



CAPTURE Falls

Collaboration and Proactive Teamwork Used to
Reduce

Best Practices in Safe Transfers and Mobility to Decrease Fall Risk

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Dawn M. Venema, PT, PhD

Jill Hassel, DPT

Katherine J. Jones, PT, PhD



Acknowledgement



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Learning Objectives

- **Describe current CAPTURE Falls event report statistics regarding types and effects of falls**
- **Discuss how principles of balance relate to falls**
- **Explain strategies to reduce patient fall risk during assisted transfers and ambulation**
- **Explain strategies to improve patient stability in sitting**



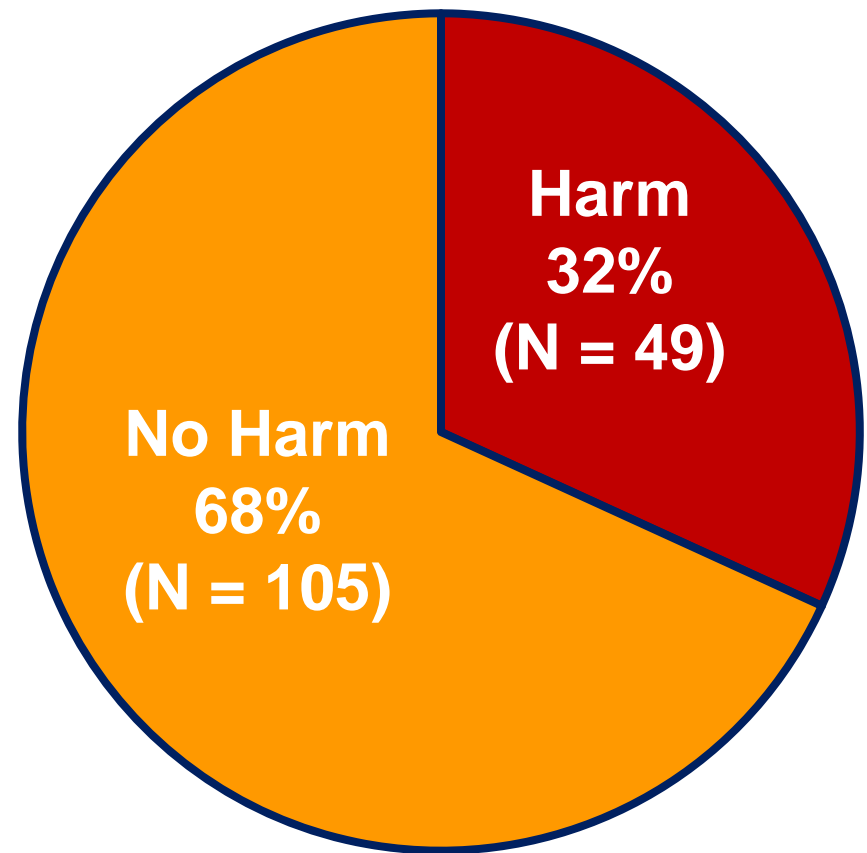
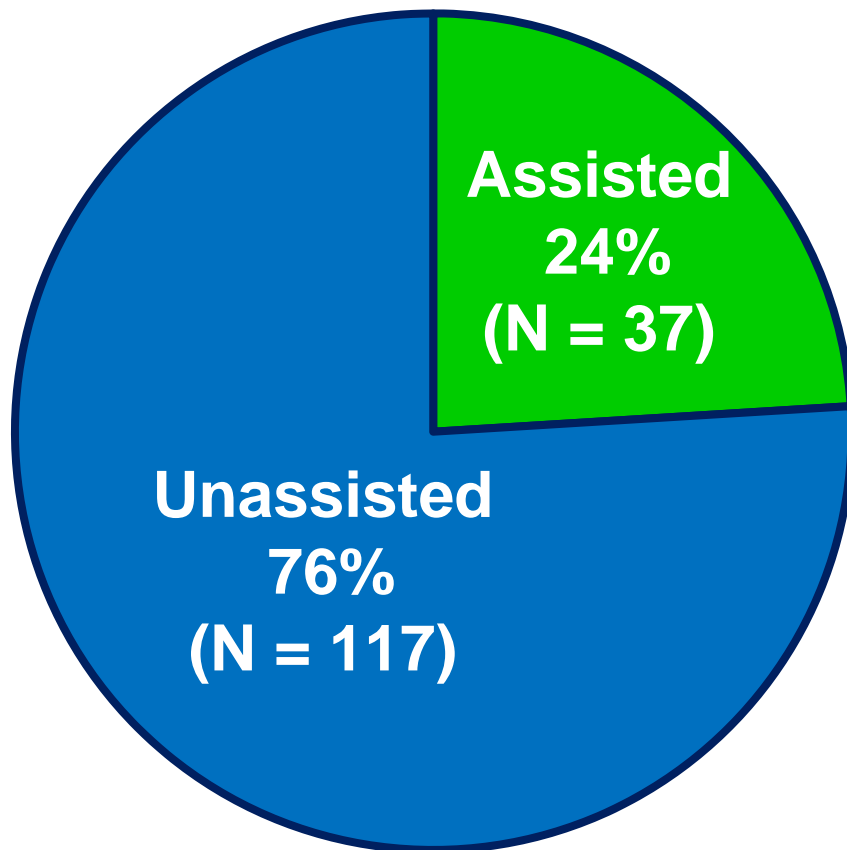
Part 1: Introduction

