



HOW DOES MY BACK WORK?



Learn about how your back works and basic body mechanics and safe lifting procedures.

POSTURE AND YOUR SPINE

A common cause of lower back pain is poor posture. In normal posture, the spine is curved in the shape of a gentle letter “S”. When this curve is exaggerated by poor posture, the delicate suspension system is altered, straining the back. The position of your pelvis determines your ability to maintain the normal “S” curve of your spine. When the abdomen sags and the body slouches, the pelvis tilts forward and the lower back arches too much.

When the abdominal muscles are tight and firm, the pelvis is tilted normally and the gentle, normal lower back curve is achieved.

Aside from standing tall, having good posture means using your body safely at all times. You should try to use good posture in all daily activities, but especially when lifting. **Safe body mechanics involves maintaining the body in the best possible position** to prevent gravity from causing stress or strain on your back. Unsafe body mechanics, such as bending at the waist with the knees straight, cause the body to be poorly balanced. This forces the back muscles to work too hard to keep the body balanced, creating a high risk of injury.

GENERAL RULES FOR SAFE LIFTING

- Be sure to use your powerful leg muscles and large hip and knee joints while lifting.
- Tighten your abdominal muscles (to stabilize your spine and pelvis) and tuck your buttocks under; then bend your knees and lift. If you lift with the small back muscles, which are designed only to hold the spine up against gravity, you will put an enormous strain on the discs and ligaments of the lower back. Other situations may require a ‘Golfer’s Lift’ or a ‘Two Person Lift’.
- Keep the person or object you are lifting close to your body when lifting. This makes the work easier and minimizes the strain on the spine.

- Avoid reaching over your head to lift. This puts strain on the joints at the back of the spine. Lift only to shoulder level.
- Place your feet firmly on the floor shoulder width apart (about 30 cm), creating a strong, wide base.
- Place one foot in the direction of the lift and then pivot both feet in this direction while moving.
- Avoid twisting your back.
- Grasp the person or object firmly using your full hand.
- Lift in stages if necessary.
- If the person or object slips, lower her/him/it gently to the floor while tightening your abdominal muscles and avoiding rotation.
- Remember that planning, rhythm and timing are important in making a safe lift.
- Appoint a leader, the one who carries the heaviest part of the load. The leader will give the signals to lift, move and lower.
- Stand upright and bend backwards gently five or six times after lifting.
- Use mechanical lifting devices whenever possible.

LIFTING WHEN YOU ARE PREGNANT

Many caregivers work during pregnancy and return to work after the birth of their babies. These workers must pay extra attention to all aspects of proper transfers and lifts, body mechanics and posture before and after the birth.

Hormones secreted during pregnancy make the ligaments around joints softer than usual in preparation for the delivery of the baby. The caregiver's muscles must be strong in order to compensate for this temporary decrease in joint support from the ligaments. As it is difficult to keep the person or object being lifted close to the body when pregnant, the leader must assign an appropriate task to the pregnant caregiver if she is assisting in a team transfer or lift.

After the birth, the worker must be sure to strengthen her abdominal muscles with exercise before returning to work.

We recommend that workers involved in transferring and lifting receive clearance to return to work from either the occupational health physician or their own physician.

REFERENCES

<https://www.pshsa.ca/wp-content/uploads/2013/01/MSDs.pdf>