BODY MECHANICS

Course
Health Science Technology I

Unit
Safety And Body Mechanics

Essential Question
How can the health care provider properly apply the principles of body mechanics to minimize personal and client injury?

TEKS
121.3 13G

TAKS
ELA 1, 4

Prior Student Learning
Knowledge of communication with clients, bed making, and OSHA lesson.

Estimated time
1.5 – 3 hours

Rationale
Health care providers must know how to properly apply the principles of body mechanics to minimize personal and client injury.

Objectives
Upon completion of this lesson, the student will be able to:
- Identify the principles of body mechanics;
- Demonstrate the techniques of moving patients; and
- Perform correct body mechanics.

Engage
Demonstrate proper use of back braces used to prevent worker back injuries while lifting patients, either with images or with actual braces.

Key Points
Body Mechanics 1 Power Point Presentation (see Power Point section)

I. Terms relating to safety and body mechanics
   A. Body mechanics: using all of body parts efficiently to safely lift and move.
   B. Body alignment: refers to correct positioning of head, back and limbs.
   C. Posture: position of body parts in relation to each other.
   D. Mobility: the ability to move.
   E. Balance: the ability to maintain a steady position that does not tip.
   F. Body support: a device used to support body at work to reduce damage when lifting, moving and transferring patients.

II. Rules for proper body mechanics
   A. Use stronger, larger muscles to perform tasks which require physical effort.
   B. When moving a heavy object, try to push or pull instead of lifting the item.
   C. Get help if object feels too heavy to lift.
   D. Lift in a smooth motion to prevent injury.
   E. Maintain good posture.
   F. Avoid twisting the body.
   G. Bend knees, keep back straight, spread feet about one foot apart, us leg muscles when lifting.

III. Conditions which affect moving, lifting, transferring of clients
   A. Obesity
   B. Fragility
   C. Amputation

D. Paralysis
E. Extra equipment needs
F. Altered level of consciousness
G. Language barriers
H. Hearing or vision loss

Activity

I. Discuss and demonstrate safe ways to use the body as a mechanical tool. Body Mechanics Procedural Guideline.
II. Demonstrate principles for proper body mechanics. Body mechanics checklist.
III. Formulate a plan of action to move clients who have conditions that complicate or inhibit movement.
IV. Use nursing skills video to demonstrate skills.

Assessment

Body mechanics check list

Materials

Bed and linens; (table tops can suffice as beds for teaching purposes if necessary.)
Chair or wheelchair

http://www.dads.state.tx.us/providers/NF/credentialing/NATCEP/cna.pdf
Nurse Aide Curriculum

http://www.osha.gov/SLTC/etools/hospital/hazards/ergo/ergo.html
E-tool designed by OSHA for ergonomics

http://www.osha.gov/SLTC/pdf_files/achback.pdf
Your Aching Back: A Look at Back Strain in the Workplace

Accommodations for Learning Differences

For reinforcement, students who cannot lift, move, or transfer clients will make posters to illustrate proper body mechanics.

For enrichment, students will develop a care plan for a client at home that needs mobility assistance.

National and State Education Standards

National Health Science Cluster Standards
HLC06.01 Safety, Health, and Environmental
Health care workers will understand the existing and potential hazards to clients, co-workers, and self. They will prevent injury or illness through safe work practices and follow health and safety policies and procedures.

TEKS

121.3 (c) 13G demonstrate skills associated with rehabilitative care such as range of motion, positioning, and ambulation.

