

SOLDIER'S MANUAL and TRAINER'S GUIDE

MOS 91B

Soldier's Manual, Skill Levels 1/2 and Trainer's Guide, MOS 91B, ASI N9, Physical Therapy Specialty

Skill Levels 1 and 2

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Skill Level 2

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CHAPTER 3

MOS/Skill Level Tasks

Skill Level 1

Subject Area 1: Ambulation Activities

USE THE TILT TABLE TO STAND A PATIENT

081-836-0022

Conditions: The patient has been screened and has a completed treatment card and/or inpatient records. Assistance is available, if needed. Necessary materials and equipment: a tilt table with safety straps, ace wraps, timer or wall clock, stethoscope, and blood pressure cuff.

Standards: The tilt table is used to stand the patient IAW the information on the treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the patient's condition. Identify the need for and obtain assistive devices.
2. Gather the materials.
3. Explain the procedure to the patient.
 - a. The table will be used to reacclimate the patient to a vertical position.
 - b. He or she will be strapped to the table for safety and slowly raised to an upright position.
 - c. The patient will be standing for approximately 5 minutes the first treatment, increasing 5 minutes daily.
4. Prepare the patient for treatment.
 - a. Transfer the patient onto the tilt table.

CAUTION: Do not attempt to transfer the patient without assistance.

- b. Align the patient in the center of the table ensuring that both feet are resting equally on the footboard.

NOTE: NOTE 1: Place a wooden block under the weightbearing foot to eliminate hip-hiking if the patient is wearing a cast or is to be nonweightbearing (NWB) on one leg. NOTE 2: Bandage both lower extremities with ace wraps to reduce the effects of gravity, if prescribed.

- c. Fasten the straps securely.
 - (1) Strap across the patellae.
 - (2) Strap across the abdomen.
 - (3) Extra strap across the chest, if the patient has weakness in the arms or shoulders.

NOTE: NOTE 1: Keep the patient's arms free at all times. NOTE 2: The straps should be snug enough so the patient will not fall when the table is raised.

- d. Measure and record the patient's pulse, respirations, and blood pressure. (See tasks 081-831-0010, 081-831-0011, and 081-831-0012.)

5. Initiate the procedure.
 - a. Tell the patient you are starting to tilt the table.
 - b. Tilt the table slowly from the horizontal (0°) to approximately 70° vertical using 10° to 20° increments. Not all patients will be able to tolerate a 70° vertical position on the first visit.

Performance Steps

NOTE: As the patient is raised, the pillow(s) and/or transfer materials (sheets, towels) may slide downward slightly. Adjust these items as needed. CAUTION: The patient must be instructed to inform you immediately if any of the following occurs. [1] Difficulty breathing. [2] Dizziness. [3] Headache. [4] Feelings of nausea. [5] Progressive weakness. - The tilt table must be lowered immediately to the patient's comfort. NOTE: The subjective feelings should be reported to the physical therapist and noted in the progress notes.

- c. Stand the patient for the prescribed treatment time or to tolerance. Record any deviation on the patient's treatment card.

NOTE: If the patient complains of an increase of pain, throbbing, or a tingling sensation in his or her legs, reassure the patient that these are normal responses and may be relieved by wiggling the toes.

- 6. Monitor the patient's responses periodically throughout the treatment. You should check the patient's pulse, respirations, and blood pressure at least every 3 to 5 minutes.

CAUTION: If adverse reactions are noted, such as gross deviations of the patient's pulse, respirations, or blood pressure; excessive flushing or paleness of the face; persistent mottled appearance; or an increase of swelling in any of the limbs, the tilt table must be lowered immediately. Your observations and length of time the patient was raised must be reported to the physical therapist and noted in the progress notes.

- 7. Discontinue the procedure by gradually returning the tilt table to the horizontal position at the end of the prescribed time or when the patient cannot tolerate standing any longer.

NOTE: Allow the patient to rest for a few minutes prior to transferring from the tilt table.

- 8. Check the patient's treatment card to determine whether other treatments are required to complete the visit.

- 9. Transfer the patient back onto the litter. Assistance must be requested prior to performing the transfer.

- 10. Provide the patient with instructions for return visits. The ward personnel should also be informed of return visit times.

NOTE: Ensure all materials which belong to the patient or ward are returned with the patient, for example: patient record, pillows, safety belts, etc.

- 11. Write appropriate progress notes on the patient's treatment card and SF 509 or SF 600 as appropriate.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Gathers the materials.	P	F
3. Explains the procedure to the patient.	P	F
4. Prepares the patient for treatment.	P	F
5. Initiates the procedure.	P	F
6. Monitors the patient's responses.	P	F
7. Discontinues the procedure when indicated.	P	F
8. Checks the patient's treatment card for other procedures.	P	F
9. Transfers the patient from the tilt table.	P	F
10. Provides the patient with instructions for return visits.	P	F
11. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

AMBULATE A PATIENT IN THE PARALLEL BARS

081-836-0023

Conditions: The patient has been screened for the treatment and has a completed treatment card. Assistance is available, if needed. Necessary materials and equipment: parallel bars, safety belt or litter strap, wheelchair, litter, straight-back chair, tilt table, stethoscope, and blood pressure cuff.

Standards: The patient is instructed in the appropriate gait using the parallel bars without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the patient's disability and the gait to be used.
2. Explain the procedure.
 - a. Tell the patient that the parallel bars are the first step toward independent ambulation.
 - b. The patient should push rather than pull on the bars since the parallel bars are a preparation for other ambulation aids, such as walkers and crutches.
3. Adjust the parallel bars to the approximate height required.
4. Demonstrate the gait to the patient.
 - a. The two-point gait. This is the most natural gait for walking, but it requires good balance to control the movements.
 - (1) Move the left hand and the right foot forward simultaneously.
 - (2) Move the right hand and the left foot forward simultaneously.
 - b. The three-point gait. This gait is used when one lower extremity (LE) is weakened or unfit for weightbearing.
 - (1) Move both hands and the involved LE forward.
 - (2) Step forward past both hands with the uninvolved LE.

NOTE: NOTE 1: Explain the amount of weight that may be placed on the involved LE. If the treatment card specifies nonweightbearing (NWB), stress that no weight is to be placed on the involved LE. NOTE 2: If partial weightbearing (PWB) is indicated, the patient's physician should specify the amount of weight which can be applied to the involved LE. NOTE 3: If the amount of weight to be placed on the involved LE is not specified on the treatment card, the patient's tolerance will be used to establish the amount.

- c. The four-point gait. Move in turn the left hand, right foot, right hand, and left foot.

NOTE: This is a very awkward gait which should be demonstrated slowly emphasizing to the patient that he or she must not revert to the more natural two-point gait. Even though this is such an awkward gait, it is considered to be the most stable since there are always three points of contact with the ground.

5. Prepare to stand the patient.

CAUTION: Place a safety belt or litter strap securely around the patient's waist to use as an aid when standing and ambulating the patient. The belt should be snug but not loose enough to ride up onto the patient's rib cage.

- a. If the patient is in a wheelchair.
 - (1) Position the wheelchair facing one end of and as close to the end of the parallel bars as possible.
 - (2) Lock the wheelchair brakes. Put up or swing away the wheelchair footrests.

CAUTION: If the wheelchair is missing brakes or they are faulty, have an assistant stabilize the chair by holding the back of the chair and placing one or both feet behind the rear wheels.

- b. If the patient is brought to the clinic on a litter instead of in the wheelchair, the tilt table will be used to stand the patient. (See task 081-836-0022).
 - c. Stand inside the parallel bars facing the patient. Place both hands on the safety belt.
6. Stand the patient in the parallel bars giving assistance only as needed. Instruct the patient to--
 - a. Move forward to the edge of the wheelchair seat and put both feet flat on the floor slightly under the seat.

Performance Steps

- b. Place both hands, if the patient's disability allows, on the wheelchair armrests.
- c. Push down with both hands and both legs, if the patient's disability allows.
- d. Transfer both hands, if the patient's disability allows, onto the parallel bars and step into the bars.

NOTE: If the tilt table was used, both hands are placed on the parallel bars and the patient steps off the table and into the bars. CAUTION: [1] The patient must be observed for signs of fainting. If any abnormalities are noted, the patient must be allowed to sit back down. [2] Do not rush the patient who started ambulation in the parallel bars from the tilt table. [3] The patient must be instructed to inform you immediately if any of the following occurs: difficulty breathing, dizziness or headache, feelings of nausea, or a progressive weakness.

- 7. Recheck the height of the parallel bars to ensure there is 20ø to 30ø flexion at the patient's elbows when relaxed.

CAUTION: The patient should never be left standing in the bars without assistance while making adjustments in the parallel bar height.

- 8. Ambulate the patient to his or her tolerance making corrections to the technique as needed. If the patient cannot complete the entire length of the parallel bars in one attempt, a chair should be placed inside the bars to allow the patient to rest.
- 9. Monitor the patient's responses continuously throughout the treatment.
 - a. You should observe the patient's facial coloration and the patient's tolerance of the ambulation procedure.
 - b. If the patient is generally debilitated, extremely weak, or apprehensive, it may be necessary to closely monitor the patient's pulse, respirations, and blood pressure.

NOTE: If the patient complains of an increase of pain, throbbing, or a tingling sensation in his or her legs, reassure the patient that these are normal responses and may be relieved by wiggling the toes.

