Posture & Body Mechanics

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BODY MECHANICS
Definition

- Taber’s – application of kinesiology to use of the body in daily life activities and to the prevention and correction of problems related to posture and lifting.
- Mosby’s - the field of physiology that studies muscular actions and the function of muscles in maintaining body posture. Knowledge gained from such studies is especially important in the prevention of injury during the performance of tasks that require the body to lift and move.
Recommendations for proper body mechanics

- Obtain *neutral spine*
- Stand *close to object* or pull it toward you
- Stand with feet hip width apart and when appropriate with one foot slightly ahead of the other
- Bend your knees, lifting with legs
- Lift slowly without jerking
- *Avoid twisting* while in a forward bent position or with a heavy load
Pushing/Pulling

• We are more effective and can maintain better body mechanics when we push.
• We keep the object closer

• We are less effective and usually show a rounding out of the spine when we pull.
• Object usually at a greater distance.
Ideal lifting

- Obtain neutral spine, contract abdominal muscles
- Squat to floor with wide base of support while maintaining upright trunk, shoulders over hips
Reaching over head

• Stand close
• Do not over arch back
• Lift with one foot slightly behind
Bending Forward

- Bending forward at the waist to pick up an object moves your center of gravity (COG) farther away from your pivot point.
Bending Forward

- The weight along with the distance is multiplied to come up with the force generated at the pivot point.

- Ex: \((\text{Wt lifted} + \frac{1}{2} \text{ body wt}) \times \text{distance COG moves}\)
  - \((10\# + 50\#) \times 10\text{ inches} = 600\text{ in. pds}\)
Twisting

• Ideally – turn feet to face the object and direction you are moving
• Incorrectly – keep feet planted and twist at waist while holding object. Puts increase strain on low back
Computer set up

• Top of monitor at or just below eye level, unless you wear bifocals than lower monitor to avoid tilting head back to read

• Monitor about arm length away or more.
Computer set up

- Sit all the way back into chair with hips and knees bent 90
- Mouse and keyboard within reach with elbows bent between 80-110 and wrists in neutral
Computer set up

- Follow other sitting posture requirements. Get a foot rest if feet do not touch floor.
Sitting & reaching

- Maintain good posture when sitting
- Objects should be within arms reach
Sitting & reaching

- Heavier objects lower to reduce strain on back
- Frequently used items should be distributed equally to right and left
- Get up and move as needed
Vacuuming
Laundry
Washing dishes/ Dishwasher
Getting up from low seats