

4 • Body mechanics & safe transfers

Body mechanics

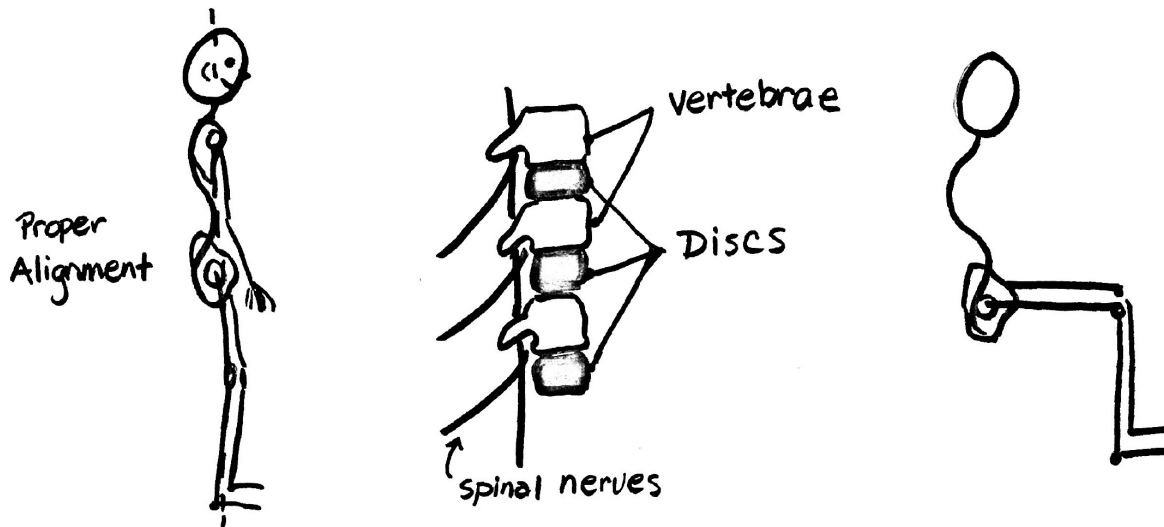
Understanding body mechanics and how to transfer someone safely will help you protect your back and other parts of your body, keeping both you and your patient safe.

Three basic body mechanics rules when lifting:

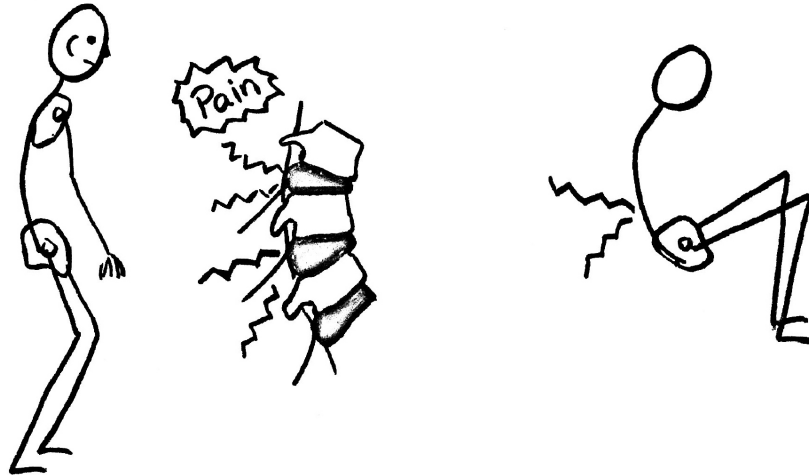
1. Maintain your natural spinal curves
2. Bend at your hips and knees
3. Do NOT twist

Spinal alignment

- Spinal alignment occurs when your head is balanced over your shoulders, your shoulders are balanced over your hips, and your hips are balanced over your knees and feet. Think about dropping a plumb line from your ear and having it drop straight down to your feet.
- When your spine is aligned, the vertebral bodies, discs, and nerves can function optimally.

