Ambulation Training

Ambulation Training

- Ambulation
    - A primary functional goal for many residents
    - Often requires therapist intervention and oversight
    - Gait belts should be used as directed
    - Safe body mechanics should be practiced by all involved in ambulation training

- Gait Training

The purpose of a gait-training program is to provide the resident with a method of ambulation that allows maximum functional independence and safety at a reasonable energy cost.

Assistive Devices

- Types of Assistive Devices:
    - Walkers:
        - Pick up (standard-SW)
        - Front wheeled (FWW)
        - 3 wheeled walker (3WW)
        - Four wheeled (4WW)
        - Platform walker
        - One-handed walker (stroke walker)
    - Canes:
        - Straight cane/single point cane (SC/SPC)
        - Walk cane/hemiwalker
        - Quad cane (QC)
    - Crutches:
        - Underarm (Axillary) crutches
        - Forearm crutches
        - Platform crutches

- Adjustment of Assistive Devices
    - Adjustable Walkers
        - Ask the resident his/her height or estimate the resident's height. As a rule of thumb, residents who are 5'2" and below should use a youth walker. Residents who are 5'3" and above should use an adult size walker.
        - Choose a walker appropriate for the resident's height
        - Examine the walker for obvious defects. Check the tips, wheels and/or brakes on each of the legs.
        - To determine the correct height of a walker, have the resident stand and place his/her hands on the walker. Move the walker slightly

forward of the resident's feet and have the resident relax his/her arms. In this relaxed position, the elbows will form a 30-degree angle when the walker is at the correct height, or have resident let go of walker and relax arm straight down. Resident's wrist should be at the level of the handgrip. When hand is placed on the walker, the wrist will be at 30 degrees.

- Determine if the walker needs to be raised or lowered in order for the elbows to form a 30-degree angle
- The walker can be adjusted in 1" increments
- Return the resident to the sitting position and adjust the walker
- To adjust the walker, turn the walker upside down and push the button on the adjustable legs. Pull the legs out to make the walker taller or push the legs in to make the walker shorter.
- Be sure when you have finished the adjustment of the walker, the buttons are fully exposed and protruding outward. If the buttons do not "pop out," attempt to re-adjust. If the buttons continue to fail to "pop out," do not use the walker. It is unsafe.
- Be sure all four legs of the walker are adjusted to the same height
- Stand the resident with the walker and re-check the height adjustment. With the arms relaxed, the elbows should form a 30-degree angle. Re-adjust the walker if necessary.

- Adjustable Canes
  - Examine the cane for obvious defects, as well as a good tip
  - To determine the correct height of a cane, have the resident stand up and place his/her hand on the cane
  - The cane should be placed slightly forward and to the side of the resident's foot
  - When the resident is standing erect with his/her arm relaxed, the elbow will form a 30-degreee angle when the cane is adjusted correctly
  - If the angle is greater than 30 degrees, the cane will need to be shortened
  - If the angle is less than 30 degrees, the cane will need to be lengthened
  - Sit the resident down and adjust the cane
  - To adjust the cane, push the button in on the lower half of the cane and pull the cane apart to make it longer, or push the cane together to make it shorter
  - The cane can be adjusted in 1" increments
  - Once the cane is adjusted, make sure the button has "popped out.. If the button has not "popped out," re-adjust the cane until it does. If for any reason the button will not pop back out, do not use the cane. It is unsafe.
  - Stand the resident with the newly adjusted cane and re-check the angle of the elbow. The elbow should be in approximately 30 degrees of flexion; if not, re-adjust the cane.

- Wooden Cane: The same procedure should be used as for the adjustable cane, however, the wooden cane should be cut off in 1" increments until the correct height is obtained. Again, examine the cane and check the tip for defects.