Introduction



Introduction

Total Reported Falls in CAPTURE Falls through July 2013 = 154

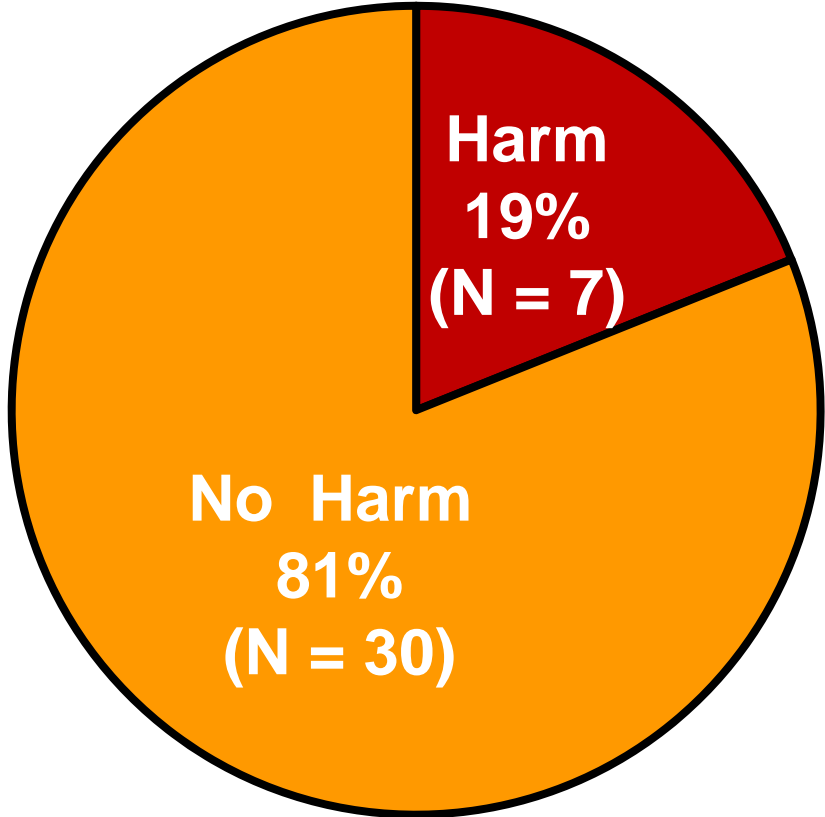




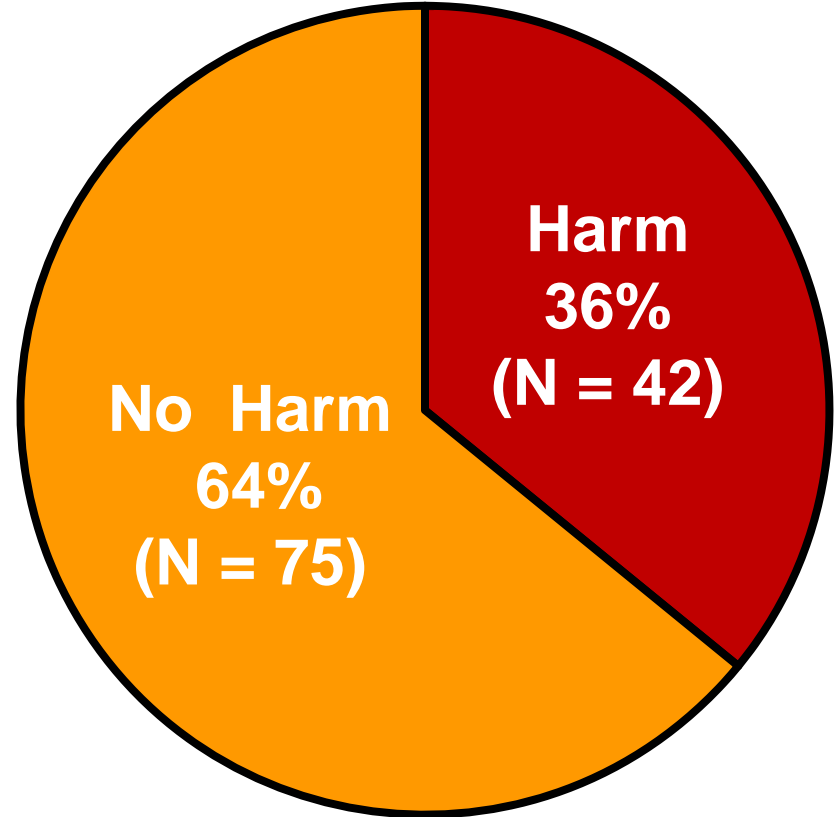
Introduction

Relationship Between Harm and Assistance

Assisted Falls
N = 37



Unassisted Falls
N = 117





Introduction

Five of the 49 harmful falls resulted in moderate* or severe** harm.

ALL five of these falls were unassisted.

