BODY MECHANICS

Proper

INTRODUCTION

- *You will face the possibility of injury in your back in every area of Health care. All hospital personnel must understand and use proper body mechanics to preserve their physical health. If not done correctly, positioning, turning, and transferring patients or equipment can result in injury to you.*
- *Most work-related injuries are preventable if a person maintains good physical condition, understands basic body mechanics, and practices proper techniques with lifts and transfers*

CONT:

- **Ergonomics** is the study of body mechanics. It studies the physiologic limitations of body movement and what factors contribute to musculoskeletal disorders.
- Science is clear that the more you repeat a motion, the more likely you are to get hurt - though the number of repetitions for each person may be different
- An employee who has to engage in repetitive movements over time is particularly at risk for work-related injury

BACK INJURIES IN HEALTH CARE

Back injuries can occur from repeated activities over time or from one event.

Signs and symptoms of a back injury:

- pain when trying to assume a normal position
- decreased mobility and range of motion
- pain when standing or rising from a seated position

SAFE MOVEMENT

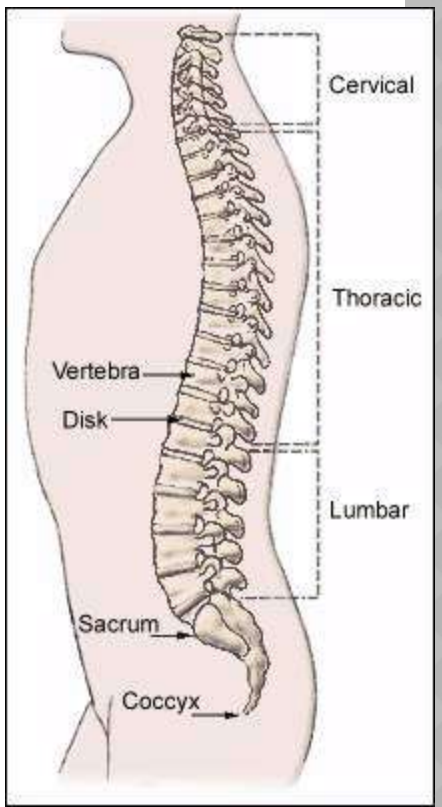
- Body mechanics and ergonomics
  - Refers to the way the body is moved to prevent injury to oneself and to others
  - Accomplished by using knowledge of proper body alignment, balance, and movement
  - Posture is the position of body parts in relation to each other
  - Balance is the ability to maintain a steady position that does not tip
  - Ergonomics refers to the design of equipment that minimizes fatigue and discomfort

TERMS RELATED TO BODY MECHANICS

- Body alignments: refers to correct positioning of head, back, and limbs
- Body support: advise used to support body at work to reduce damage when lifting, moving, and transferring clients

BACK ANATOMY

Back has three natural curves
cervical curve - neck
thoracic curve - middle back
lumbar curve - low back
These three curves need to stay in proper **alignment** (proper positioning of parts in a line)
Good posture - proper alignment of the spine
vertebrae - 33 individual bones make up spine
discs - round shaped cartilage which separate vertebrae. Discs absorb shock to spine.
back muscles - support the spine, not used for lifting



CONT

- The muscles of the thighs, buttocks, abdomen and back play a significant role in the prevention of serious injury to the back. These muscle groups support the 3 natural curves of the back and allow you to move freely
- The joints of the hips,knees,and ankles are essential in promoting healthy back by maintaining proper alignment of the back.
- The spine is a marvelous machine but is not indestructible, so proper body mechanics are essential for a healthy back.