Ambulation Guidelines

- Know the resident's weight bearing status prior to ambulation. DO NOT ambulate with the resident until this is confirmed by the Charge Nurse or the Physical Therapist.
  - Weight Bearing Status
    - Non-Weight Bearing (NWB): The resident should not touch the foot to the floor while ambulating
    - Toe Touch Weight Bearing (TTWB): 10% or less weight bearing. The resident can touch his/her toe down for balance.
    - Partial Weight Bearing (PWB): 50% or less weight bearing. The resident can weight bear on the ball of the foot.
    - Full Weight Bearing (FWB)/Weight Bearing as Tolerated (WBAT): The resident can weight bear 100%, or as much as is comfortable
- The resident should be wearing a robe or dressed in street clothes and non-skid slippers or shoes with good rubber soles. Check the policy of your facility regarding dress requirements for out of room.
- Explain to the resident what you are going to do and what you expect him/her to do
- If the resident is lying in bed when approached, have him/her sit up on the edge of the bed
- Make sure the resident is not lightheaded, dizzy or nauseous before standing
- Place a safety/gait belt around the resident's waist. Make it snug, as the belt will loosen up when he/she stands up.
- Prior to practicing gait training techniques outdoors, consult the therapist on resident capability and limitations.

Gait Patterns

Depending on the resident's diagnosis, the resident may use a variety of gait patterns, which will be specified by the Physical Therapist. If a gait pattern is not specified, general gait patterns should be utilized.

- Walker: Resident should move the walker ahead first, followed by the weaker leg, then the stronger one. Don't allow the resident to carry the walker or take too big of steps. If the resident has to bend forward or reach outside of his/her base of support, instruct the resident not to place walker so far out. This could cause the resident to lose his/her balance and fall.
- Check the height of the walker. The elbow should be flexed at approximately 30-degrees; if not, have the resident sit down while adjusting the walker.
- **Do not allow the resident to hold onto the walker while sitting down or standing up.**
  - To stand

- Resident moves forward in chair
- Walker is positioned in front of the resident
- Resident leans forward and pushes down with both hands on armrests and stands
- Resident reaches for walker, one hand at a time

- To sit
  - As resident approaches chair, he turns toward the stronger side
  - Resident backs up until he can feel the chair touch the back of his legs
  - Resident reaches for the armrests, one at a time
  - Resident lowers to chair

- Canes: Generally, a resident should utilize a cane on the opposite side of the involvement. The resident should first place the cane in front and slightly to the side of the strong leg a comfortable distance. The resident then should advance his/her weaker or involved leg, followed by his/her strong leg.
  - To stand
    - Resident moves forward in chair
    - Cane is positioned on uninvolved side (or leaned against armrest)
    - Resident leans forward and pushes down with both hands on armrests, stands and grasps cane
  - To sit
    - As resident approaches chair, he makes a turn toward the uninvolved side
    - The resident backs up until the chair touches the back of his legs
    - The resident reaches for the armrest with the free hand, and releases the cane, and reaches for opposite armrest

- Crutches
  - To stand
    - Resident moves forward in chair
    - Crutches are placed together in vertical position on affected side
    - One hand is placed on hand pieces of the crutches, one on the armrest of the chair
    - Resident leans forward and pushes down with both hands on arm rests and stands
    - Resident gains balance, places crutch under axilla on unaffected side – The resident should not lean on the crutches
    - Second crutch is placed on the affected side
    - A tripod stance is assumed
  - To sit
    - As resident approaches chair, resident turns toward the uninvolved side
    - Resident backs up until he feels the chair touch the back of his legs
    - Both crutches are placed in a vertical position (out from the axilla)
    - One hand is placed on the hand pieces of the crutches, one on the armrest of the chair
    - Resident lowers to the chair

<u>Techniques for Guarding the Resident during Ambulation Training</u>

- For level surfaces
  - With your hand securely on the safety/gait belt (palm up), walk beside or slightly behind the resident on the involved side. Keep your feet apart (broad base of support) so you can easily maintain your balance, as well as the resident's.
  - Use your leading lower extremity following the assistive device
  - Your opposite lower extremity should be externally rotated and follow the resident's weaker lower extremity

- Place one hand posterior on the gait belt and the other anterior to, but not touching the resident's shoulder on the involved side
- Walk at the resident's pace. **Do not try to rush him/her**. The distance walked will depend on the resident's functional activity tolerance.