*moderate harm = Bodily or psychological injury adversely affecting functional ability or quality of life, but not at the level of severe harm

**severe harm = Bodily or psychological injury (including pain or disfigurement) that interferes significantly with functional ability or quality of life

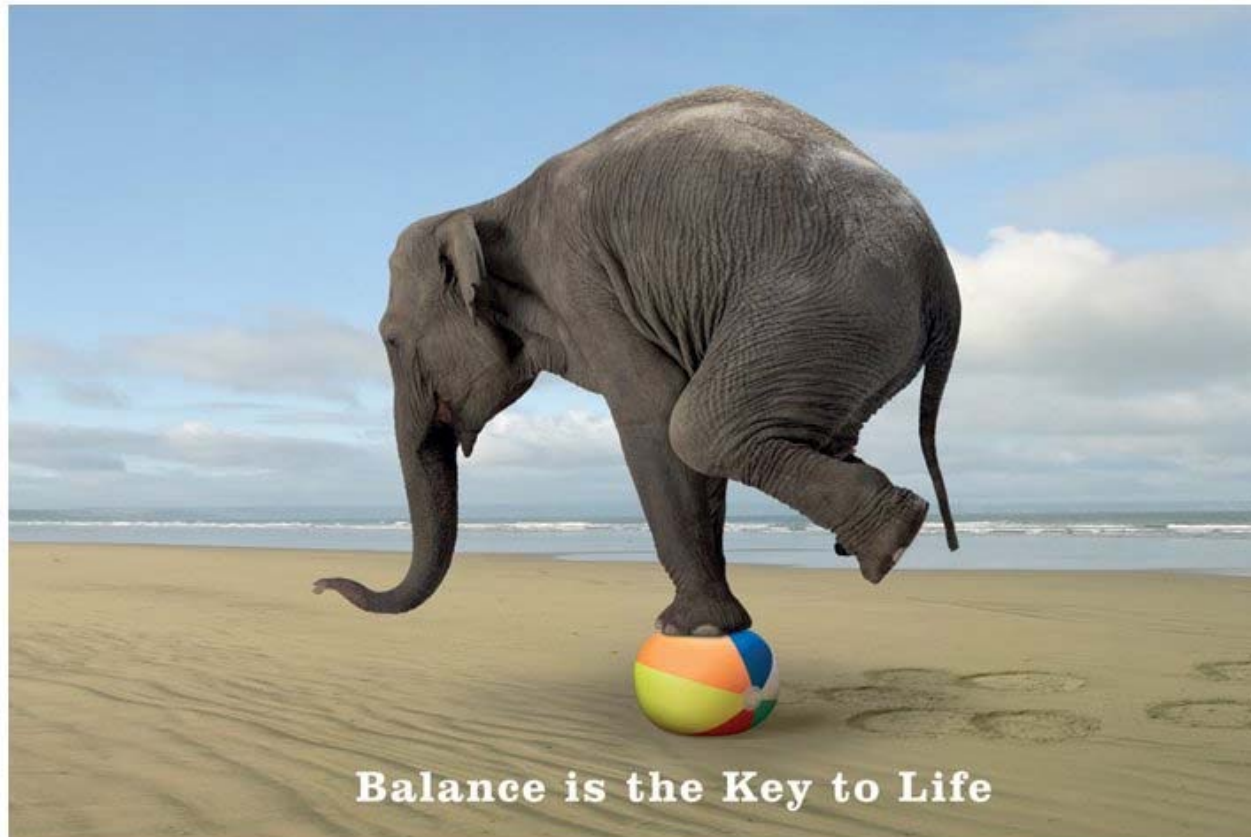




Part 2: Basics Principles of Balance

Basic Principles of Balance*

**also known as Postural Control*





Basics Principles of Balance

Base of Support (BOS)

