

BODY MECHANICS

Objectives:

Upon completion of this section, the employee will be able to:

1. Identify two advantages of utilizing proper body mechanics
2. Describe how to establish proper balance in performing daily tasks
3. Differentiate between proper and improper technique when lifting and carrying heavy objects

Instructions to the Employee:

Please read the following section, then answer the study questions at the end of this section.

BODY MECHANICS

I. INTRODUCTION

It is important to understand human movement in order to prevent injury while performing tasks. There are mechanical principles or rules that govern all movement and determine what the body can and cannot do. These principles apply regardless of the type of activity involved. Body mechanics is the application of laws of physics to the human body at rest or in motion.

II. REASONS FOR USING PROPER BODY MECHANICS

- A. To prevent injury to self or patients
- B. To prevent fatigue
- C. To maintain good general health and physical appearance
- D. To increase capacity to work comfortably
- E. To increase productivity

III. PROPER BODY MECHANICS

A. Use proper lifting technique

1. Place feet apart to provide an adequate base of support, which will assist in maintaining balance.
2. When lifting an object, keep it as close to one's body as possible.
3. Maintain the inward curve of one's lower back at all times.
4. Point one's feet in the direction of movement.
5. Bend one's knees and hips to get down to the level of the work. Do not overreach, especially when handling large bulky objects.
6. Center oneself over the load.
7. Lift the load straight up, keeping one's spine in a neutral position. Lift/pull with one's body weight.
8. Lift with one's legs, NOT one's back.
9. Do not twist or turn suddenly when lifting or carrying.
10. Set an object down properly; lower object by bending one's hips and knees, letting one's legs do the work.
11. Always push, not pull, an object when possible.

B. Use proper posture when sitting, standing or reclining

1. When **standing** correctly, the spine has a natural "S" curve. The shoulders are back and the "S" curve is directly over the pelvis.
2. When **sitting** correctly, knees should be at a 90° angle. Hips should be positioned to the rear of

the chair with the lower back not overly arched. Use a towel roll behind one's lower back to maintain the inward curve. Shoulders and upper back are not rounded.

3. When **reclining** correctly, lie on one's back or, alternatively, on one's side with knees bent. Lying on one's abdomen places strain on the spine.

C. Change positions frequently

1. Get up and stretch frequently if one is required to sit for long periods.
2. Change foot positions often if one is required to stand for long periods. Use an object/step stool to shift one's weight. Keep one's weight evenly balanced when standing.

IV. CAUSES OF BACK INJURY

- A. Poor posture/poor body mechanics
- B. Decreased flexibility
- C. Lack of physical fitness
- D. Poor work habits
- E. Repetitive trauma
- F. Accidents

V. GUIDELINES FOR PREVENTING MUSCULAR AND SKELETAL INJURY

The body can be thought of as a machine which must be used correctly to maintain health and efficiency. Consider the following guidelines:

A. Plan ahead

1. Assess the work to be done.
2. Ensure one can lift/carry the load.
3. Request help when necessary.

B. Use good body mechanics

C. Make sure one's path is clear

D. Check equipment for safety

1. Lock all brakes on wheeled equipment such as beds, wheelchairs, gurneys, etc. before moving patient to and from wheeled equipment.

E. Obtain patient's cooperation

1. Be sure the patient understands what is going to happen.
2. When working with another person, plan timing of movement for a smooth action.

F. Lifting or moving

1. Grip objects securely.
2. Whenever possible, slide patient or object over a friction-free surface rather than lifting.
3. Use a step stool to get closer to objects above shoulder level.
4. Stay in shape by following a sensible diet and exercise program.

PLEASE COMPLETE THE STUDY QUESTIONS

**BODY MECHANICS
Study Questions**

Select the best answer to each question. **DO NOT** write in the manual.

1. Which of the following are expectations of using good body mechanics?
 - a. Prevention of injury to self and patient
 - b. Increased capacity to work comfortably
 - c. Maintenance of general good health and a safer environment
 - d. All of the above
2. When lifting items to balance oneself correctly, one must
 - a. Lift with one's back
 - b. Place feet close together
 - c. Keep knees and hips straight
 - d. Keep the item as close to one's body as possible
3. Proper balance may be established by which of the following?
 - a. Keeping weight on one foot only
 - b. Placing feet apart and centering oneself
 - c. Keeping feet together and leaning forward
 - d. Tilting backward slightly while spreading feet apart
4. Which of the following guidelines should be followed when carrying heavy objects?
 - a. Lean backward
 - b. Hold the object at arm's length
 - c. Use whatever method is comfortable
 - d. Hold the object as close to the body as possible

CHECK YOUR ANSWERS TO THE STUDY QUESTIONS ON THE NEXT PAGE

BODY MECHANICS
Answers to Study Questions

1. d 2. d 3. b 4. d

If you answered all of the questions correctly, go on to the next section. If you missed one or more, read the content again and repeat the study guide questions.

Bibliography

Body mechanics-computer. In: *Hospital and Medical Administration Policy and Procedure Manual*. Torrance, CA: Harbor-UCLA Medical Center; 2006. Policy 463.

Body mechanics-exercises to relieve muscles in sustained positions. In: *Hospital and Medical Administration Policy and Procedure Manual*. Torrance, CA: Harbor-UCLA Medical Center; 2006. Policy 464.