BODY IN PROPER ALIGNMENT

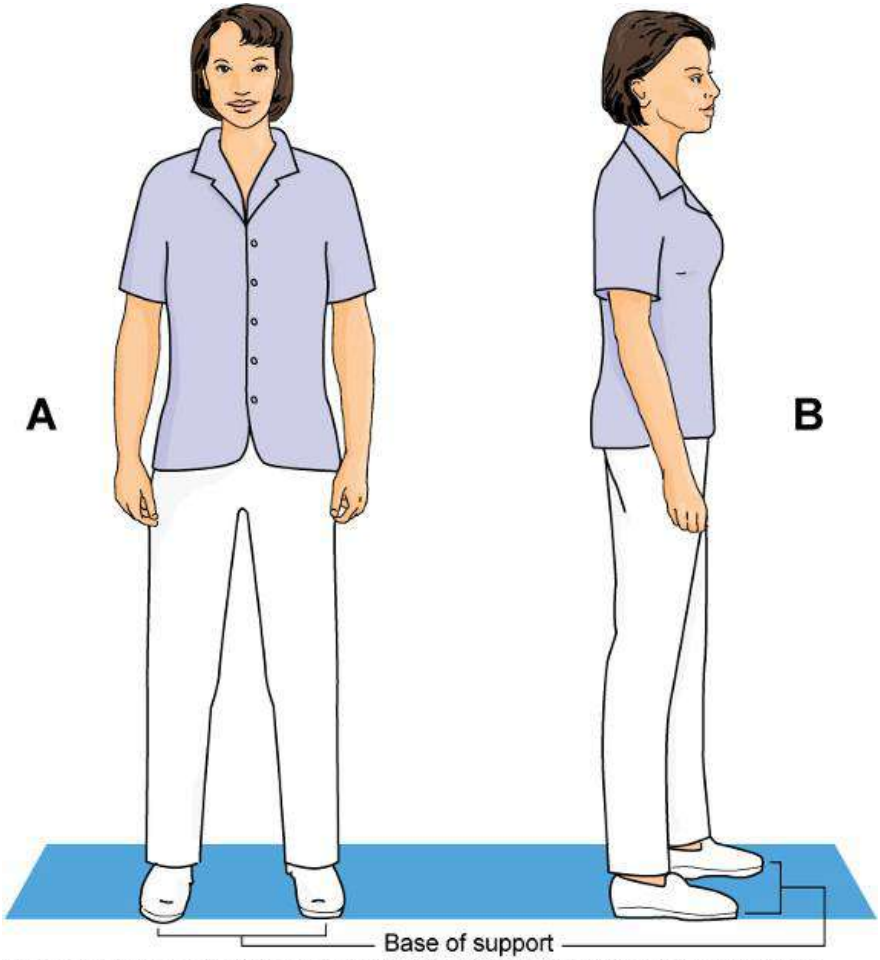
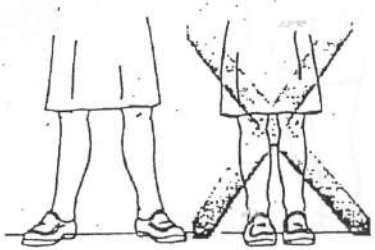


Fig. 15-3. **A,** Anterior (front) view of an adult in good body alignment. The feet are apart for a wide base of support. **B,** Lateral (side) view of an adult with good posture and alignment.

The Ten Commandments of Good Body Mechanics

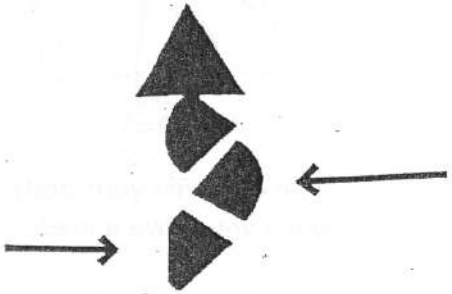
1. Assess the work or load you will handle.



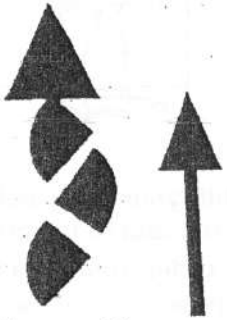
2. Keep your feet apart for security and a broad base of support.

3. Get a secure hold on the person or object you are lifting.

4. Keep your back straight.



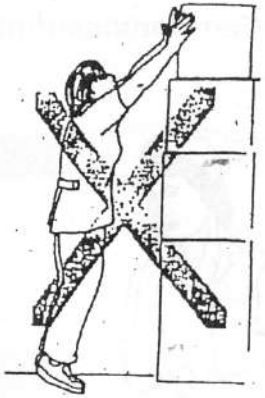
5. Pull in your stomach and your hips when you lift.



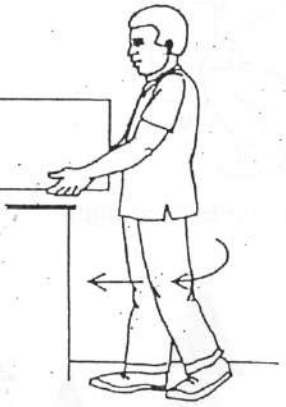
6. Lift smoothly.

he Ten Commandments of Good Body Mechanics (Cont.)

7. Keep the weight close to body.



8. Do not over-reach or stretch.



.Shift your body weight from one foot to the other in order to move a load.

10. Do not twist your body when you move a load.

94). Health occupations (the vocational ESL series). Los Angeles, CA.: Educational Telecommunications Network (ETN), Los Angeles County Department of Education. Used with permission under grant.

REASONS FOR USING PROPER BODY MECHANICS

- · Muscles work best when used correctly
- · Correct use makes lifting, pulling and pushing easier
- · Correct use prevents unnecessary fatigue and strain
- · Preventing unnecessary fatigue and strain saves energy.

GOOD BODY MECHANICS RULES

1. Use a broad base of support.
2. Don’t twist and lift.
3. Don’t bend for long periods of time.
4. Get help if the load is too heavy.
5. Bend from the hips and knees, not the waist.
6. Use the strongest muscles to do the job.
7. Push or pull using the weight of your body.
8. Carry objects close to the body.

GOOD BODY MECHANICS

Conditions which affect moving, lifting, or transferring clients

- Obesity
- Fragility
- Amputation
- Paralysis
- Altered level of consciousness
- Language barriers
- Hearing or vision loss
- Extra equipment needs