- The area on which the body rests;
- The area that provides support for the body
 - Larger BOS = More Stability



Narrow Base
Of Support



Wide Base Of
Support



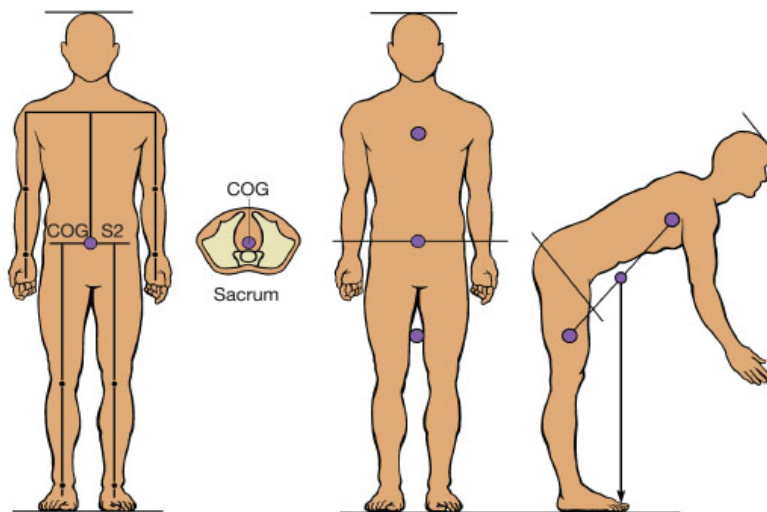


Basics Principles of Balance

Center of Mass (COM)*

**also known as center of gravity (COG)*

- The point at which the mass of the body is centered
- In an erect standing posture, the COM is located at the sacrum
- COM position moves with changes in body position

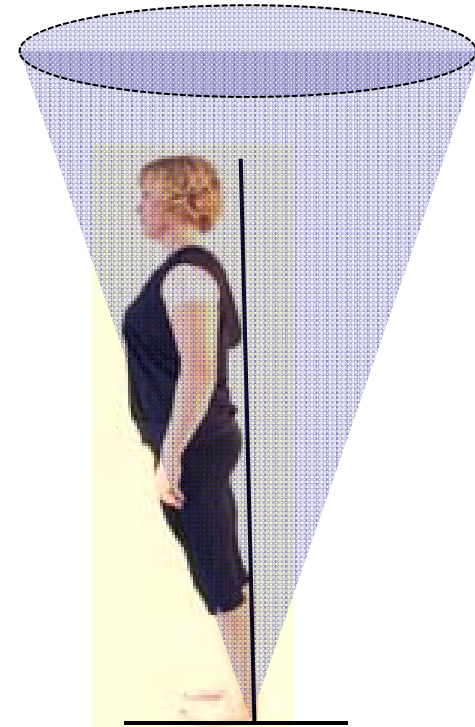




Basics Principles of Balance

Limits of Stability (LOS)

The maximum distance an individual is able or willing to move their center of mass in any direction without loss of balance or changing the base of support