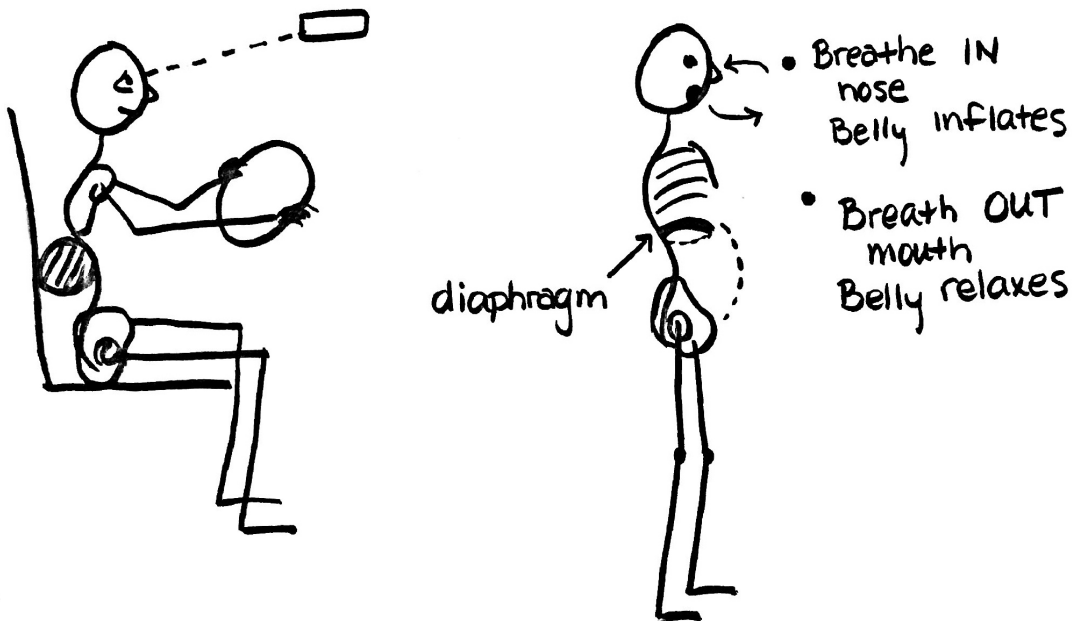


- A misaligned spine causes compression of the spinal discs, which can impinge on the spinal nerves and cause pain down our arms, back, or legs.



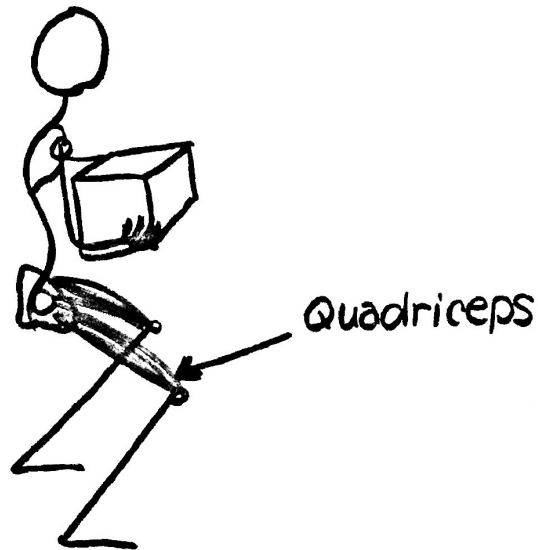
Ways to improve spinal alignment

- Adjust chair height, use lumbar supports, adjust the mirror in your car, bring present-moment awareness to breathing and posture.