- 10. Return the patient to the wheelchair or tilt table upon completion of the treatment.
- 11. Write appropriate progress notes.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Demonstrates the gait.	P	F
4. Adjusts the parallel bars.	P	F
5. Prepares to stand the patient.	P	F
6. Stands the patient.	P	F
7. Rechecks the height of the parallel bars.	P	F
8. Ambulates the patient.	P	F
9. Monitors the patient's responses.	P	F
10. Returns the patient to the wheelchair or tilt table.	P	F
11. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER A CRUTCH AMBULATION TREATMENT

081-836-0041

Conditions: The patient has been screened for crutch ambulation and has a completed referral. He or she is in a bed or seated in a chair or wheelchair. Assistance is available. Necessary materials and equipment: four matched pairs of crutches (two pairs each of adolescent and adult), crutch tips, axillary pads, a safety belt or litter strap, pliers, flat-tipped screwdriver, wheelchair or chair, and a large goniometer.

Standards: The patient is fitted for crutches and properly instructed in ambulation techniques using standard issue crutches without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral to determine his or her disability.

NOTE: If the patient is in the standing position, allow him or her to sit until measured for the crutches.

2. Explain the procedure to the patient.
 - a. The patient will be fitted for crutches and will be shown how to use them properly. The crutches will assist him or her with balance and weight bearing for walking.
 - b. The patient will be instructed how to stand, walk on level surfaces, ambulate up and down stairs, and manipulate closed doors using crutches.

NOTE: Ask the patient his or her height. This will assist in selecting the appropriate size pair of crutches. Patients who are 48 to 60 inches in height should be fitted with adolescent crutches. Patients 60 to 74 inches should be fitted with adult crutches.

3. Gather the materials.
 - a. Inspect the crutches selected.
 - (1) Check for loose axillary crossbars, cracks, or splinters.
 - (2) Ensure all wing nuts and bolts are present.
 - (3) Check that axillary pads are not split or deteriorating.
 - (4) Ensure the crutch tips are not split or worn.
 - b. Replace any worn, broken, or missing parts prior to bringing materials to the patient.
 - c. Place crutch tips on the base end of the crutches, securing them by applying a downward force to properly seat the crutch end into the crutch tip well.
 - d. Place the axillary pads on the axillary crossbars, ensuring the pads are properly seated.

4. Measure the patient for crutches.

CAUTION: Place a safety belt or litter strap securely around the patient's waist to use as an aid when standing and ambulating the patient. The belt should be snug but not loose enough to ride up onto the patient's rib cage.

- a. The patient is in a bed.
 - (1) To measure handgrip placement.
 - (a) Position the patient with one elbow bent to 90° with that shoulder externally rotated and abducted to 90° with the fingers fully extended and palm facing forward (as if taking an oath). Instruct the patient to keep the arm in line with the shoulders.
 - (b) Position one crutch to the patient's front with the axillary end of the crutch to the outer edge of the lower portion of the flexed arm and move the handgrip in line with the outstretched tip of the middle finger.
 - (c) Line up the holes on the handgrip with the nearest openings on the crutch and insert the screw. Place the wing nut on the screw finger-tight.
 - (2) To measure crutch length.
 - (a) Position the patient with one elbow bent to 90° with that shoulder externally rotated and abducted to 90° (as if taking an oath) and the other arm abducted to 90° with the fingers fully extended and palm facing forward. Instruct the patient to keep both arms in line with the shoulders.

Performance Steps

- (b) Position one crutch to the patient's front with the axillary end of the crutch to the outer edge of the upright portion of the flexed arm and move the crutch tip to the end of the outstretched tip of the middle finger.
- (c) Line up the holes on the lower portion of the crutch to the nearest opening on the crutch and insert both screws. Place the wing nuts on the screws finger-tight.

NOTE: Ensure all screws are placed on the same side of the crutch.

- b. The patient is in a sitting position. Raise the patient to a standing position.

CAUTION: Lock the wheelchair brakes if the patient is in a wheelchair. If the wheelchair is missing brakes or they are faulty, have an assistant stabilize the chair by holding the back of the chair and by placing one or both of his or her feet behind the rear wheels.

- (1) Put up or swing away the footrests if the patient is in a wheelchair.
- (2) Stand in front of and face the patient. Place one or both hands on the safety belt.
- (3) Have the patient slide forward to the edge of the chair seat and put both feet flat on the floor slightly under the seat.
- (4) Instruct the patient to lean forward slightly at the waist and push straight down with the hands and legs to rise. Pull up slightly on the safety belt to assist him or her, as needed.

NOTE: Have an assistant hold onto the safety belt to support the patient in a standing position.

- (5) Give the crutches to the patient and instruct him or her to place the axillary portion of the crutch under each axilla and to place the hands on the handgrips. Ensure the pads on the axillary crossbars are placed evenly under each armpit.
- (6) Place the crutch tips 6 inches to the outside of and 6 inches to the front of the base of the fifth metatarsal (widest part of the foot).

NOTE: Ensure the patient is standing with good posture, the shoulders relaxed, not hiked.

- (7) Adjust the crutches so there is one to one and one-half inches (a two-finger width) between the axillary crossbar and the patient's axilla.

NOTE: Ensure both screws are placed on the same side of the crutch. Place the wing nuts on the screws finger-tight.

- (8) Adjust the handgrips so there is 20° to 30° of elbow flexion. Use a goniometer to check the measurement.

NOTE: Ensure the handgrip screw is placed on the same side of the crutch as the other screws and tightened in the same manner.

- (9) Allow the patient to return to the chair.

- 5. Check the crutches for proper fit. Raise the patient to a standing position.

CAUTION: Have an assistant support the patient by the safety belt when you are checking the fit of the crutches to the patient.

- a. The patient is in a bed.

- (1) Lock the wheels of the bed.
- (2) Ensure the head of the bed is elevated to approximately 30°.
- (3) Lower the side rail on the side where the patient will exit the bed.
- (4) Slide a safety belt around the patient's waist.

NOTE: The belt should be snug but not loose enough to ride up onto the patient's rib cage.

- (5) Assist the patient to slide toward the edge of the bed where the rail has been lowered.
- (6) Instruct the patient to pivot the body so the legs swing over the edge to a dangling position with the upper body in a sitting position.

NOTE: NOTE 1: If a lower extremity (LE) is injured, instruct the patient to "cup" the ankle of the uninvolved LE under the injured LE to support and assist in the transfer. NOTE 2: If an overhead trapeze is attached to the bed frame, instruct the patient to pull the upper body onto the edge of the bed into a sitting position.

- (7) Position both crutches with the tips on the floor to the patient's involved side and allow the patient to grasp the inside of the crutch handgrips with the hand of the involved side.
- (8) Have the patient slide from the sitting position to a standing position by placing both feet flat on the floor.

CAUTION: If the patient is to be nonweightbearing on the involved side, ensure the patient keeps the involved limb slightly suspended above the surface of the floor.

Performance Steps

- (9) Instruct the patient to place one crutch under each armpit ensuring the pads on the axillary crossbars are placed evenly under each armpit and that all wing nuts are facing to the rear of the patient.
- (10) Place the crutch tips 6 inches to the outside of and 6 inches to the front of the base of the fifth metatarsal (widest part of the foot).

NOTE: Ensure the patient is standing with good posture, the shoulders relaxed, not hiked.

- (11) Position the crutches so there is one to one and one-half inches (a two-finger width) between the axillary crossbar and the patient's axilla.
 - (12) Ensure the handgrips allow 20° to 30° of elbow flexion. Use a goniometer to check the measurement.
 - (13) Allow the patient to sit on the bedside after the crutches are properly fitted to his or her height.
- b. The patient is in a wheelchair.
- (1) Lock the wheelchair brakes and put up or swing away the footrests.
 - (2) Provide the patient with the preadjusted crutches.
 - (3) Have the patient grasp the crutches with the hand of the involved side from the inside and place the opposite hand on the wheelchair armrest (or chair seat if there is no armrest). Instruct the patient to place the tips of the crutches firmly on the floor just lateral to the foot.
 - (4) Stand in front of and face the patient. Place one or both hands on the safety belt.
 - (5) Have the patient slide forward to the edge of the chair seat and put both feet flat on the floor slightly under the seat.
 - (6) Instruct the patient to lean forward slightly at the waist and push straight down with the hands and legs to rise. Pull slightly on the safety belt to assist the patient, as needed.

CAUTION: Brace the patient's uninvolved knee, if necessary, with your own to assist the patient in locking the knee to stand.

- (7) Instruct the patient to place one crutch under each armpit ensuring the pads on the axillary crossbars are placed evenly under each armpit and that all wing nuts are facing to the rear of the patient.
- (8) Place the crutch tips 6 inches to the outside of and 6 inches to the front of the base of the fifth metatarsal (widest part of the foot).

NOTE: Ensure the patient is standing with good posture, the shoulders relaxed, not hiked.

- (9) Position the crutches so there is one to one and one-half inches (a two-finger width) between the axillary crossbar and the patient's axilla.
- (10) Ensure the handgrips allow 20° to 30° of elbow flexion. Use a goniometer to check the measurement.
- (11) Allow the patient to return to the chair after the crutches are properly fitted to his or her height.

6. Demonstrate the appropriate gait to the patient, simulating the patient's injury. (See Figure 3-1.)

NOTE: Use a pair of crutches measured for your height.