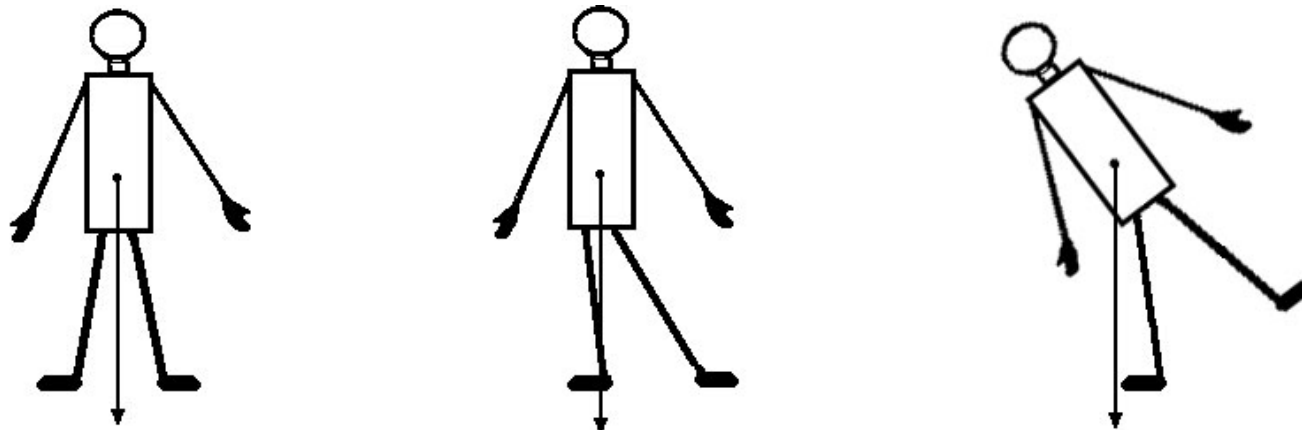




Basics Principles of Balance

Balance

Balance is the condition in which all the forces acting on the body are balanced in such a way that the center of mass (COM) stays within the limits of stability (LOS), which is dependent upon the base of support (BOS)

