Body Mechanics, Transfer, Ambulation

Your automobile and other important equipment work based on mechanical principles. Each part is made to work a certain way and to work with specific other parts. Your body is much the same. Certain parts are for certain activities and perform best when they are used the way they were intended. You have some control over making your individual parts work better and stronger. You also have control over whether or not you use them wisely. The proper use of your body is called *Body Mechanics*. *Body Mechanics* involves standing and moving one's body so as to prevent injury, avoid fatigue, and make the best use of strength. When you learn how to move, control and balance your own body, you can more easily and safely control and help or move another person. Back injuries are common among caregivers and many such injuries are preventable.

Proper *Body Mechanics*

Helpful caregiver advice for moving a person. These pointers are to protect the *caregiver* only. Be sure to get training for the steps of a specific move or transfer.
• Before starting a move, count with the person, "1-2-3."
• To feel in control, get close to the person you are moving or lifting. • To feel in control, get close to the person you are moving or lifting.
• Keep your back in a neutral position, knees bent, weight distributed between both feet.
Tighten your stomach and back muscles to maintain a correct support position.
• Use your arms to support the person.
• Again, let your legs do the lifting. • Turn, rather than twist, your body.
• Breathe deeply.
• Keep your shoulders relaxed.

General Rules
The following hints will help you use proper body mechanics and be safe. • Only lift as much as you can comfortably handle.
• Always let the person you are helping know what you are going to do.
• To create a base of support, stand with your feet 8-12" apart with one foot a half step ahead of the other to create a base of support as you move.
• Bend your knees slightly.
• Keep your spine in a neutral (normal arched, not stiff) position while lifting.
• USE YOUR LEGS instead of your back to do most of the work—leg muscles are stronger muscles than your back muscles.

• If you are able to adjust the bed, keep the top at about waist level. If it is low or you are tall, put one foot on a foot stool to relieve pressure on your lower back.
• When needing to give a lot of assistance with transfers, tie a strong belt or a transfer belt around the person's waist and hold it as you complete the transfer. In some situations, you may need a lift device, such as a Hoyer lift, to help you.

Safe Transfers

As a caregiver, you may have to help the person, in your care, move from place to place by lifting her. When you learn how to control and balance your own body, you can safely control and move another person.
You can injure your back by *not focusing* on what you are doing, whether you are bending improperly to pick a paperclip up off the floor or loading the washing machine. Being a caregiver puts you at even more risk for back injuries. Many occur when lifting, moving, transferring or changing the position of the one in your care.
Improper movements can cause injury to the person being moved, such as abrasions to skin, strains, sprains and tears—even fractures.

General Rules to Prevent Back Injury
Use the same procedure for all transfers, so that a routine is set up:
• Never lift more than you can comfortably handle.
• Create a base of support by standing with your feet 8–12 inches (shoulder width) apart with one foot a half step ahead of the other
• DO NOT let your back do the heavy work: USE YOUR LEGS. (The back muscles are not your strongest muscles.)
• If the bed is low, put one foot on a foot stool. This relieves pressure on your lower back.
• Consider using a back-support belt.
• If sitting for extended periods, get up every 20 minutes to give your spine relief.
• Stay fit by exercising and strengthening back and abdominal muscles.
• Gently stretch often during the day.
• Maintain a healthy weight to reduce pressure on your spine.
• Have a program to manage stress such as yoga, meditation or even simple walking.
• Quit smoking, as nicotine slows the flow of blood to the vertebrae and disks and impairs their function.
Smokers tend to lose bone faster than nonsmokers, putting them at risk for osteoporosis.

Rules for Moving a Person in Bed

Moving a person in bed can injure the person in your care or you, the caregiver, if certain basic rules are not followed:
• Never grab or pull the person's arm or leg.
• If the medical condition allows, raise the foot of the bed slightly to prevent the person from sliding down.
• If moving him is difficult, get him out of bed and back in the wheelchair and start over by putting him in bed closer to the headboard.

Moving a Person Up in Bed
1. Tell the person what you are going to do.
2. Lower the head of the bed to a flat position and remove the pillow— never try to move the person "uphill."
3. If possible, raise the bed and lock the wheels.
4. Tell the person to bend his knees and brace his feet firmly against the mattress to help push.
5. Stand at the side of the bed and place one hand behind the person's back and the other underneath the buttocks.
6. Bend your knees and keep your back in a neutral position.
7. Count "1-2-3" and have the person push with his feet and pull with his hands toward the head of the bed.
8. Replace the pillow under his head.

TIP– Lighten Your Load
A too-heavy handbag can cause muscle soreness, nerve compression and back and shoulder pain. A bag should weigh no more than 10 percent of your body weight. Weigh your bag on the bathroom scale to make sure you're not putting unnecessary strain on your body. If you have to carry a heavy load on a regular basis, consider a bag with wheels.

Transferring from a Wheelchair to a Car
Be sure the car is parked on a level surface without cracks or potholes.
• Open the passenger door as far as possible.
• Move the left side of the wheelchair as close to the car seat as possible.
• **Lock the chair's wheels.**
• Move both footrests out of the way.
• Position yourself facing the person.
• Tell him what you are going to do.
• Bending your knees and hips, lower yourself to his level.
• Grasp the transfer belt around his waist to help him stand while straightening your hips and knees.
• If his legs are weak, brace his knees with your knees.

• While he is standing, turn him so he can be eased down to sit on the car seat. GUIDE HIS HEAD so it is not bumped.

• Lift his legs into the car by putting your hands under his knees.
• Move him to face the front.
• Put on his seat belt.
• Close door carefully.

ASSISTIVE DEVICES . . . tools to help prevent injury

These devices can be very helpful in making a lift or transfer easier and in preventing injuries, however, these items require a prescription, and the caregiver should be trained by a therapist or nurse before using them.

Transfer belt – Placed around the waist of a person and used to secure the person while walking; Gait belt

Transfer board (sliding board) – A polished board used to slide a person when moving from one place to another; for example, from bed to wheelchair or commode

Trapeze – A metal bar suspended over a bed that the person can grab to pull up in bed or to assist with turning in bed or coming to a seated position

Mechanical lift – Also called a *hydraulic lift* or known as a Hoyer lift. A canvas sling is placed under the person as he lies in bed, then attached to the lift with straps. The caregiver starts the lift (electronically or by hydraulics), which secures the sling around the person and lifts him off the bed. The position of the sling can then be adjusted and the person transferred into a chair.

Please watch the YouTube videos:

https://www.youtube.com/watch?v=pbpC0nxzBOY

https://www.youtube.com/watch?v=TDagSMJbNZI