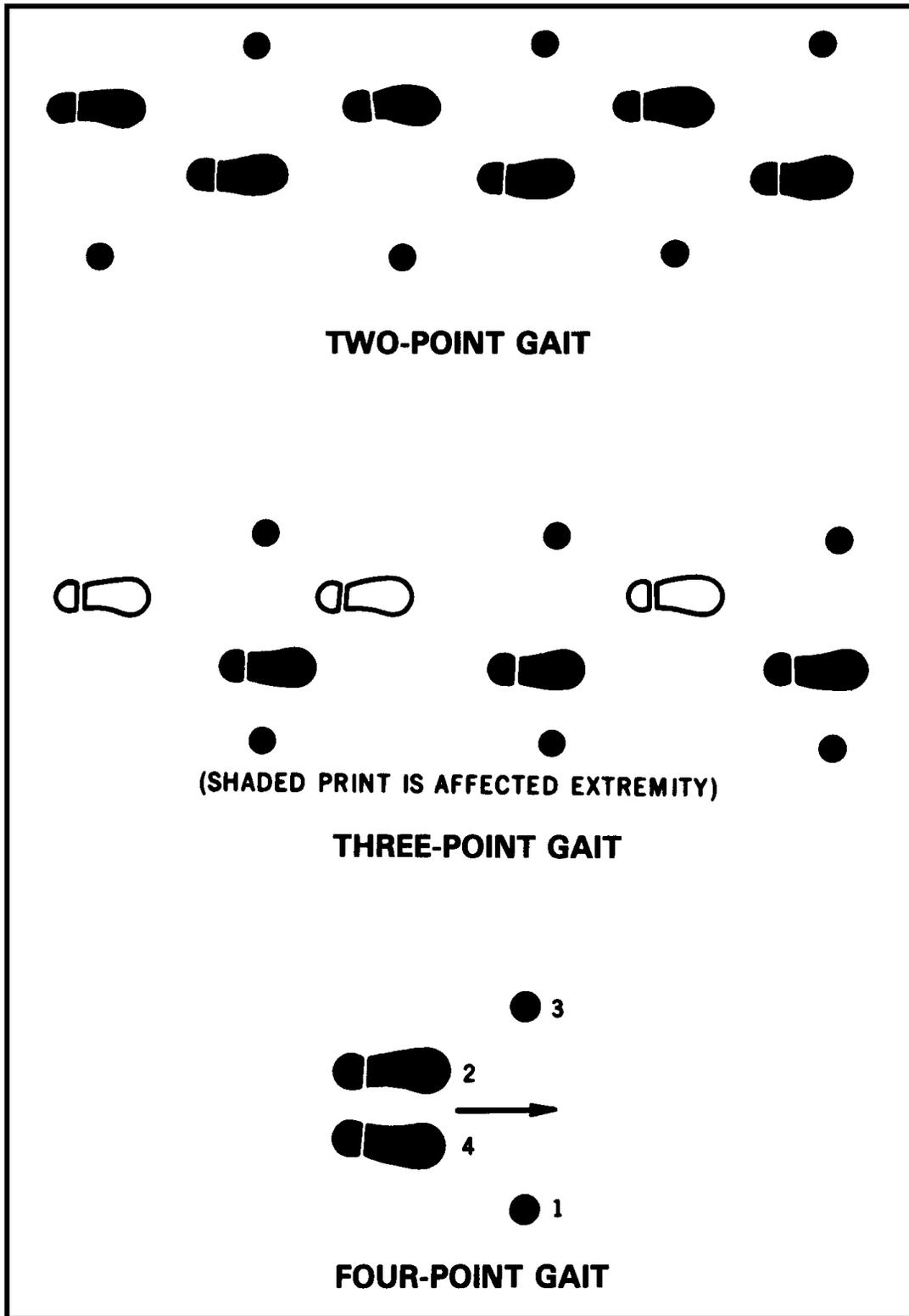
7. Raise the patient to the standing position with the crutches.

8. Ambulate the patient using the appropriate gait.

CAUTION: [1] Instruct the patient to keep his or her center of gravity over the base of support when walking with the crutches. - [2] The patient's tolerance will determine the length and time of ambulation.

- a. Level surfaces. Reinstruct the patient in the performance of the appropriate gait by word and action. If the patient cannot understand the gait, have him or her sit down and redemonstrate the gait using terms he or she can understand.

Performance Steps



Performance Steps

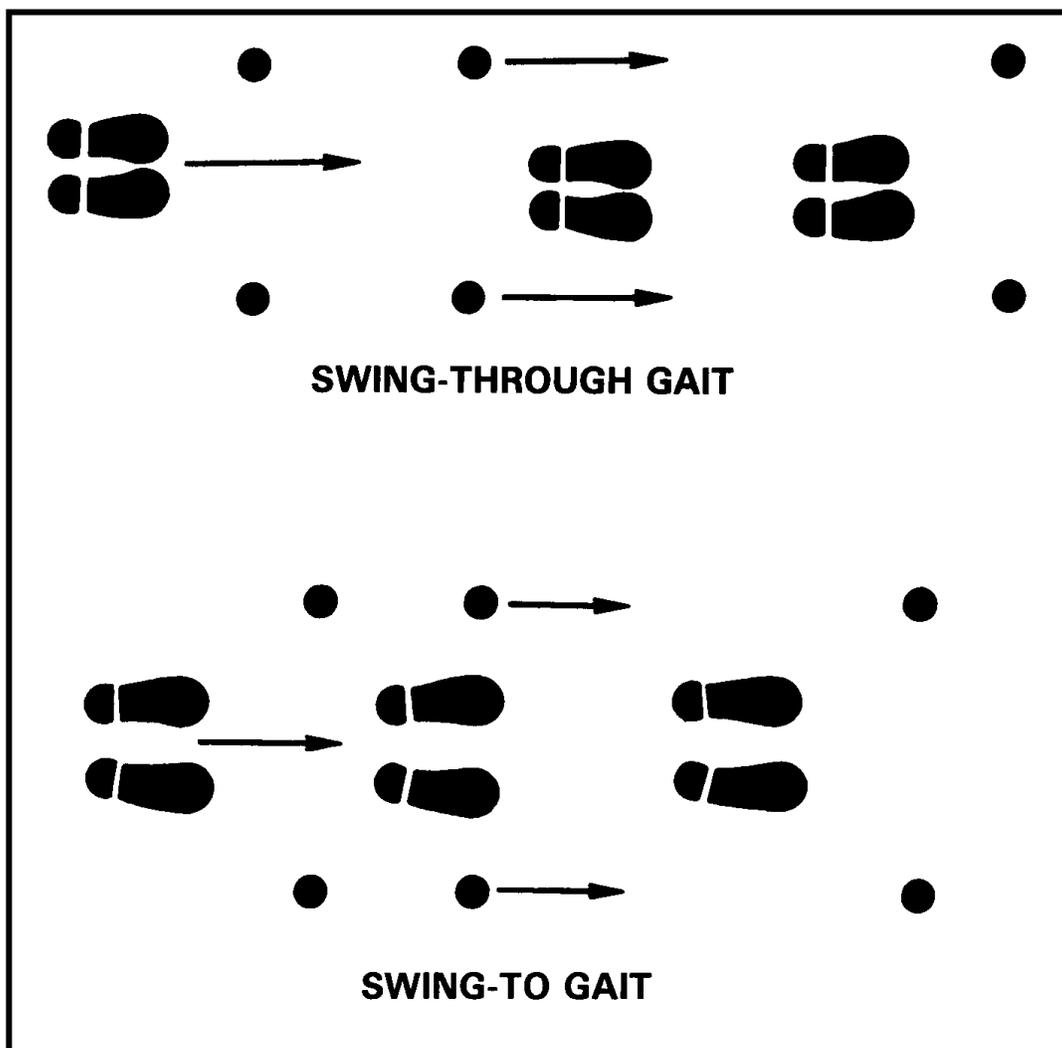


Figure 3-1

NOTE: Move behind and to the side of the patient's uninvolved side, maintaining a tight grasp of the safety belt when ambulating the patient on level surfaces. CAUTION: The patient must be proficient in ambulation on level surfaces before continuing to stairs or inclined surfaces.

b. Stair mobility. If the stairs have handrails attached, the patient may be instructed to use one handrail in place of one crutch. The crutch nearest the handrail will be removed and placed with the other crutch in a "cross" fashion. (See Figure 3-2.)

- (1) To ascend the stairs, stand behind the patient and instruct the patient to--
 - (a) Face the stairs, centered in the stairway, unless the handrail is to be used.
 - (b) Place the crutch tips 2 to 4 inches from the front edge of the first step.
 - (c) Step up onto the closest stair with the uninvolved leg while maintaining balance and weight bearing on the crutches.
 - (d) Transfer the body weight onto the uninvolved leg, lean forward slightly while straightening out the leg, and bring the involved leg and crutches simultaneously up onto the same step as the other leg.

NOTE: Ensure the patient keeps the crutch tips at least 1 inch in from the edge of the step.

- (e) Repeat the process until the top of the stairs is reached.