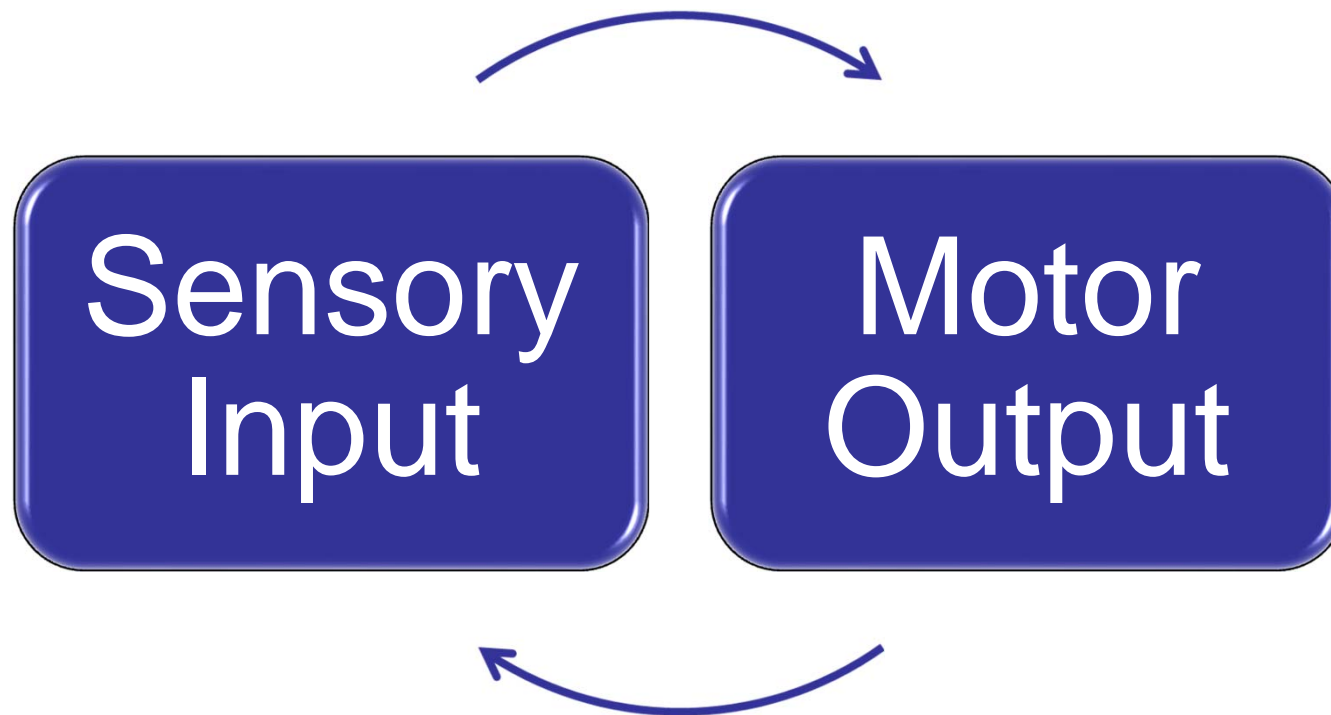




Basics Principles of Balance

Balance Simplified

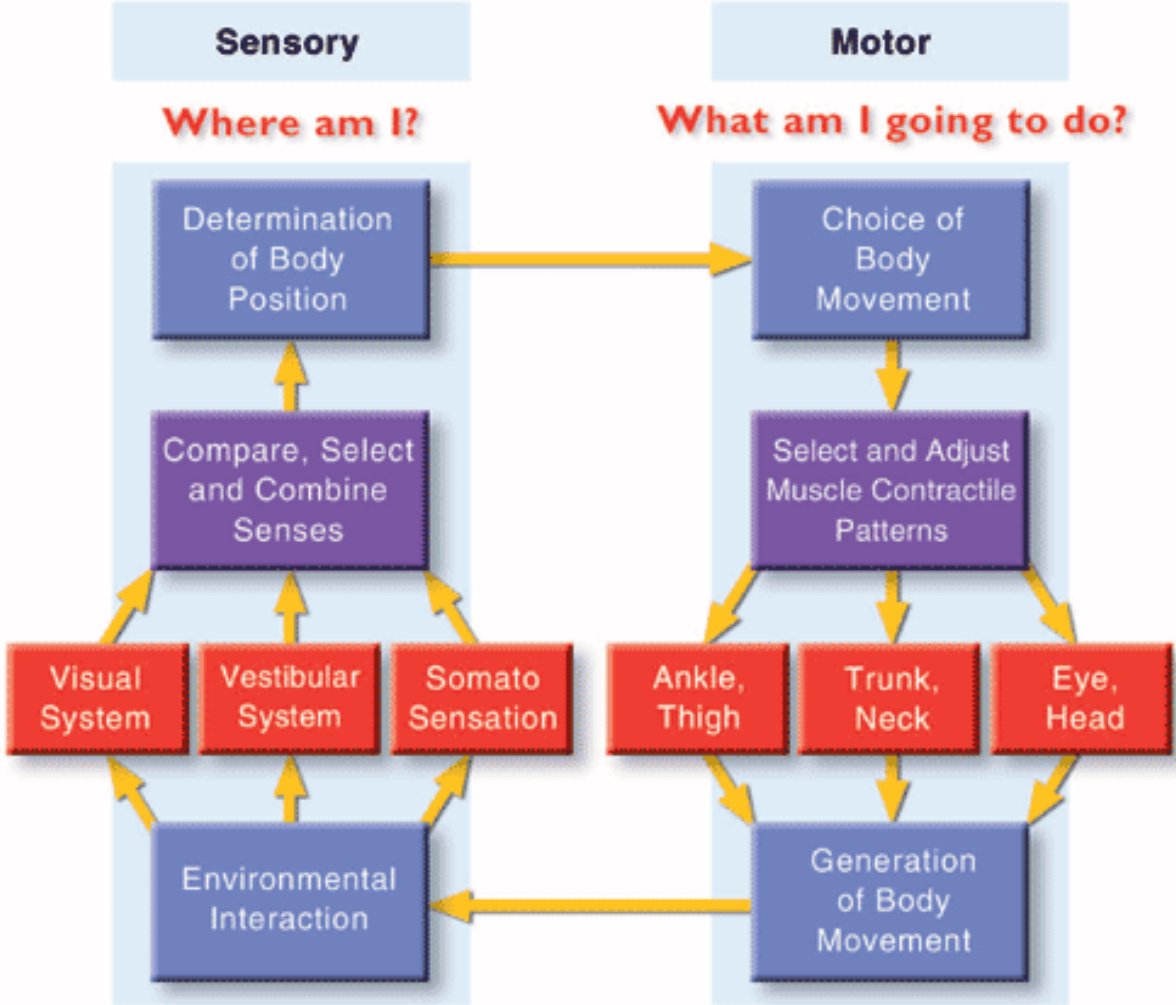
How Do We Maintain our Center of Mass
within our Limits of Stability?





Basics Principles of Balance

Balance Control





Part 3: Safe Transfer and Mobility Techniques

Safe Transfer and Mobility Techniques

*Disclaimer: The transfer techniques
shown may need to be modified for
specific patient diagnoses*



Body Mechanics

Basic Body Mechanics Principles:

The safer you are, the safer your patient will be.

**Adjust the height of
the bed as needed**

**Use a wide base of
support**

**Maintain the natural
curves of your back -
Bend at your hips
and knees instead**

**Get your center of
mass close to your
patient's center of
mass**



Body Mechanics

Basic Body Mechanics Principles:

The safer you are, the safer your patient will be.