When lifting, or when helping a person to sit or stand:

- Use the largest leg muscles – the quadriceps – not the small, thin back muscles
- Maintain your lumbar curve to keep the spine aligned
- Use a large base of support
- Keep the load close to your body



For a healthy back

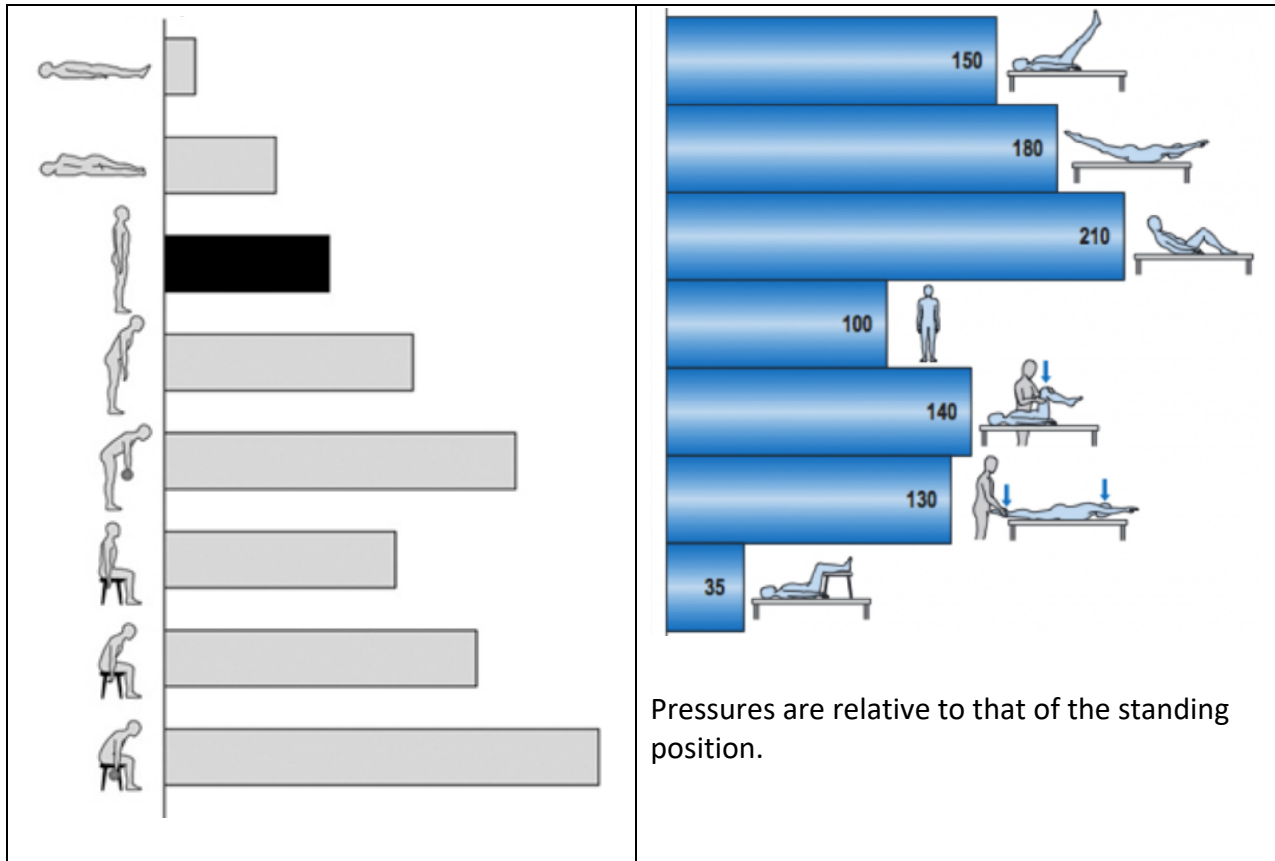
- Exercise regularly
- Limit reaching when working
- Wear good shoes
- Ask for help

First aid for your back

- Rest/lie flat with knees up
- Ice for 10-15 minutes

Lumbar intradiscal pressures

These diagrams show the intradiscal (L2-L3) lumbar pressure in various positions, relative to the pressure when standing. Higher pressures are more stressful.