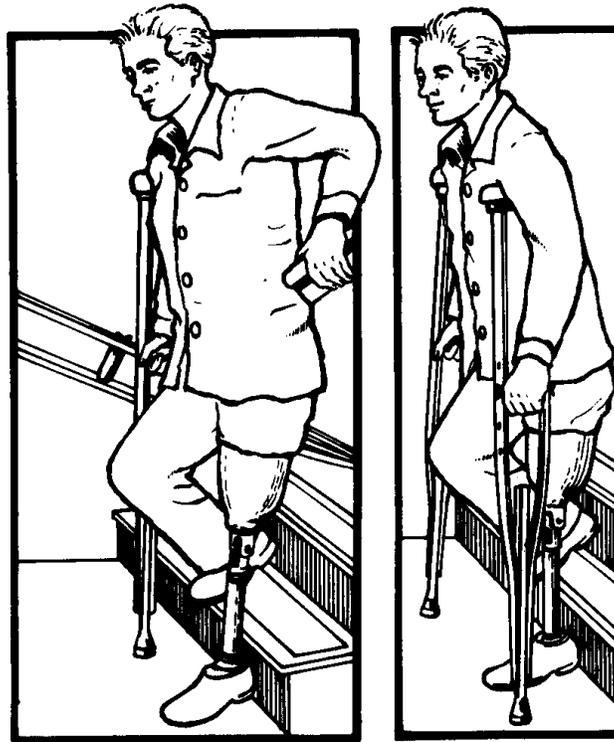
CAUTION: Allow the patient to rest as necessary.

Performance Steps



With Rail

Without Rail



With Rail

Without Rail

Figure 3-2

Performance Steps

- (2) To descend the stairs, stand in front of and face the patient and instruct him or her to--
 - (a) Face the stairs, centered in the stairway, unless the handrail is to be used.

NOTE: Ensure the patient keeps the crutch tips at least one inch in from the edges of the step.

- (b) Shift all of the body weight onto the uninvolved or stronger leg.
- (c) Move the crutches and the involved or weaker leg down simultaneously onto the step, placing the crutches in the center of the step or approximately 1 inch from the front edge of the step. The patient must bend the knee of the uninvolved leg to prevent falling forward.

NOTE: "Touch" the affected LE to the step if the patient is to be nonweightbearing. This will increase the patient's awareness of the LR and keep the patient balanced.

- (d) Place the uninvolved leg down onto the same step with the involved leg and crutches.
- (e) Repeat the process until the bottom of the stairs is reached.

CAUTION: Allow the patient to rest as necessary.

c. Manipulating closed doors.

- (1) If the door opens away from the patient, instruct him or her to--
 - (a) Stand centered in the doorway, close enough to preclude bending forward to reach the doorknob.
 - (b) Grasp the doorknob and push the door open.
 - (c) Quickly move the crutches forward to block the door open.
 - (d) Step through the doorway, repositioning the crutches as needed, to hold the door open until the doorway is cleared.
- (2) If the door opens toward the patient, instruct him or her to----
 - (a) Stand to the side of the door opening, close enough to prevent leaning sideways to reach the knob.
 - (b) Grasp the doorknob and pull the door open.
 - (c) Quickly move the crutches sideways to block the door open.
 - (d) Step through the doorway, repositioning the crutches as needed, to hold the door open until the doorway is cleared.

9. Monitor the patient's responses continuously throughout the procedure.

CAUTION: If you observe the patient to be debilitated, extremely weak, unusually pale, or perspiring excessively, seat him or her immediately. Monitor the pulse, respiration, and/or blood pressure as appropriate. (See tasks 081-831-0010, 081-831-0011, and 081-831-0012.)

10. Return the patient to the bed or chair upon completion of the procedure.

11. Issue the crutches per local SOP.

CAUTION: The crutches should not be issued to a patient who cannot ambulate independently on at least level surfaces.

12. Write appropriate notes on the patient's referral to include--

- a. If crutches were issued.
- b. If the patient verbally acknowledged and demonstrated a proficiency of at least independent ambulation on level surfaces.
- c. Any follow-up visits, as appropriate.

Performance Measures

Results

1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
4. Measures the patient for crutches.	P	F

Performance Measures	Results	
5. Checks the crutches for proper fit.	P	F
6. Demonstrates the appropriate gait to the patient.	P	F
7. Raises the patient to the standing position with the crutches.	P	F
8. Ambulates the patient using the appropriate gait.	P	F
9. Monitors the patient's responses.	P	F
10. Returns the patient to the bed or chair upon completion of the procedure.	P	F
11. Issues crutches IAW local SOP.	P	F
12. Writes appropriate notes on the patient's referral.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

INSTRUCT A PATIENT IN PROTECTIVE FALLING WITH CRUTCHES**081-836-0042**

Conditions: The patient with a fitted pair of crutches has a completed referral and is proficient in crutch ambulation on level surfaces. Necessary materials and equipment: a safety belt or litter strap, crutches, and mat.

Standards: The patient is properly instructed in the technique for falling with crutches without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
a. Ensures the mat on the floor is in an area without obstacles.	P	F
b. Checks the patient's crutches. Ensures the wing nuts are finger-tight and are on the same side of the crutch.	P	F
4. Demonstrates the technique.	P	F
a. Stands in front of and facing the mat in a tripod stance with the crutches.	P	F
b. Grasps the crutch handgrips and turns both crutches out from under the arms simultaneously.	P	F
c. Throws the crutches to the sides out of the way.	P	F
d. Falls forward, bends forward sharply at the waist, and reaches immediately downward to the floor.	P	F
e. Lands on outstretched palms placed wider than shoulderwidth, bending both elbows slightly.	P	F
f. Walks forward with the hands until the body is in a supported prone position.	P	F
g. Bends the elbows to lower the body to the floor.	P	F
5. Assists the patient in the technique.	P	F
NOTE: Places a safety belt or litter strap securely around the patient's waist to use as an aid during the instruction. The belt should be snug, but not loose enough to ride up onto the patient's rib cage.		
a. Stands behind the patient with one or both hands on the safety belt.	P	F
b. Uses only enough assistance as required.	P	F
c. Makes corrections to the technique as needed.	P	F
d. Repeats the procedure as needed until proficiency is achieved.	P	F
6. Writes appropriate notes.	P	F
7. Performs steps 4a through 4g in order.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

ADMINISTER A CANE AMBULATION TREATMENT
081-836-0043

Conditions: The patient has been screened for treatment and has a completed referral. The patient will be seated in a chair or wheelchair. Assistance is available. Necessary materials and equipment: standard issue wood canes, cane tips, saw, pencil or pen, safety belt or litter strap, wheelchair or chair, and a large goniometer.

Standards: The patient is measured and fitted for a cane and is properly instructed in ambulation techniques using the standard issue wood cane without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral to determine the disability.
2. Explain the procedure to the patient.
 - a. Tell the patient the fitted cane will be used to provide assistance with balance during ambulation.
 - b. The patient will be instructed on how to stand, walk on level surfaces, ambulate up and down stairs, and manipulate closed doors using the cane.
3. Gather and inspect the materials.
 - a. Check the cane for cracks or splinters.
 - b. Ensure the cane tip has a wide base and is not split or worn.
4. Raise the patient to a standing position.

NOTE: Place a safety belt or litter strap securely around the patient's waist to use as an aid when standing and ambulating the patient. The belt should be snug but not loose enough to ride up onto the patient's rib cage.

- a. Lock the wheelchair brakes and put up or swing away the footrests if the patient is in a wheelchair.
- b. Stand in front of and face the patient. Place one or both hands on the safety belt.
- c. Have the patient slide forward to the edge of the chair seat and put both feet flat on the floor slightly under the seat.
- d. Instruct the patient to lean forward slightly at the waist and push straight down with both hands and legs to rise. Pull up slightly on the safety belt to assist, as needed.

5. Measure the cane to the patient.

NOTE: Have an assistant hold the safety belt and keep the patient standing while the measurements are being made.

- a. Invert the cane so the handle (curved end) is on the floor alongside of the patient's uninvolved leg and arm.

NOTE: Ensure the patient is standing with good posture, both shoulders relaxed, not hiked.

- b. Locate the styloid process of the wrist on the uninvolved side. Scribe the cane at the point where the styloid process meets the cane.

NOTE: If the cane end does not reach up to the styloid process, secure a taller cane.

- c. Allow the patient to return to his or her seat, providing assistance as needed.
- d. Squarely cut the cane at the scribe using a handsaw. Dispose of the cut off section and ensure no sawdust is in the ambulation area.
- e. Place the cane tip on the cut end of the cane, securing it by hand. Place the cane upright and apply a downward force onto the ground to properly seat the cane end into the cane tip well.

6. Check the cane for proper fit.

- a. Raise the patient to a standing position.
- b. Place the cane handle in the patient's uninvolved hand with the crutch tip placed 6 inches to the outside of and 6 inches to the front of the base of the fifth metatarsal (widest part of the foot).

Performance Steps

NOTE: Ensure the patient is standing with good posture, both shoulders relaxed, not hiked.

- c. Measure the amount of elbow flexion using a goniometer. Ensure there is 20° to 30° of elbow flexion to the arm holding the cane.

NOTE: Remove the tip and re-cut the cane if there is greater than 30° of elbow flexion to the arm holding the cane. Secure a new cane and repeat steps 5 and 6 if the elbow flexion is less than 20°.

7. Demonstrate the gait to the patient, simulating the patient's injury.

NOTE: Use a cane measured for your height.

8. Raise the patient to a standing position with the cane.

CAUTION: Recheck the wheelchair brakes. If the wheelchair is missing brakes or they are faulty, have an assistant stabilize the chair by holding the back of the chair and by placing one or both of his feet behind the rear wheels.

- a. Stand in front of and face the patient. Place one or both hands on the safety belt.
- b. Instruct the patient to--
 - (1) Slide forward to the edge of the chair seat and put both feet flat on the floor slightly under the seat.
 - (2) Grasp the cane with the hand on the involved side, placing the cane in front of and to the side of the wheelchair on that same side. Have the patient place the other hand on the wheelchair armrest on the involved side.
 - (3) Grasp the cane firmly, lean forward slightly at the waist, and push straight down with both hands and legs to rise.
 - (4) Transfer the cane to the uninvolved side.