- If balance is lost or threatened during gait training
  - The hand guarding the shoulder should make contact

- If balance loss is severe
  - Move in toward the resident so that the body and guarding hands can be used for stabilization
  - Allow resident to regain balance while "leaning" on you
  - If balance is not recovered and it is apparent the resident will fall --- ***Do not attempt to break the resident's fall since this will result in injury to the resident and you.***
  - Brace the resident against your body and move with the resident to a sitting position to break the fall and to protect the head.
  - Talk to the resident and explain that you are lowering him to the floor to prevent him from panicking and trying to correct his balance.
  - Call for assistance and report the incident.

Stairs and Curbs

The purpose of this section it to instruct regarding proper techniques, assistive devices and safety precautions to follow when negotiating stairs or inclines. Before assisting an individual up or down stairs or curbs, you must know resident's:

- Diagnosis
- Involved or weak side
- Weight bearing status, if appropriate
- Ability to follow instructions
- Medical precautions (e.g., no excessive hip flexion or internal rotation)

Assistive Devices

Very few walkers are designed for stair climbing. If the resident has an assistive device, the following should be noted:

- With a walker, the physical therapist will give the assistant specific instructions in its use
- Canes should be carried in the strong hand or in the resident's shirt pocket while ascending or descending stairs. Quad canes are turned sideways.

Ascending Stairs

For ascending and descending stairs or curbs, the memory cue is "Up with the good and down with the bad." In other words, the resident should always start going up the stairs or curb by leading with the stronger or uninvolved leg, and should always start going down the stairs or curb by leading with the weaker or involved leg.

When climbing stairs, the resident should lead with the stronger extremity and use a handrail whenever possible.

- When assisting the resident, always use a safety/gait belt
- Position yourself posterior and lateral to the affected side, behind the resident
- Keep each foot on a different stair.
- Take a step ***only*** when the resident is not moving.
- Keep one hand on the gait belt and the second adjacent to, but not touching the shoulder on the involved side.
- Have the resident place his/her hand on the handrail nearest the stronger side
- Have the resident place the stronger foot up on the first step (Figure 1)

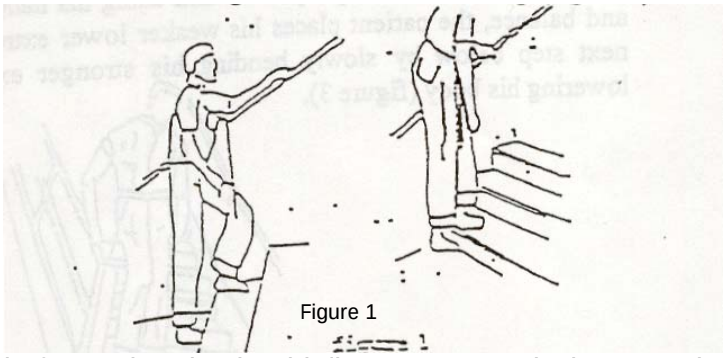

Figure 1

- By leaning slightly forward and using his/her arm to push down on the handrail and by straightening his/her stronger leg, the resident can raise his/her body and place his/her weaker extremity on the same step (Figure 2). If resident is using a cane (in the right hand in this example), the cane will always be with the involved leg.

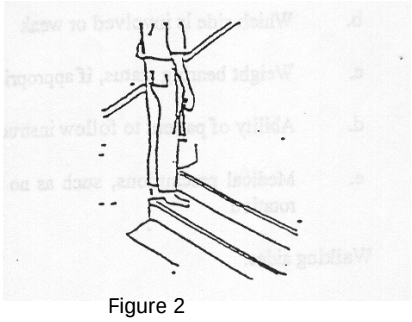

Figure 2

AVOID allowing the resident to bend excessively forward and attempting to pull him/herself up the stairs. This places the resident in a potentially unsafe position.

