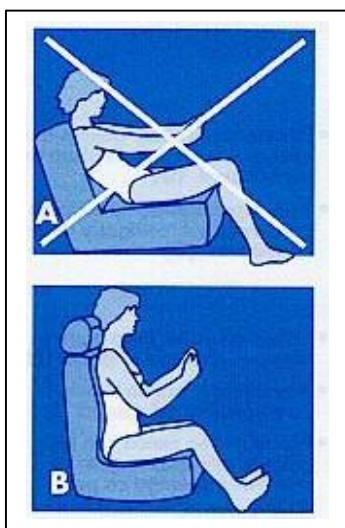
- Avoid chairs or armchairs that cause you to "slide down" into a more horizontal posture, putting strain on the lumbar spine (A)
- Avoid crossing one leg over the other.
- Avoid armrest that are too high or too far apart, which elevate the shoulders.



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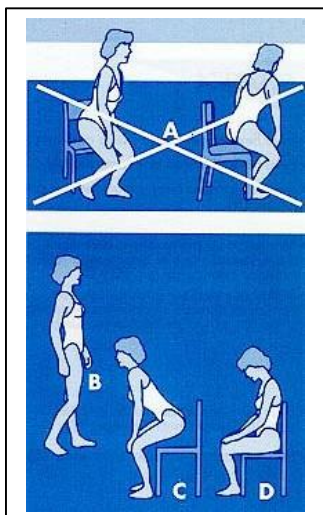
- The backrest should be well-padded and reclined:
 - 10° – 15° for reading.
 - 15° - 20° for resting.
- The back should be firmly supported
- Knees should be positioned higher than the hips.
- Feet must be fully supported on the floor; use footrests if necessary.

2.3. FOR DRIVING:



- Avoid having to stretch to reach the controls—do not place the seat too far from the steering wheel (A).
- Avoid operating the pedals by moving the entire leg from the hip.
- The lumbar spine should be in contact with the seat back, which must have an ergonomic shape. (B).
- Knees should be higher than the hips.
- The steering wheel should be held with elbows slightly flexed.

2.4 . SITTING DOWN AND STANDING UP:

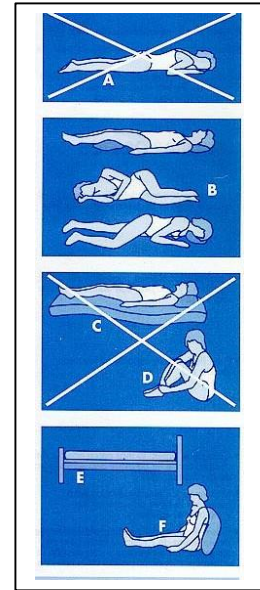


- Avoid twisting the spine while sitting down (A).
- To sit, turn using your feet and knees only, keeping your back straight (B).
- Squat by bending the knees and leaning the body forward with a straight back (C).
- To stand, lean your body and head forward, place hands on thighs, and slowly rise by extending your knees (D).

3. LYING DOWN (RECUMBENT POSTURE):

3.1. IN BED.

- Do not sleep in the prone position (face down) (A).
- Sleep on your side with knees flexed, or on your back with a pillow under the knees (B).
- Avoid soft mattresses (C).
- Avoid sitting in bed with flexed knees (D).
- Sleep on a firm mattress that does not sag (E).
- When sitting on the bed, stretch your legs (do not flex your knees) (F).



CONCLUSION

After this postural analysis, we can conclude that **incorrect posture can lead to significant functional impairments and, over time, structural alterations.**

It is essential to remember:

"The intensity of an effort depends on the posture adopted."
Hence the crucial role of **postural hygiene**.