9. Ambulate the patient, making corrections to each technique as needed.

CAUTION: The amount and duration of ambulation will be determined by the patient's tolerance. The patient should be allowed to rest as needed.

- a. Level surfaces. Have the patient--
 - (1) Move the cane and the involved leg forward simultaneously one step.
 - (2) Place the cane and involved leg firmly on the walking surface.
 - (3) Step forward one step with the uninvolved leg.
 - (4) Place the uninvolved leg firmly on the walking surface.
 - (5) Repeat the process as needed until the patient is proficient.

NOTE: Move behind and to the patient's uninvolved side, maintaining a tight grasp on the safety belt when ambulating the patient on level surfaces.

- b. Stair mobility.
 - (1) To ascend the stairs, stand behind the patient and instruct the patient to--
 - (a) Face the stairs, centered in the stairway, unless the handrail is to be used.
 - (b) Step up onto the closest stair with the uninvolved leg.
 - (c) Transfer the body weight onto the uninvolved leg, lean forward slightly while straightening out the leg, and bring the cane and involved leg simultaneously up onto the same step as the other leg.
 - (d) Repeat the process until the top of the stairs is reached.
 - (2) To descend the stairs, stand in front of and face the patient and instruct the patient to--
 - (a) Face the stairs, centered in the stairway, unless the handrail is to be used.
 - (b) Move the cane and the involved leg simultaneously down onto the closest stair bending the uninvolved leg to lower the body onto the stair.
 - (c) Transfer the body weight onto the cane and involved leg, and then step down onto the same step with the uninvolved leg.
 - (d) Repeat the process until the bottom of the stairs is reached.
- c. Manipulating closed doors.
 - (1) If the door opens away from the patient, instruct him or her to--
 - (a) Stand centered in the doorway, close enough to preclude bending forward to reach the doorknob.
 - (b) Grasp the doorknob and push the door open.

Performance Steps

- (c) Quickly move the cane or body, whichever is farther from the doorknob, forward to block the door open.
- (d) Step through the doorway, repositioning the cane and body as needed, to hold the door open until the doorway is cleared.
- (2) If the door opens toward the patient, instruct him or her to--
 - (a) Stand to the side of the door opening, close enough to preclude leaning sideways to reach the doorknob.
 - (b) Grasp the doorknob and pull the door open.
 - (c) Quickly move the cane or body, whichever is nearest the door, sideways to block the door open.
 - (d) Step through the doorway, repositioning the cane and body as needed, to hold the door open until the doorway is cleared.

10. Monitor the patient's responses continuously throughout the procedure.

CAUTION: If you observe the patient to be debilitated, extremely weak, unusually pale, or excessively perspiring, seat him or her immediately. Monitor his or her pulse, respirations, and/or blood pressure, as appropriate. (See tasks 081-831-0010, 081-831-0011, and 081-831-0012.)

11. Return the patient to the wheelchair upon completion of ambulation.

12. Issue the cane to the patient IAW local SOP.

CAUTION: Do not issue the cane to a patient who cannot ambulate independently on at least level surfaces.

13. Write appropriate progress notes to include--

- a. If a cane was issued or not.
- b. That the patient verbally acknowledged and demonstrated a proficiency of at least independent ambulation on level surfaces.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers and inspects the materials.	P	F
4. Raises the patient to a standing position.	P	F
5. Measures the cane to the patient.	P	F
6. Checks the cane for proper fit.	P	F
7. Demonstrates the gait to the patient.	P	F
8. Raises the patient to a standing position with the cane.	P	F
9. Ambulates the patient.	P	F
10. Monitors the patient's responses.	P	F
11. Returns the patient to the wheelchair.	P	F
12. Issues the cane to the patient, if applicable.	P	F
13. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

Subject Area 2: Transfer Techniques

INSTRUCT A PATIENT TO TRANSFER FROM WHEELCHAIR TO BED USING A SITTING TRANSFER
081-836-0018

Conditions: The patient was brought to the clinic in a wheelchair and has a completed treatment card. Assistance is available, if needed. Necessary equipment and materials: bed or mat table, safety belt, sliding board (if necessary), stethoscope, and blood pressure cuff.

Standards: The patient is taught a sitting transfer from wheelchair to bed IAW the treatment card information without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the patient's disability.
2. Explain the procedure to the patient.
3. Prepare the patient for the transfer.

NOTE: Determine whether one side of the body is stronger than the other, since it is much easier to perform the transfer when moving toward the strong side.

- a. Position the wheelchair so that the patient will be moving toward the strong side.
 - (1) If the wheelchair has removable armrests, the wheelchair will be positioned parallel with the bed or mat table. The armrest nearest the bed or mat table will be removed.
 - (2) If the wheelchair does not have removable armrests, the wheelchair will be positioned at a 10 to 20 degree angle facing the bed or mat table.
- b. Place a safety belt securely around the patient's waist to use as an aid to the patient during the transfer. The safety belt must be tight enough to prevent it from slipping up on the patient's ribs, but it should not cause the patient discomfort.
- c. Lock the wheelchair brakes. Put up the footrests. Assist the patient in removing the feet from the wheelchair footrests, if necessary.

NOTE: The patient must be encouraged to do as much as possible. CAUTION: If the wheelchair does not have brakes, have an assistant stabilize the wheelchair by holding the back of the chair and placing one or both feet behind the rear wheels.

- d. Provide the patient with a sliding board, if indicated. Instruct the patient to place one end of the board securely under the strong hip and the other end on the bed or mat table.

4. Instruct the patient in the performance of the transfer. Stand in front of and face the patient. Place one or both hands on the safety belt. The safety belt is to be used to assist with the transfer and guide the patient onto the bed or mat table.

NOTE: Additional personnel should be standing by, ready to provide assistance, if necessary.

- a. Have the patient place the hand of the stronger side on the bed or mat table.
 - (1) If a sliding board is being used, the hand will be placed on the sliding board instead of the bed or mat table.
 - (2) If the patient is able to use both arms to perform the transfer, the other hand is placed on the wheelchair seat near the hip.
- b. Have the patient push straight down on both arms, if applicable, lift both hips off the wheelchair seat, and shift or slide the hips toward the bed or mat table. Have him or her reposition the hands, and repeat this step until the transfer has been completed.

CAUTION: Care must be used to prevent tissue damage of the hips and/or buttocks by bumping against the wheelchair or using too much force when sliding.

- c. Instruct the patient to lie down when the transfer is completed.

5. Monitor the patient's responses continuously throughout the transfer. At a minimum, you should observe the patient's facial coloration and tolerance.

Performance Steps

CAUTION: If the patient is generally debilitated, extremely weak, or apprehensive, it may be necessary to monitor the patient's pulse, respirations, and blood pressure before and after performing the transfer.

6. Check the patient's treatment card to determine whether other treatments are required to complete the visit.
7. Conclude the visit by assisting the patient to transfer back into the wheelchair. Reposition the wheelchair, if needed, to ensure that the patient will be moving toward the strong side.
8. Record the patient's visit on the treatment card ensuring that progress notes are up-to-date and reflect the patient's current condition.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares the patient for the transfer.	P	F
4. Instructs the patient on the transfer technique.	P	F
5. Monitors the patient's responses.	P	F
6. Checks the patient's treatment card for other procedures.	P	F
7. Concludes the visit.	P	F
8. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

INSTRUCT A PATIENT TO TRANSFER FROM WHEELCHAIR TO BED USING A STANDING TRANSFER

081-836-0020

Conditions: The patient was brought to the clinic in a wheelchair. The patient has been screened for the treatment and has a completed treatment card. Assistance is available, if needed. Necessary materials and equipment: bed or plinth, safety belt, step stool, stethoscope, and blood pressure cuff.

Standards: The patient is instructed in performing a standing transfer from the wheelchair to the bed, IAW the information on the treatment card, and without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the patient's disability and the type of transfer to be instructed.
 - a. Nonweightbearing (NWB) transfer. This transfer is used when one lower extremity (LE) is weakened or unfit for bearing weight.
 - b. Partial weightbearing (PWB) transfer. This transfer is used when only a portion of the patient's body weight is to be placed on the involved lower extremity.
 - c. Full weightbearing (FWB) transfer. This transfer is used when the patient can place the entire body weight on both lower extremities.
2. Explain the procedure to the patient. Tell the amount of weight that may be placed on the involved extremity.
3. Prepare the patient for the transfer.
 - a. Position the wheelchair so that the patient will be moving toward the uninvolved or strong side.
 - b. Place a safety belt securely around the patient's waist. The safety belt must be tight enough to prevent it from slipping up on the patient's ribs, but it should not cause the patient discomfort.
 - c. Lock the wheelchair brakes. Assist the patient to remove the feet from the footrests, if necessary. Put up or remove the footrests.

CAUTION: If the wheelchair does not have brakes, have an assistant stabilize the wheelchair by holding the back of the chair and placing one or both feet behind the rear wheels.

4. Instruct the patient in the performance of the transfer. Stand in front of and face the patient. Place both hands on the safety belt. The safety belt is to be used to assist with the transfer and guide the patient onto the bed.

NOTE: Additional personnel should be standing by ready to provide assistance. Have the patient--

- a. Move forward to the edge of the wheelchair seat and put both feet, as appropriate, flat on the floor slightly under the seat.
- b. Place both hands, as appropriate, on the wheelchair armrests.
- c. Lean slightly forward at the waist, push straight down on both hands and both legs to stand, if the patient's disability allows.