**Move or pivot
your feet to turn;
do not twist at
your back**

**Always let your
patient assist as
much as possible**

**Perform transfer in
a smooth motion**

**If more than 1
person is assisting,
communicate**



Level of Assistance

PT Documentation: Level of Assistance

- **Dependent:** Patient requires total assistance
- **Max Assist:** Patient does 25%, Caregiver does 75%
- **Mod Assist:** Patient does 50%, Caregiver does 50%
- **Min Assist:** Patient does 75%, Caregiver does 25%





Level of Assistance

PT Documentation: Level of Assistance

- **Contact Guard Assist (CGA):** Caregiver has hands on pt “just in case,” gives verbal cues but does not physically assist
- **Stand By Assist (SBA):** Caregiver is nearby and ready to assist but does not touch the pt—May give verbal cues
- **Modified Independent:** Pt is able to complete the transfer without a caregiver present but requires adaptive equipment to complete the task
- **Independent:** Pt is able to completed the transfer without a caregiver present and without the use of adaptive equipment



- **Video “Menu” for Today**
 - **Supine to Sit**
 - **Gait Belt Application**
 - **Stand Pivot Transfer Bed to Chair Without Assistive Device (1 Assist)**
 - **Stand Pivot Transfer Chair to Bed With Assistive Device (1 Assist)**
 - **Wheelchair Management**
 - **Squat Pivot Transfer Bed to/from Chair (2 Assist)**
 - **Assisted Ambulation**
 - **Ambulation: Controlling a Loss of Balance**
 - **Assisted Fall to a Chair**
 - **Assisted Fall to Floor**



Supine To Sit Transfer: 1 Person Assist

Video



Supine To Sit Transfer: Safety

- **If two assist is needed, one can handle legs, the other can handle trunk**
- **Gather necessary equipment prior to sitting up (gait belt, non-slip socks, walker, etc.)**
- **Lower bed once pt is sitting so that pt's feet contact floor**
- **Keep 1 hand on the pt once in sitting**
- **Watch for potential dizziness, orthostatic hypotension (Take orthostatic BPs if needed)**
- **Also maintain pt modesty with proper draping**



Gait Belt Application

Video



Gait Belt Application

Gait Belt Helpful Hints

- Purpose is to control patient's center of mass during mobility, control descent if a fall occurs, and reduce chance of grabbing patient's upper extremities
- Place the belt low and snug
- Thread the end through both sides of the buckle – teeth side first.
- May need to adjust tightness once in standing
- Hold from bottom edge of the belt



Gait Belt Application

Gait Belt Helpful Hints

A good way to ensure a gait belt is used with every transfer is to have it in a specific place in every room so it is easy to find



These gait belts are ready for use!



Bed To Chair Transfer: 1 Person Assist

Video



Chair To Bed Transfer: With Device

Video



Bed ↔ Chair Transfer: Safety

- **Minimize distance between chair and bed**
- **Patient should wear non-slip socks or shoes**
- **Use a gait belt**
- **Patient should initiate stand with wide base of support, feet underneath their center of mass**
- **Transfer towards the patient's stronger side**
- **Patient should make contact with surface before sitting**



Bed ↔ Chair Transfer: W/C Management

Video



W/C Management: Safety

- **Lock the brakes**
- **Swing away/remove leg rests to position chair in close proximity to surface pt is transferring to/from**
- **If leg rests can't be removed, elevate the footplates for the transfer**
- **Remove armrest if needed**





Bed To Chair Transfer: 2 Person Assist

Video



Chair To Bed Transfer: 2 Person Assist

Video



Bed ↔ Chair Transfer: 2 Person Assist

- **Technique shown is a “squat” pivot**
- **One caregiver in front, one behind allows for closer proximity of chair**
- **Best done into a wheelchair or chair where armrest can be removed**
- **Caregiver in front shifts his/her body weight backward as pt leans forward, which elevates the pt’s hips**
- **Caregiver behind helps “steer” pelvis**