Transfers

When transferring a client from sit to stand, hold their hands while you stand anteriorly and gently rock the client in a rhythmical fashion forward and back. This will make them more comfortable with leaning forward and assisting with the transfer of weight.

When preparing for sit-to-stand transfers:

1. Tell the client the plan.
2. Scoot client to the edge.
3. Gently rock forward and back.
4. Do on the count of three.
5. Ask the client to bring their nose over his or her toes.

When transferring between chair/bed and wheelchair, place the foot that is closest to the direction of the transfer slightly forward.

When preparing for supine to sit transfers:

1. Bend both knees as much as is comfortable.
2. Encourage the client to scoot away from the edge of the bed, or use a draw sheet to pull the client.
3. Roll towards the side closest to the edge of the bed.
4. Bring the legs off the edge while assisting the head up.

Bed mobility

1. Rolling patients from supine to side-lying

- a. If able, have patient bend knees or assist patient in bending knees.
- b. Have patient cross arms over chest or reach in the direction they are rolling. Patient can grab the edge of the bed or bed rail to assist if necessary.
- c. Place one hand on patient's back at shoulder level and place other hand on back of patient's pelvis. Remember to stand facing the bed with hips positioned midway between their knees and shoulders. Assist patient with rolling by shifting your weight.
- d. If the patient has a back condition, be sure to "log roll" patient, avoiding twisting the low back.

2. Moving from side-lying to sitting EOB (edge of bed)

- a. Encourage the client to scoot away from the edge of the bed you want to sit up towards, (or use a draw sheet to pull client.)
- b. Roll towards the direction of the transfer.
- c. If patient is able to help, have them actively slide feet off bed while you assist trunk.
- d. The patient can assist by pushing against the bed with his arms.
- e. Avoid this technique for patients with these medical conditions: total hip replacement, open heart surgery, and upper extremity fractures.

3. Scooting sideways

- a. If able, have patient bend knees or assist patient in bending knees.
- b. Have patient push down into bed with feet in order to lift hips into "bridge" and scoot sideways.
- c. Assist patient with movement of trunk if necessary (do not assist at head or neck).
- d. Move in small steps and slowly to prevent injury.
- e. If patient is unable to assist, then use draw sheet, bed rails, or trapeze.

4. Scooting to head of bed

- a. If able, have patient bend knees or assist patient in bending knees.
- b. Have patient push down into bed with feet in order to lift hips into "bridge" and scoot sideways.
- c. Assist patient with movement of trunk if necessary (do not assist at head or neck).
- d. If bed can be moved, go to the head of bed to assist.
- e. If patient is able to grasp headboard, have patient assist with movement.
- f. If patient is in a hospital bed, then lower head of bed; raise foot of bed.
- g. Use a draw sheet to assist.
- h. If patient is hemiplegic, do NOT pull on affected arm.

5. Supine to sit (no side-lying)

- a. Assist patient to scooting to edge of bed unless they are very tall.
- b. Position yourself close to the bed next to the patient's hips so you can prevent patient from sliding off the bed.
- c. Assist patient to raise up on elbows.
- d. Use with patients with the following medical conditions: total hip replacement, open heart surgery, and upper extremity fractures.
- e. Have patient begin to lower legs off edge of bed as you assist in raising trunk so that patient can sit at edge of bed.

6. Toileting using bedpan

- a. If able have patient bridge and place bedpan under buttocks.
- b. If patient unable to bridge, assist patient in rolling to side, place bedpan under buttocks and assist patient to roll back onto bedpan.
- c. Utilize same method to remove.

7. Occupied bed change

- a. Assist patient to roll side to side.
- b. Roll dirty linen underneath patient. Place clean linen on bed and tuck in bottom sheet.
- c. Tuck clean linen under patient.
- d. Roll over linen to other side; remove dirty linen and secure clean linen.

Proper positioning in bed

- Keep spinal alignment
- Gentle bend in knees
- Float heels