CAUTION: [1] Be ready to assist the patient to lock the knee of the uninvolved or stronger leg by placing your knee against the front of the patient's knee. [2] The patient must be observed for signs of fainting.

Allow the patient to sit down, if necessary. [3] Ensure that the patient is balanced before proceeding.

- d. Place the hand nearest the bed on the bed.
- e. Pivot on the stronger leg away from the bed until it is felt against the back of the patient's legs. The patient must reposition his or her hands while pivoting.

NOTE: Provide a step stool, if necessary, for the patient to complete the transfer.

- f. Push straight down on both arms and feet, as appropriate, until securely seated on the bed.

NOTE: If the patient has a cast or bulky dressing, additional assistance may be required to complete the transfer.

- g. Instruct the patient to lie down when the transfer is completed.

5. Monitor the patient's responses continuously throughout the transfer.

Performance Steps

CAUTION: If the patient is generally debilitated, extremely weak, or apprehensive, it may be necessary to monitor the patient's pulse, respiration, and blood pressure before and after performing the transfer.

6. Check the patient's treatment card to determine whether other treatments are required to complete the visit.
7. Conclude the visit by assisting the patient to transfer back into the wheelchair. Reposition the wheelchair, if needed, to insure that the patient will be moving toward the strong side.
8. Write appropriate progress notes.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares the patient for the transfer.	P	F
4. Instructs the patient on the transfer technique.	P	F
5. Monitors the patient's responses.	P	F
6. Checks the patient's treatment card for other procedures.	P	F
7. Concludes the visit.	P	F
8. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

Subject Area 3: Physical Therapy Diagnostics Procedures

MEASURE A PATIENT'S LEG LENGTH**081-836-0044**

Conditions: The patient has a completed referral. Necessary materials and equipment: treatment or mat table, examining shorts or gown, sheet, towels, a tape measure (1/4" width) with centimeter markings.

Standards: The patient's leg length measurements are taken without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
4. Prepares the patient for the procedure. Instructs the patient to change into shorts and/or gown as appropriate and to remove all footgear.	P	F
5. Positions the patient.	P	F
a. With the patient supine.	P	F
(1) Positions the patient with the body in a straight line.	P	F
(2) The knees should be extended.	P	F
(3) There should be no hip rotation and the knees should be in the neutral position.	P	F
b. With the patient standing.	P	F
(1) The knees should be extended.	P	F
(2) There should be no hip rotation and the knees should be in the neutral position.	P	F
6. Performs the measurement.	P	F
a. With the patient supine.	P	F
(1) Locates the anterior superior iliac spine (ASIS) on one side of the body.	P	F
(2) Places the beginning of the tape measure on the ASIS and draws the tape measure distally to the distal tip of the medial malleolus of the same lower extremity (LE).	P	F
(3) Notes the measurement at the distal tip of the medial malleolus of the same LE.	P	F
(4) Repeats the procedure for the other leg.	P	F
b. With the patient standing.	P	F
(1) Locates the anterior superior iliac spine (ASIS) on one side of the body.	P	F
(2) Places the beginning of the tape measure on the ASIS and draws the tape measure distally to the floor just anterior to the medial malleolus of the same LE.	P	F
(3) Notes the measurement at the floor just anterior to the medial malleolus of the same LE.	P	F
(4) Repeats the procedure for the other leg.	P	F
7. Records the measurements.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

STP 8-91BN9-SM-TG

**References
Required**

**Related
TC 8-640**

MEASURE ANKLE JOINT SWELLING USING THE FIGURE-OF-8 METHOD

081-836-0045

Conditions: The patient has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a dark-colored skin pencil or marker, treatment table (plinth), and a tape measure (1/4" width) with centimeter markings.

Standards: A patient's ankle swelling is measured accurately in centimeters without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card.
2. Gather the materials.
3. Explain the procedure to the patient. After specific points are marked on his or her feet, the procedure will determine the swelling about the ankle (talar and subtalar) joints using a tape measure in a figure-of-8.
4. Instruct the patient to remove footgear and socks from both feet.
5. Position the patient supine, supporting the upper body by resting on the palms of the hands, with the ankles slightly extended beyond the end of the table edge.
6. Locate the landmarks on both feet.
 - a. Distal tip of the lateral malleolus. (See Figure 3-3.)
 - b. Base of the fifth metatarsal. The bony prominence located inferior to the lateral malleolus and midway between the lateral base of the heel and the lateral base of the fifth metatarsophalangeal (MTP) joint. (See Figure 3-3.)
 - c. Tibialis anterior (TA) tendon. (See Figure 3-3.)
 - d. Tuberosity of the navicular. The bony prominence located medially between the medial malleolus and the base of the first MTP joint. (See Figure 3-3.)
 - e. Distal tip of the medial malleolus. (See Figure 3-3.)

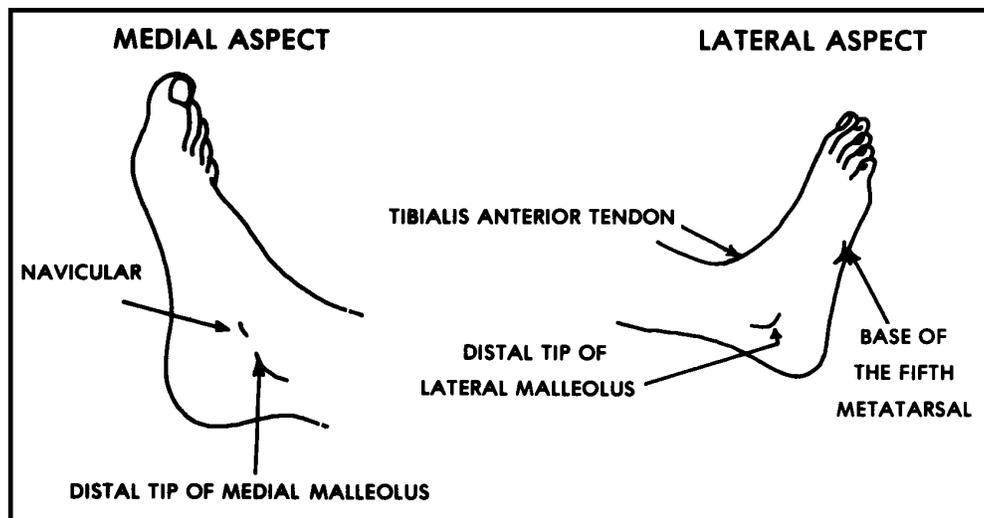


Figure 3-3

Performance Steps

7. Mark the landmarks on both feet with a dark-colored skin pencil or marker using a tick mark.

8. Position the patient's unaffected lower extremity (LE) on a towel roll with the ankle in the neutral position for eversion and inversion while keeping it dorsiflexed to the neutral position.

NOTE: A towel roll or the patient's helmet/helmet liner with a towel drape, if available, should be placed under the calf muscle of the LE to elevate the limb slightly.

9. Measure the unaffected ankle.

a. Subtalar joint.

- (1) Place the beginning of the tape midway between the TA tendon and the lateral malleolus. (See Figure 3-4a.)
- (2) Draw the tape medially across the instep and places it just distal to the tuberosity of the navicular. (See Figure 3-4b).
- (3) Pull the tape across the arch and up, just proximal to the base of the fifth metatarsal.
- (4) Cross the TA tendon. (See Figure 3-4c.)

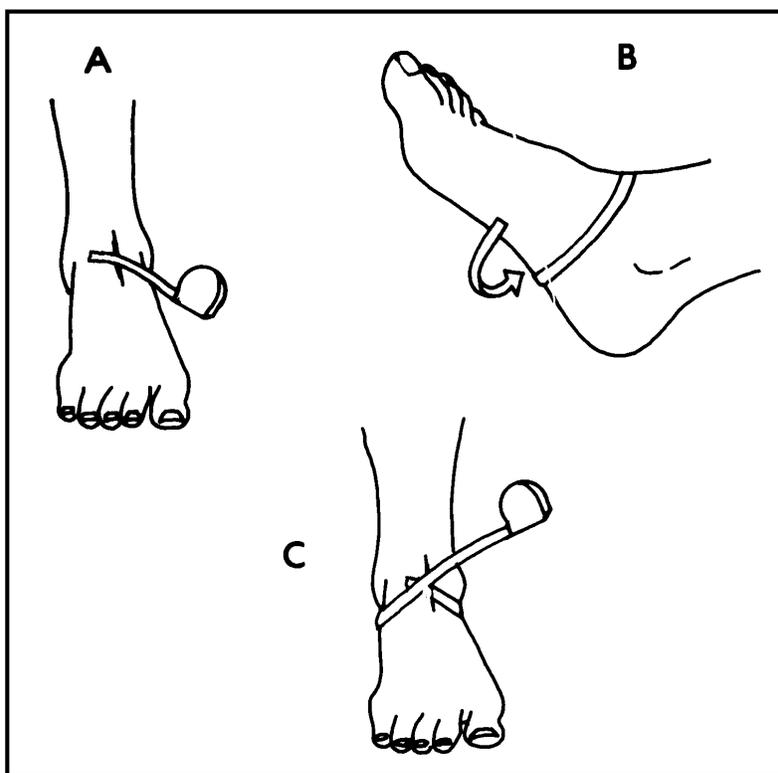


Figure 3-4

b. Talar joint.

- (1) Continue the tape around the ankle joint just distal to the distal tip of the medial malleolus.
- (2) Pull the tape across the achilles tendon.
- (3) Place the tape just distal to the distal tip of the lateral malleolus.
- (4) Complete the measurement by drawing the tape to the start point at the TA tendon. (See Figure 3-5.)

