

PARTNERS IN MOBILITY: HOW TO HELP PATIENTS BE MORE ACTIVE

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MEDICINE

Why is mobility important?

- Lower levels of physical fitness are directly associated with all-cause mortality and cardiovascular disease
- Most hospitalized patients currently spend most of their time in bed.
- Increased complications from prolonged bed-rest for hospitalized patients.

JAMA. 1989;262(17):2395-2401.

J Am Geriatr Soc. 2009; 57(9):1660-5

JAMA. 2008;300:1685–1690

What are some of the systems affected by bed rest

- **Skeletal muscle atrophy and weakness**
 - Muscle mass decreases by ~1.5-2% per day during bed rest.
 - Likely via increased oxidative stress and degradation of proteins.
- **Joint contractures**
 - One study found 61 of 155 patients with contractures who survived a critical illness, commonly in elbow and ankle.
- **Thromboembolic disease**
 - Virchow's triad includes the three categories of factors that contribute to thromboembolic disease: blood flow; vascular injury; and coagulopathy.
- **Atelectasis**
 - Many ill patients, atelectasis of the left lower lobe is apparent on chest radiographs. Atelectasis may predispose to pneumonia, and it raises pulmonary vascular resistance.
- **Pressure ulcers**
 - In supine subjects, raising the head of the bed causes greater pressure at the skin-bed interface in the sacral region, increasing the risk of skin ulcers

Brower. CCM 2009

The Challenge

- “The adult human form is an awkward burden to lift or carry. Weighing 200 pounds or more, it has no handles, it is not rigid, and it is susceptible to severe damage if mishandled or dropped.”
(circa 1950)

- The cumulative weight lifted by a nurse in one typical 8-hour shift is equivalent to 1.8 tons. (Tuohy-Main, 1997)
- 34% of student nurses experience back pain during clinical placements. (Barnes, 2009)
- Nursing staff and orderlies suffer the highest prevalence of work related back injury in U.S. (CDC, 2010)

Body Mechanics: Protect the Spine

Don'ts

- Bend at the waist.
- Flex your spine.
- Twist your spine.
- Reach far out with your arms.

Do's

- Bend at the knees.
- Maintain lumbar lordosis and neutral spine.
- Pivot feet.
- Get close to the patient.
- Keep a wide base of support.

The importance of a “neutral spine”

Poor back positioning



Correct positioning



Body Mechanics is not enough.....

- Safe Patient Handling equipment should be considered based on RN assessment.

SAFE PATIENT HANDLING EQUIPMENT

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Products to be considered

- Ceiling lifts
- Portable lifts
 - Bariatric
- Anti-friction sheets

SITTING EDGE OF BED

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Bed Mobility

- Patient can push with one leg to help roll lower body and use the rails to help.
- Support the patient at the pelvis and shoulder blade.
- Once rolled onto the side, the patient's legs come off the bed and patient comes to sitting.



SIT TO STAND

Sit to Stand Transfer

- Remember your body mechanics.
- Assist the patient to the edge of the bed.
- Assist the patient so their feet are flat on the floor and knees are at a 90 degree angle.
- Instruct the patient to push up from the bed or arm rests, NOT pulling on you.
- Use momentum.
- Raise the bed to make it easier to rise.

Sit to Stand



For a two person transfer
Mod to Max assist



For a Min A transfer

STAND PIVOT TRANSFER

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Stand Pivot Transfer

- Remember your body mechanics
- Always support on the “impaired” or “weak” side
- Flex the patient’s knees are at least at a 90 degree angle when sitting on the edge of bed
- Block the knees if they are weak in standing
- Transfer to the stronger side if possible
- Remove arm rest if able
- Head-Hips relationship

Stand Pivot Transfer

(What can be improved?)

1. Position the patient.



2. Stand and pivot.



3. Patient's legs are against the bed.



4. Made it!



The patient can be mobile...now what?

- Encourage mobility with every patient.
- Communicate with therapy staff about ambulation status.
- Utilize assistive devices in the room with the patient.
- If appropriate, encourage the family member to help mobilize the patient.