<u>Descending Stairs</u>

As a rule of thumb, always lead with the weaker extremity down the stairs. Use the handrail whenever possible.

- When assisting the resident, always use a safety/gait belt
- Position yourself anterior and lateral to the affected side, in front of the resident.
- Keep each foot on a different stair.
- Take a step ***only*** when the resident is not moving.

- Keep one hand on the gait belt and the second adjacent to, but not touching the shoulder on the involved side.
- Have the resident place his/her hand on the handrail nearest his/her stronger side
- While maintaining an erect posture and using his/her hand for support and balance, the resident places his/her weaker lower extremity on the next step below by slowly bending his/her stronger extremity and lowering his/her body (Figure 3)
- If using a cane (in right hand in this example), the cane would be placed down on the next step prior to the weaker leg to give resident additional support

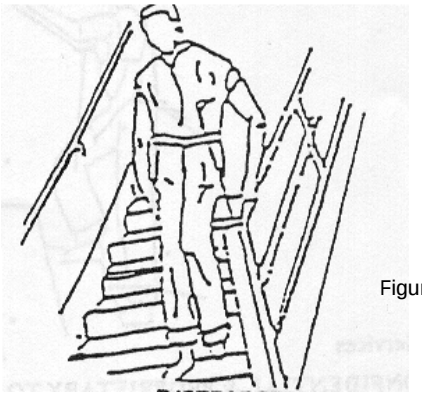

Figure 3

- Once the weaker extremity is firmly on the step below and the knee is straightened, allow the resident to step down to the same step with his/her stronger extremity

AVOID allowing the resident to bend excessively forward or backward. This will result in an unsafe position.

If balance is threatened:

- Make contact with the guarding hand at the shoulder.
- Move toward the resident to help brace the resident.
- ***Do not pull the resident toward you on the stairs.***
- If necessary, move with the resident to sit the resident down on the stairs.
- Inform the resident that you will assist him in sitting on the stairs.
- Call for assistance and report the incident.

<u>Ascending a Curb</u>

As a rule of thumb, always lead with the stronger extremity up the curb.

- When assisting the resident, always use a safety/gait belt
- Have the resident place the stronger extremity on the curb (Figure 4)
- Position yourself anterior and lateral to the affected side, in front of the resident.
- Keep each foot on a different stair.
- Take a step ***only*** when the resident is not moving.
- Keep one hand on the gait belt and the second adjacent to, but not touching the shoulder on the involved side.

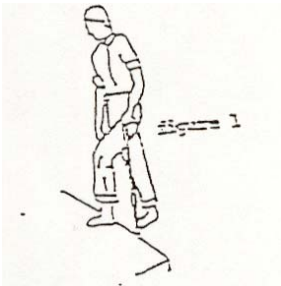

Figure 4

- The resident shifts the body weight onto the stronger extremity
- The resident then leans slightly forward and straightens the stronger extremity pushing on a cane to assist, if applicable
- As the body elevates, have the resident place the weaker extremity and the cane, if applicable, on the curb (Figure 5)

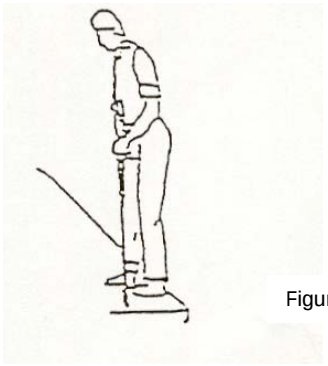

Figure 5

Descending a Curb

As a rule of thumb, always lead with the weaker extremity down the curb

- Have the resident step up to the curb, so his/her toes are at the edge of the curb (Figure 6)
- While standing erect and bending the stronger extremity to lower the body, the resident places the weaker extremity and cane, if applicable, on the street (Figure 7)