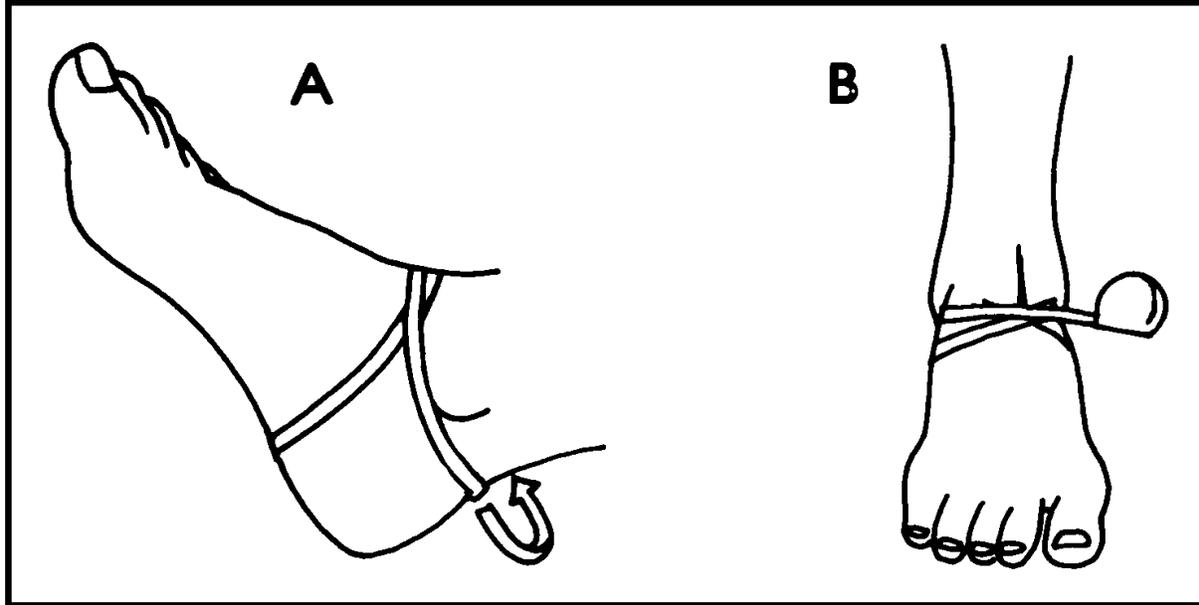
Performance Steps

Figure 3-5

10. Note the measurement in centimeters.

NOTE: Note the reading as measured. For example, if the tape measure shows 52.7 cm, record it as 52.7 cm.

11. Position the affected ankle for measurement by placing it on the towel roll.

NOTE: If the patient's affected ankle cannot be actively dorsiflexed to the neutral position due to pain or swelling, an assistive device such as a towel, shoelace, or litter strap should be used to position the ankle as close to neutral as possible. CAUTION: Use the patient's tolerance to pain as a guide for positioning the ankle to the neutral position.

12. Measure the affected ankle using the same technique as described in steps 9a through 10.

13. Record the measurements in the "O" portion of the SOAP notes. - Example, 0: Fig-8 girth: (L) ankle 51.5 cm /*(R) ankle 54.0 cm * = affected ankle

NOTE: Record other observations pertinent to the measurement, as appropriate. - 1. Patient unable to attain active dorsiflexion to the neutral position. - 2. Hypersensitivity to touch. - 3. Pitting edema.

Performance Measures

1. Reviews the patient's treatment card.
2. Gathers the materials.
3. Explains the procedure to the patient.
4. Instructs the patient to remove footgear and socks from both feet.
5. Positions the patient.
6. Locates the landmarks on both feet.
7. Marks the landmarks on both feet.

Results

P	F
P	F
P	F
P	F
P	F
P	F
P	F

Performance Measures

	Results	
8. Positions the patient's unaffected lower extremity (LE).	P	F
9. Measures the unaffected ankle.	P	F
10. Notes the measurement in centimeters.	P	F
11. Positions the affected ankle.	P	F
12. Measures the affected ankle.	P	F
13. Records the measurements in the "O" portion of the SOAP notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

PERFORM GIRTH MEASUREMENTS**081-836-0031**

Conditions: The patient has been screened for treatment and has a completed referral. A patient care handwash has been performed. Necessary materials and equipment: treatment table (plinth) or chair, a dark-colored skin pencil or marker, and a tape measure (1/4 inch width).

Standards: The required measurements are taken and recorded without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
a. The procedure will determine the muscle bulk or swelling in the extremity to assist in identifying deficiencies caused by the patient's condition.	P	F
b. Measurements will be taken on both extremities.	P	F
(1) The measurements of the uninvolved extremity will be the basis for comparison to establish the normal girth of the involved extremity.	P	F
(2) The measurements will be used as a guide to indicate improvement or regression of the patient's condition.	P	F
3. Gathers the materials.	P	F
4. Prepares the patient for the measurements.	P	F
a. Positions the patient in a manner which will provide complete support of the involved extremity and proper body alignment.	P	F
b. Assists the patient, as necessary, to remove clothing from the area.	P	F
c. Drapes the patient, exposing only the area to be measured.	P	F
d. Instructs the patient to totally relax the area to be measured.	P	F
5. Visually inspects and palpates the areas to be measured.	P	F
CAUTION: Reports any abnormalities, such as inflammation and signs of swelling, to the physical therapist immediately. Documents findings on the patient's treatment card, as appropriate.		
6. Locates the appropriate anatomical landmarks.	P	F
a. Marks the landmarks with a dark-colored skin pencil or pen, using a tick mark, on the uninvolved limb first.	P	F
b. Uses the tape measure to assist in locating any additional points to be measured from the initially measured reference point.	P	F
c. Marks the contralateral limb in the same manner.	P	F
NOTE: Records the distances between each measurement on the treatment card.		
7. Performs the measurements.	P	F
NOTE: Ensures the area is totally relaxed and the muscles are undistorted during the procedure.		
a. Places the tape measure around the extremity circumferentially.	P	F
b. Pulls the tape snug and notes the reading.	P	F
c. Records the reading to the nearest one-half centimeter.	P	F
NOTE: Unless otherwise directed, records the reading in centimeters.		
d. Measures the contralateral limb in the same manner.	P	F
8. Records both sets of measurements in the "O" portion of the SOAP notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

MEASURE JOINT RANGE OF MOTION (ROM) OF THE UPPER EXTREMITY JOINTS

081-836-0046

Conditions: The patient has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a treatment table, assorted goniometers, treatment gown, ruler, and tape measure (with inches and centimeters).

Standards: The joint ROM is measured and results are recorded accurately using the goniometer and the tapeline without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card for the joints to be measured.
2. Gather the materials. Select a tapeline and/or the appropriate goniometer for the joints to be measured. (See Figure 3-6.)
 - a. Large standard goniometer - used for the measuring the ROM of the shoulder, knee, and hip.
 - b. Small standard goniometer - used for measuring the ROM of the wrist and forearm.
 - c. "Finger" goniometer - used for measuring finger and thumb flexion and extension.
 - d. Tapeline or ruler - used for measuring finger spread at the metacarpophalangeal (MCP) joints.

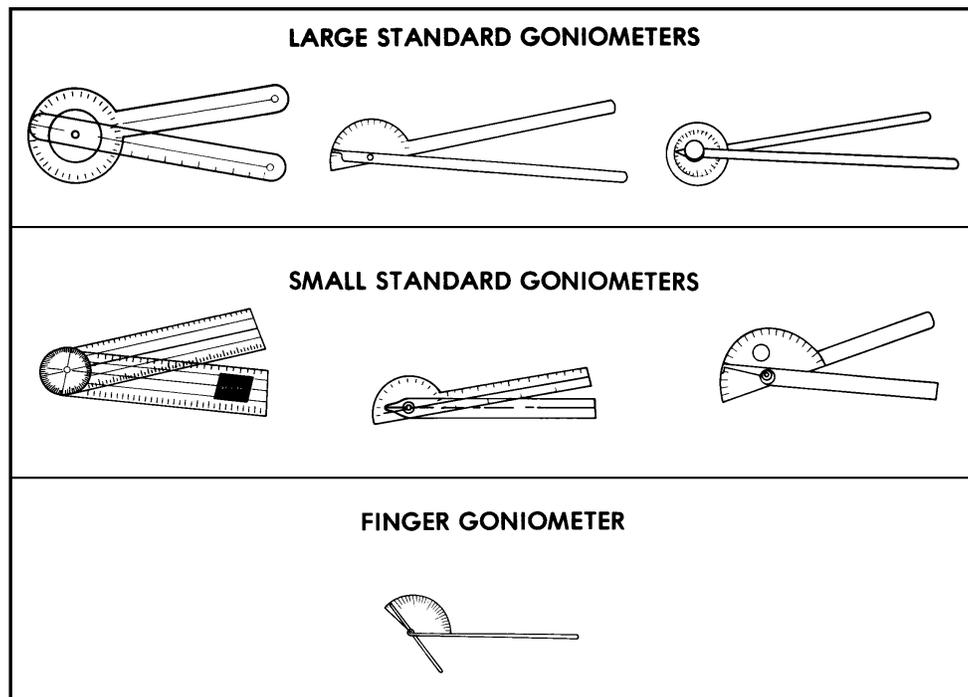


Figure 3-6

3. Explain the procedure to the patient. The measurements will assist in--
 - a. Evaluating the ROM at a given joint.
 - b. Planning an exercise program.
 - c. Evaluating the present treatment program.
4. Prepare the patient for the procedure.
 - a. Instruct the patient to remove clothing and jewelry covering the joints to be measured. Provide a treatment gown, if appropriate.
 - b. Place the patient into the base position appropriate for the joint to be measured.