How to Fit an Assistive Device

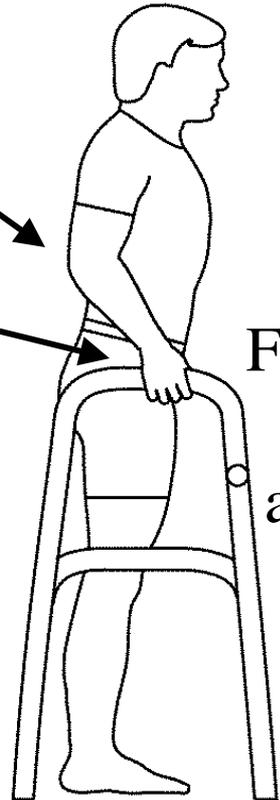
Elbow is slightly bent



The arm that is opposite the affected side holds the cane

Hand position is at the greater trochanter

Elbow is slightly bent



Front legs will slide off to accommodate wheels

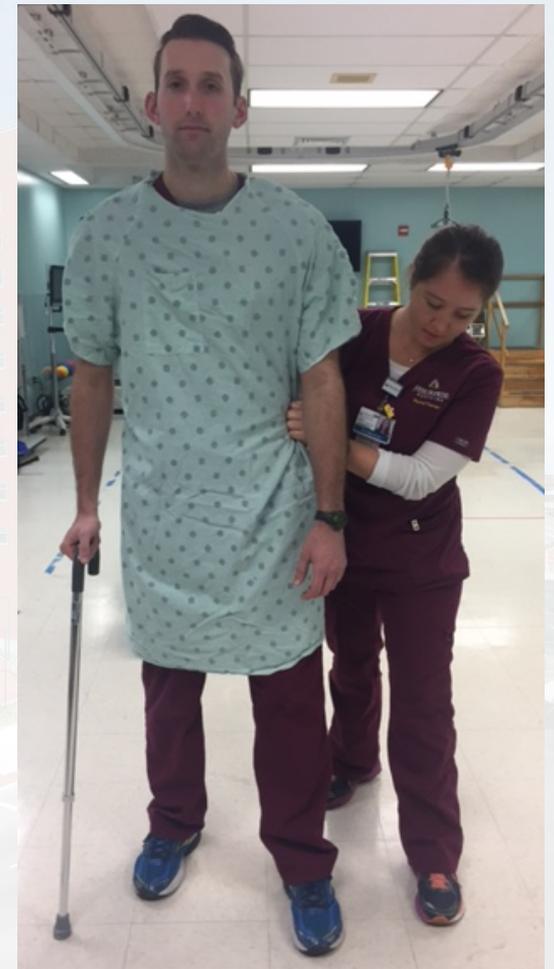
Feet are just inside the walker

HOW TO GUARD A PATIENT

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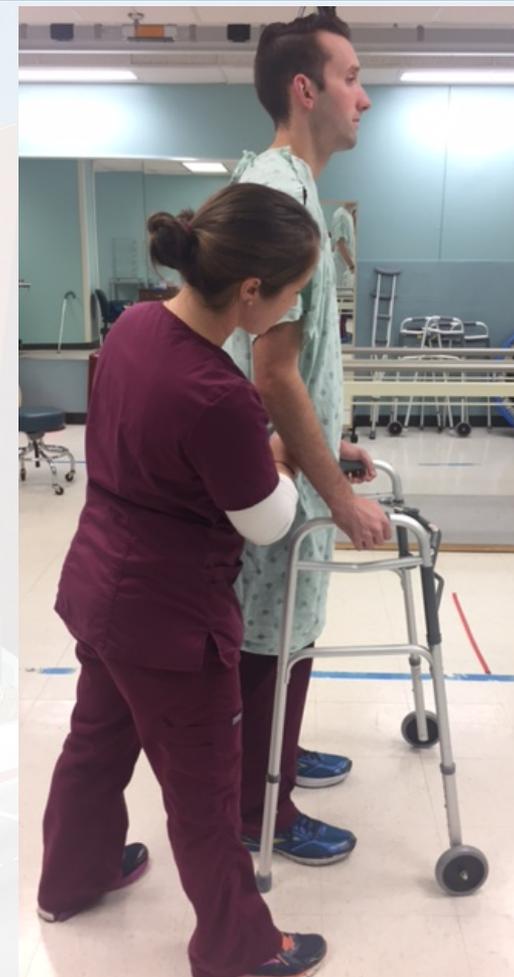
ASSISTANCE WITH CANE AND WALKER



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ASSISTANCE WITHOUT DEVICE

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HAND HOLD ASSIST FOR BALANCE WITH OR WITHOUT ASSISTIVE DEVICE



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