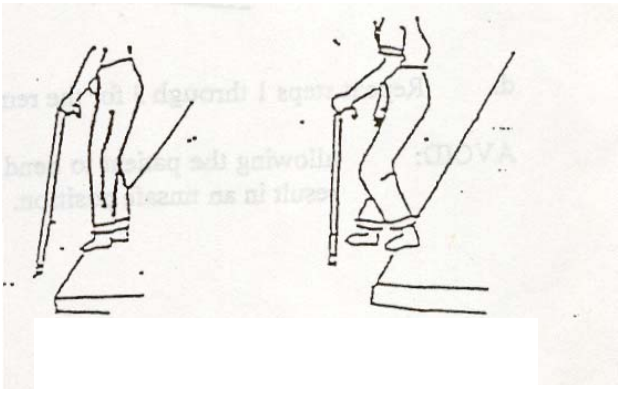

Figure 6

Figure 7

AVOID allowing the resident to lean "heavily" on the cane or to lean excessively forward.
This will put the resident in an unbalanced position and will make him/her use extra effort to ascend or to descend the curb.

Figure 9 illustrates the technique for ascending/descending using a walker.

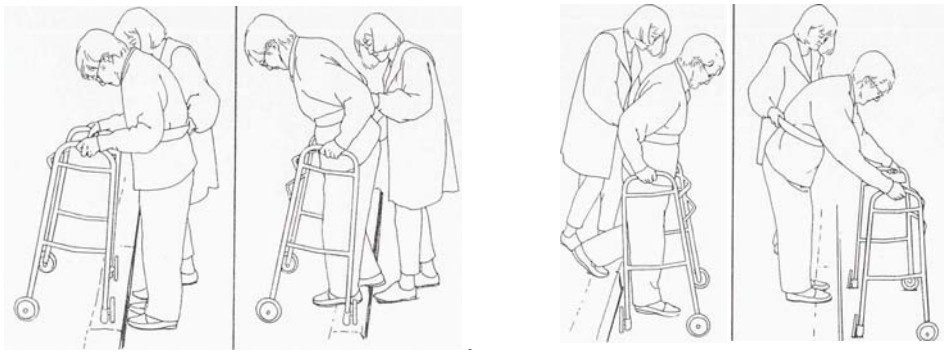

Figure 9

Ambulation Training

Pretest Post Test (circle one)

Name: _____
Title:_____

Social Security #:_____ Work #:_____

Mailing Address:_____
__

_____

1. Ambulation is a key component of resident care. Cornerstones of the gait-training program are functional independence, safety and energy consideration.

   A. True B. False

2. When using a cane, the cane should be positioned on the involved side.

   A. True B. False

3. When returning to a sitting position, the resident should walk up to the chair until the chair is touching the front of the knees and then turn to sit.

   A. True B. False

4. When guarding a resident during ambulation, a gait belt should be used.

   A. True B. False

5. If the resident starts to lose balance and you are not able to correct the balance by contact with the shoulder and by moving closer to the resident, you should try to break the fall.

   A. True B. False

6. When assisting the resident to the floor to prevent a “fall”, you should explain to the resident that you are lowering him to the floor since he may begin to panic and make the situation worse by struggling.

   A. True B. False

7. When ascending stairs, you should position yourself in front of the resident to guide him up the stairs.

   A. True B. False

8. If a resident has no problems ambulating inside, you should feel comfortable that he will be able to ambulate outside without any issues.

   A. True B. False

9. The walker is at the correct height when the hands are placed on the hand grips and the elbow forms a 30 degree angle

   A. True B. False

10. The resident should always lead with the weak extremity when going down the curb/stairs

    A. True B. False

11. You should always walk beside the resident on the involved side

    A. True B. False

Ambulation Training

Key to Pre/Post Test

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Title:_____

Social Security #:_____ Work #:_____

Mailing Address:_____
__

_____

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   A. True B. False

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