Texas College Readiness Standards

English Language Arts

II. B. Understand new vocabulary and concepts and use them accurately in reading writing and speaking.

III. B.Develop effective speaking styles for both group and one on one situations.

IV. A. Apply listening skills as an individual and as a member of a group in a variety of settings.

Body Mechanics Checklist

A. Moving a patient up in bed when the patient can help the care giver.
    1. Identify the patient and address the patient by name.
    2. Introduce yourself and explain what will be done.
    3. Wash your hands.
    4. Provide privacy by closing door or pulling curtains.
    5. Raise the bed to a working height if possible (hospital bed).
    6. Lower the head of the bed if the patient can tolerate being flat.
    7. Use the pillow to pad the head of the bed if the patient does not require it under the head.
    8. Provide for safety of the patient by raising far side rail, but leave near rail lowered.
    9. Ask patient to bend knees and place feet flat on the mattress.
    10. Position the far arm so the patient can help "push off" if able.
    11. Position near arm under your arm with the hand on your shoulder, if possible.
    12. Slip your arm under the near arm with hand under shoulder.
    13. Place your other arm under the neck and shoulders.
    14. Count to three then lift the patient up (to wash back, fasten gown, etc or to slide up in bed).
    15. Provide support as the patient returns to supine position.
    16. Check to see that patient is comfortable and that the spine is straight.
    17. Reposition pillow under head, straighten bed linens, place call light within patient's reach.
    18. Raise near side rail if indicated.
    19. Return bed to lower position.
    20. Open screen curtain.
    21. Wash your hands.

B. Moving a helpless patient in bed.

1. Ask a co-worker to help you move patient.
2. Identify patient and address by name as you explain what you are doing.
3. Introduce yourself and the one who is helping.
4. Wash your hands.
5. Provide privacy with closed door or screen curtain.
6. Check that bed is securely locked and locked wheels if necessary.
7. Raise bed to working height if possible.
8. Flatten head of bed if condition of patient allows it.
9. Move pillow from under patient and position it at the head of bed next to the headboard.
10. Position worker/assistant on side of bed opposite you.
11. Ask patient for help if able to do so.
12. Place your feet about 12" apart with one foot pointed toward the head of the bed and the other foot pointed toward the side of the bed. Bend your knees and keep back straight.
13. Place one arm under the shoulder nearest you and the other under the hips. Ask your coworker to do the same on the opposite side.
14. Lock arms with the co-worker under the patient's hips and shoulders.
15. Ask the patient to bend slightly and raise both knees.
16. Explain that on the count of three, you and co-worker will lift patient toward head of bed. Ask patient to help by pushing with both feet.
17. At count of three, lift patient up in bed.
18. Repeat as necessary to move patient up.
19. Replace pillow under head and check for comfort.
20. Straighten linens and place call light where patient can reach it.
21. Raise the side rail as indicated by patient's condition.
22. Lower the bed, if reasonable.
23. Open screen curtain.
24. Wash your hands.

PROCEDURAL GUIDELINE #11 – BODY MECHANICS

A. Purpose
    1. To maximize strength.
    2. To avoid injury to the nurse aide and the resident.

B. General Guidelines and Precautions for Lifting and Moving
    1. Wear loose clothing and low heeled, comfortable, non-skid shoes to allow good body mechanics.
    2. Always get help from co-workers when needed before lifting heavy objects or residents who are unable to stand.
        A. Plan the lift ahead of time.
        B. Lift on signal such as "on the count of three."
    3. Elevate the bed to comfortable working height when working at the bedside. Remember to return the bed to the lowest horizontal position when finished for resident safety.
    4. Maintain good posture and good body alignment while lifting.
        A. Keep your back straight.
        B. Keep your knees bent.
        C. Keep your weight evenly distributed on both feet.
        D. Keep your feet at shoulder width (about 12 inches apart) to provide a broad base of support.
    5. Use the strongest and largest muscles to do the job. Leg and arm muscles are the strongest. Back and abdominal muscles are the weakest.
    6. Bend from the hip and knees--not waist--when lifting objects.
    7. Always squat down to lift heavy objects from the floor.
    8. Keep objects close to your body when lifting and carrying.
    9. Use both hands when lifting or moving heavy objects.
    10. Slide, push or pull heavy objects rather than lifting them, when possible.
    11. Use the weight of your body to help push or pull objects.
    12. Work with smooth, even movements--not quick, jerky motions.
    13. Face your work and avoid twisting your body.
    14. To change the direction of your work, take short steps and turn your whole body without twisting your back and neck.
    15. Avoid unnecessary bending and reaching.

http://www.dads.state.tx.us/providers/NF/credentialing/NATCEP/cna.pdf