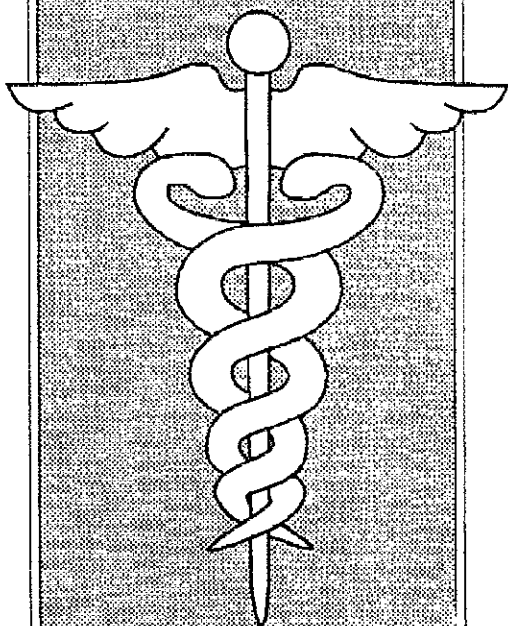


Long Term Care  
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# Ergonomics, Body Mechanics and Body Alignment

EDA 311-0055



**LTCN**™  
LONG TERM CARE NETWORK

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## **INTRODUCTION**

The use of good body mechanics and correct body alignment can prevent many injuries. The nursing assistant should know the correct way to lift and move residents. Positioning of residents to achieve correct body alignment is important to prevent discomfort and the complications of immobility.

## **LEARNING OBJECTIVES**

Upon completion of this activity, the learner should be able to:

1. Explain the purpose of good body mechanics.
2. List two rules of good body mechanics.
3. Recognize the procedure for proper lifting or transfer of a resident.
4. Explain the reasons for correct body alignment.
5. List two positioning devices that promote correct body alignment.

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This syllabus is designed to be used in conjunction with video program EDA311-0055 by the Long Term Care Network.

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- Get help when it is necessary to move heavy residents or objects.
- Use the large and strong muscles of the hips and thighs when lifting heavy objects.

## RESIDENT TRANSFERS

### **BED MOBILITY**

Sometimes a resident slides down in bed. He or she must be moved up to maintain good body alignment. This may be accomplished by one person with the help of the resident. Residents should be encouraged to help with moves or transfers when they are able as this will help to maintain strength and muscle tone.

The resident should flex the knees and grasp the head of the bed with the hands. The nursing assistant may then "scoot" the resident up in the bed by placing the hands under the resident's thighs and shoulders. At the same time, the resident will push against the bed with the feet and pull with the hands. The nursing assistant should keep his or her back straight and move the resident by shifting the nursing assistant's weight. If the resident is not able to help, then two nursing assistants will be needed to move the resident.

To aid a resident to sit up in bed, the nursing assistant may lock arms with the resident, placing the other arm under the resident's shoulders. This method of raising the resident may be used to reposition the resident to help him or her to sit up in bed.

The nursing assistant may need to help the resident from a sitting to a standing position. If possible, the resident may help by pushing his or her fists into the mattress as he or she stands.

### **DEPENDENT TRANSFERS**

Residents often need to be moved from their beds to a chair, wheelchair, or stretcher. Some may need only minimal assistance; others may need the help of one or more nursing assistants. A transfer or gait belt may help the nursing assistant in making such a transfer. The nursing assistant should be careful to

use good body mechanics when aiding or moving residents.

## BODY ALIGNMENT

The resident must be properly positioned whether lying in bed or sitting in a chair. Proper body alignment promotes comfort and may prevent complications, such as pressure ulcers. Respiration and circulation are promoted by good body alignment. Good body alignment is essential to rest.

A resident who sits in a chair must be able to hold the body and head erect. The back should be against the chair and more support may be added with a pillow. The feet should always be supported. A resident who is unable to keep the upper body erect may need postural support.

When lying in bed, the resident may need to be supported by pillows to keep the spine straight and to prevent discomfort. Residents, whether in bed or in a wheelchair, must be repositioned at least every two hours.

## SUMMARY

Good body mechanics and proper body alignment are necessary for health and to prevent injuries. Nursing assistants should know how to position their bodies when bending or lifting to promote efficiency and to prevent injury. Good body alignment is important to nursing assistants and to residents.

## BIBLIOGRAPHY

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# ERGONOMICS, BODY MECHANICS AND BODY ALIGNMENT

## ERGONOMICS

Ergonomics is concerned with the characteristics of people that need to be considered in designing and arranging things that they use. This science designs objects and procedures so that work may be accomplished easily, effectively, and safely. In the context of a long term care facility, this means ensuring that nursing assistants learn to use their bodies efficiently and safely when they lifting or transferring a resident. This means understanding the principles of body mechanics and good body alignment.

Body mechanics refers to special ways of standing and moving one's body: It also refers to using the body in an efficient and careful way. Body mechanics means using good posture and balance to avoid injury and prevent fatigue. The strongest and largest muscle groups of the body should be used to perform work.

Body alignment is the way in which the body parts are aligned with one another. Using proper body alignment allows the body to move and function with strength and maximum efficiency. Good body alignment is necessary whether an individual is sitting, standing, or lying down.

Nursing assistants must often lift residents who cannot move or stand on their own. The resident must depend on staff to assist with basic activities such as bathing which require lifting and which, if not done correctly, could result in healthcare workers experiencing pain, fatigue, or back injury.

## BODY MECHANICS

An important factor in using the body properly to lift and support is to stand on both feet with the feet about 12 inches apart. This will offer a wide base of support which will increase balance and stability.

The largest and strongest muscle groups are located in the shoulders, upper arms, and the thighs, and hips. The nursing assistant should use these muscle groups to lift and move heavy objects or to transfer residents. The large muscles of the hips and thighs are used by bending and squatting to pick something up rather than bending from the waist. Bending from the waist involves the small muscles of the back which may lead to strain, injury or fatigue. If a heavy object or person is held close to the body, the muscles of the upper arms and shoulders will be used. If the person or object is held away from the body, the weight will be carried by the smaller muscles of the lower arms.

To use good body mechanics in lifting and transferring residents the nursing assistant should:

- Stand in good body alignment with a wide base of support.
- Use the larger and stronger muscles of the body.
- Keep residents close to the body when lifting, moving, or transferring them.
- Avoid unnecessary bending and reaching. Adjust the bed to waist level.
- Avoid twisting the body. Turn the body when changing the direction of movement.
- Push, slide, or pull rather than lifting whenever possible.
- Use both hands and arms when lifting or carrying.

Name : \_\_\_\_\_

## POST TEST

### ERGONOMICS, BODY MECHANICS AND BODY ALIGNMENT

1. The purpose of good body mechanics is: 1. \_\_\_\_\_
  - a. To avoid injury
  - b. To make it easier for your body to work
  - c. To have more control if there is a problem
  - d. All of the above
  
2. It is a good idea for a resident to help during bed mobility and transfers if he or she can. 2. \_\_\_\_\_
  - a. True
  - b. False
  
3. The purpose of bed positioning for residents is: 3. \_\_\_\_\_
  - a. To make the resident more comfortable
  - b. To prevent stiff joints and muscles
  - c. To prevent bed sores from bony pressure points
  - d. All of the above
  
4. Good body alignment is not important when positioning a resident. 4. \_\_\_\_\_
  - a. True
  - b. False
  
5. How often should a resident be repositioned? 5. \_\_\_\_\_
  - a. Every 1 hour
  - b. Every 2 hours
  - c. Every 4 hours
  - d. Once a day