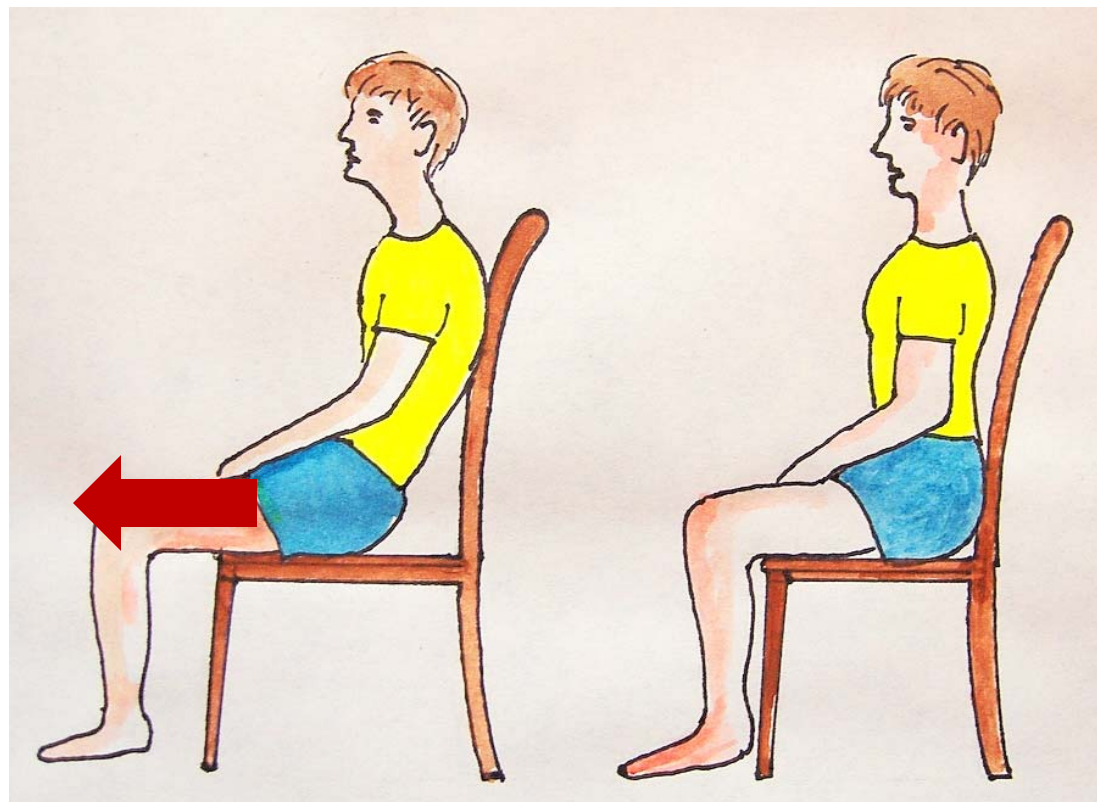
Correct Chair Positioning



Photo Credit: <http://media-cache-ak1.pinimg.com/originals/60/02/b0/6002b026e8fae7fe37e78156db05faee.jpg>



Correct Chair Positioning



Posterior Pelvic Tilt Vs. Anterior Pelvic Tilt



Chair Fit Considerations

- **Seat height:** Can patient's feet touch the floor?
- **Seat depth:** How does this compare to patient height/femur length? Can patient's feet touch the floor? What is the position of the patient's pelvis (anterior vs. posterior tilt)?
- **Seat width:** Is patient slumping to one side?
- **Elevating legs:** May be indicated medically or for comfort. May also pose a fall hazard.



Chair Characteristics

Chair with poor characteristics



Chair with good characteristics





Chair with Good Characteristics

**Elevating arm rest
facilitates transfers
from bed to chair**





Assisted Ambulation

Video



Ambulation: Controlling a Loss of Balance

Video



Ambulation: Assisted Fall to a Chair

Video



Ambulation: Assisted Fall to the Floor

Video



Ambulation and Assisted Falls: Safety

- **Guard on weaker side (if there is asymmetry of strength)**
- **Maintain a wide base of support yourself**
- **Use the gait belt to control movement of patient's center of mass in the event of a fall**
 - **Use the gait belt to direct the pt's center of mass back over their base of support**
 - **Pull patient towards you or another stable object, and/or retard descent**



Summary

- **In falls reported by CAPTURE Falls hospitals, there was a smaller percentage of harmful falls when the falls were assisted vs. unassisted.**
- **Balance = maintaining one's center of mass within one's limits of stability and/or base of support. It requires sensory input and motor output.**
- **Use proper body mechanics when assisting patients with transfers and gait. If you are stable, you can help your patient stay stable.**
- **If in doubt, ask for help!**



Acknowledgements: Videos

- Stephen Smith: Instructional Technologist/Videographer, College of Nursing, UNMC
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Photo Credit: www.team-building-techniques.com



Thank You



References/Resources

Fairchild S. *Pierson and Fairchild's Principles and Techniques of Patient Care*. St. Louis, MO: Elsevier Saunders; 2013.

O'Sullivan SB, Schmitz TJ. *Physical Rehabilitation*. 5th ed. Philadelphia, PA: F.A. Davis Company; 2007.

**U.S. Department of Veterans Affairs - includes information on patient care ergonomics, algorithms for safe patient handling, bariatric toolkit, and more:
<http://www.visn8.va.gov/patientsafetycenter/safePtHandling/>**



Contact Information

Dawn Venema, PT, PhD
dvenema@unmc.edu



**Please complete the webinar
evaluation by clicking on the link
below:**

<https://www.research.net/s/capturefalls-eval8>

We value your input!



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CAPTURE Falls

Collaboration and Proactive Teamwork Used to Reduce

http://unmc.edu/patient-safety/capture_falls.htm

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