

Chapter 8

Body Mechanics and Patient Mobility

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Lesson 8.1

1. State the principles of body mechanics.
2. Explain the rationale for use of appropriate body mechanics.
3. Discuss considerations related to mobility for older adults.
4. Discuss the complications of immobility.
5. Demonstrate the use of assistive devices for proper positioning.
6. State the nursing interventions used to prevent complications of immobility.

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Body Mechanics

- Area of physiology that studies muscle action and how muscles function in maintaining the posture of the body and prevention of injury during activity
- Principles of body mechanics
 - > Maintain appropriate body alignment
 - > Maintain wide base of support
 - > Bend knees and hips
 - > Do not bend from waist

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Rationale for Proper Body Mechanics

- Must be learned by nursing personnel to prevent injury
- Back injuries rank second in occupational injuries
- Using proper body mechanics
 - > Protects large muscle groups from injury
 - > Provides safety

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Body Mechanics and Patient Mobility

- Evidence-based practice
 - > Safe-lift programs
 - > Application to nursing practice



Life Span Considerations


- Mobility
 - > Skin fragile
 - > Support joints when moving in bed
 - > Lose flexibility and joint mobility
 - > Weakness
 - > Orthostatic hypotension
 - > Altered sensory perception

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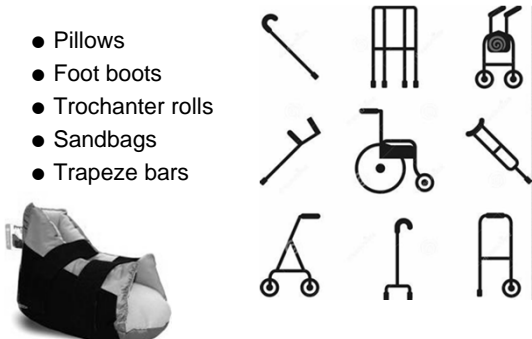
Mobility Versus Immobility

- Mobility
 - > Ability to move around freely
- Immobility
 - > Inability to move around freely



Assistive Devices

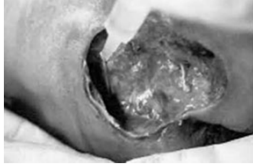
- Pillows
- Foot boots
- Trochanter rolls
- Sandbags
- Trapeze bars





Complications of Immobility

- Muscle atrophy and asthenia (muscle weakness)
- Contractures
- Osteoporosis
- Pressure ulcer
- Constipation
- Pneumonia, pulmonary embolism



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Lesson 8.2

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7. Demonstrate placement of patient in various positions, such as Fowler's, supine (dorsal), Sims, side-lying, prone, dorsal recumbent, and lithotomy positions.
8. State the assessment for the patient's neurovascular status, including the phenomenon of compartment syndrome.
9. Describe and demonstrate range-of-motion exercises and explain their purpose.
10. Identify complications caused by inactivity.

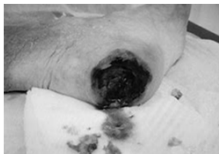
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Lesson 8.2

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11. Relate appropriate body mechanics to the techniques for turning, moving, and lifting the patient.
12. Discuss use of the continuous passive motion machines.
13. Discuss the nursing process and how it relates to patient mobility.



Positioning

(Slide 1 of 3)

- Dorsal – lying flat on back
- Dorsal recumbent – supine lying on back, head, and shoulder with extremities moderately flexed
- Fowler's – head of bed is raised 45-60 degrees
- Semi-Fowler's – head of bed raised 30 degrees

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Positioning

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- Orthopneic – sitting up in bed at 90-degree angle or sometimes resting in forward tilt while supported by pillow on overbed table
- Sims' – lying on side with knee and thigh drawn toward chest
- Prone – lying face down in horizontal position

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Positioning

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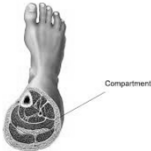

- Knee-chest (genupectoral) – kneels so weight of body is supported by knees and chest, abdomen raised, head turned to one side and arms flexed
- Lithotomy – lying supine with hips and knees flexed, thighs abducted and rotated externally
- Trendelenburg's – head is low, body and legs are on inclined plane
- Lateral

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Neurovascular Assessment

- CSM
 - > Neurovascular function or circulation
 - > Movement
 - > Sensation
 - > LPN/LVNs check skin color, temperature, movement, sensation, pulses, capillary refill, and pain
- Compartment syndrome





Range-of-Motion Exercises

- Movement of the body that involves the muscles and joints in natural directional movements
- Active – performed by patient
- Passive – performed by caregivers

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Life Span Considerations (Older Adult)

- Inadequate calcium intake
- Fear of falling
- Depression
- Arthritic
- Chronic illness



Moving the Patient

- Assist patient with moving
- Assist with ambulation
- Using a lift



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Continuous Passive Motion Machines

- Machine that flexes and extends joints to passively mobilize them
- Prevents complications
 - > Joint contracture, atrophy of muscles, thromboembolism

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Nursing Process for Mobility

- Assessment
 - > Foci of ROM, muscle strength, activity tolerance, gait, posture
 - > Observe for fatigue, muscle strength, ROM
 - > Assistance needed for transfers
- Patient problem statement
- Expected goals and planning
- Implementation
- Evaluation

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