Performance Steps

c. Ask the patient if there is pain in the joint and whether or not the pain increases with movement.

NOTE: Record the patient's comments in the "S" portion of the SOAP notes.

5. Demonstrate the motion to be measured for the patient.
6. Locate the pertinent bony landmarks.
7. Position the measuring device.
 - a. Goniometer. Align the arms of the goniometer carefully so the pivot of the goniometer falls naturally in the region of the axis of joint motion.
 - b. Tapeline or ruler. Place over surface anatomical landmarks, as appropriate.
8. Establish the zero degree starting position.
9. Instruct the patient to move the joint(s) as far as possible in the desired plane of movement and hold the position.

CAUTION: Monitor the patient's reactions to the movements for an indicator of discomfort or pain. The amount of movement will be determined by the patient's tolerance. NOTE: NOTE 1: Keep the goniometer in alignment with the bony landmarks during the movement of the joint. NOTE 2: If the joint is to be measured "actively", encourage the patient to move the part as far as possible. If the joint is to be measured "passively", have an assistant move the part to the patient's tolerance.

10. Quickly eye the measuring scale and note the measurement.
11. Remove the goniometer, tapeline, or ruler and instruct the patient to slowly return the joint to the starting position.
12. Measure the contralateral joint, repeating steps 5 through 11.
13. Record the number of degrees which the joint can move, rounding off the measurement to the nearest five degree mark achieved. For example, if you measured 67° active flexion of the wrist, record the measurement as 65°.

NOTE: Do not use the descriptive word "minus" or its symbol (-) to indicate hyperextension or limited motion in joints that are measured from a fully extended position. Document hyperextension as "HE" and limited motion as "lacks".

14. Record observations in the "O" portion of the SOAP notes, documenting the following information, as appropriate.
 - a. Motion was "active" or "passive".
 - b. Names of soft tissue structures which may be causing limitation of motion of the affected joint.
 - c. Modifications of the zero degree or base starting position.
 - d. Excessive abnormal motion or deformity.
 - e. Circumstances which may affect the accuracy of the recorded measurements.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Gathers the materials.	P	F
3. Explains the procedure to the patient.	P	F
4. Prepares the patient for the procedure.	P	F
5. Demonstrates the motion for the patient.	P	F
6. Locates the pertinent bony landmarks.	P	F
7. Positions the measuring device.	P	F

Performance Measures	Results	
8. Establishes the zero degree starting position.	P	F
9. Instructs the patient to move the joint(s) and hold the position.	P	F
10. Eyes the measuring scale and notes the measurement.	P	F
11. Removes the measuring device and instructs the patient to slowly return the joint to the starting position.	P	F
12. Measures the contralateral joint, repeating steps 5 through 11.	P	F
13. Records the measurement.	P	F
14. Records observations in the "O" portion of the SOAP notes	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

MEASURE JOINT RANGE OF MOTION (ROM) OF THE LOWER EXTREMITY JOINTS
081-836-0047

Conditions: The patient has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a treatment table, assorted goniometers, tape measure (with inches and centimeters), treatment gown, and examination shorts.

Standards: The joint ROM is measured and results are recorded accurately using the goniometer and the tapeline without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card for joints to be measured.
2. Gather the materials. Select the appropriate goniometer for the joints to be measured. (See Figure 3-7.)
 - a. Large standard goniometer - used for measuring the ROM of the hip and knee.
 - b. Small standard goniometer - used for measuring the ROM of the ankle and foot.
 - c. "Finger" goniometer - used for measuring toe motion.
 - d. Tapeline or ruler - used for measuring toe spread at the metatarsophalangeal (MTP) joints.

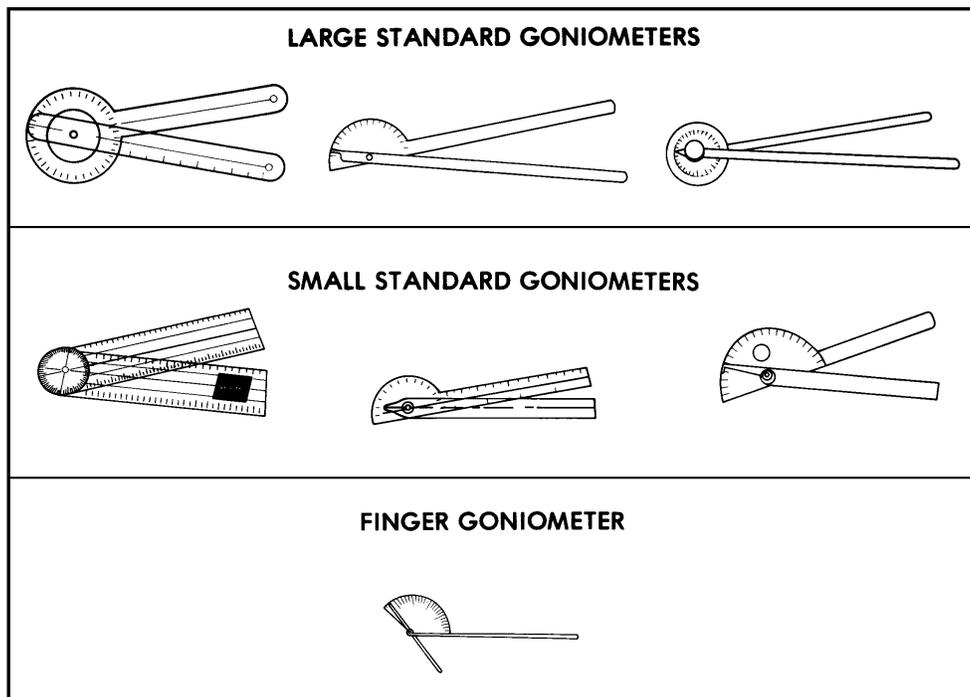


Figure 3-7

3. Explain the procedure to the patient. The measurements will assist in--
 - a. Evaluating the ROM at a given joint.
 - b. Planning an exercise program.
 - c. Evaluating the present treatment program.
4. Prepare the patient for the procedure.
 - a. Instruct the patient to remove clothing and footgear covering the joints to be measured. Provide a treatment gown and/or examining shorts, if needed.
 - b. Place the patient into the base position appropriate for the joint to be measured.

Performance Steps

c. Ask the patient if there is pain in the joint and whether or not the pain increases with movement.

NOTE: Record the patient's comments in the "S" portion of the SOAP notes.

5. Demonstrate the motion to be measured for the patient.
6. Locate the pertinent bony landmarks.
7. Position the measuring device.
 - a. Goniometer. Align the arms of the goniometer carefully so the pivot of the goniometer falls naturally in the region of the axis of joint motion.
 - b. Tapeline or ruler. Place over surface anatomical landmarks, as appropriate.
8. Establish the zero degree starting position.
9. Instruct the patient to move the joint(s) as far as possible in the desired plane of movement and hold the position.

CAUTION: Monitor the patient's reactions to the movements for an indicator of discomfort or pain. The amount of movement will be determined by the patient's tolerance. NOTE: NOTE 1: Keep the goniometer in alignment with the bony landmarks during the movement of the joint. NOTE 2: If the joint is to be measured actively , encourage the patient to move the part as far as possible. If the joint is to be measured passively , have an assistant move the part to the patient's tolerance.

10. Eye the measuring scale quickly and note the measurement.
11. Remove the goniometer and instruct the patient to slowly return the joint to the starting position.
12. Measure the contralateral joint, repeating steps 5 through 11.
13. Record the number of degrees which the joint can move, rounding off the measurement to the nearest five degree mark achieved. For example, if you measured 43ø passive IR of the hip, record the measurement as 40ø.

NOTE: Do not use the descriptive word "minus" or its symbol (-) to indicate hyperextension or limited motion in joints that are measured from a fully extended position. Document hyperextension as "HE" and limited motion as "lacks".

14. Record observations in the "O" portion of the SOAP notes, documenting the following information as appropriate.
 - a. Motion was "active" or "passive".
 - b. Names of soft tissue structures which may be causing limitation of motion of the affected joint.
 - c. Modifications of the zero degree or base starting position.
 - d. Excessive abnormal motion or deformity.
 - e. Circumstances which may affect the accuracy of the recorded measurements.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Gathers the materials.	P	F
3. Explains the procedure to the patient.	P	F
4. Prepares the patient for the procedure.	P	F
5. Demonstrates the motion for the patient.	P	F
6. Locates the pertinent bony landmarks.	P	F
7. Positions the measuring device.	P	F

Performance Measures	Results	
8. Establishes the zero degree starting position.	P	F
9. Instructs the patient to move the joint(s) and hold the position.	P	F
10. Eyes the measuring scale and notes the measurement.	P	F
11. Removes the measuring device and instructs the patient to slowly return the joint to the starting position.	P	F
12. Measures the contralateral joint, repeating steps 5 through 11.	P	F
13. Records the measurement.	P	F
14. Writes the notes in the "O" portion of the SOAP notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

ADMINISTER A GRIP STRENGTH TEST

081-836-0032

Conditions: The patient has a completed treatment card or record. A patient care handwash has been performed. Necessary materials and equipment: a treatment table, chair, and a hand dynamometer.

Standards: The patient's grip strength is measured accurately and the results are recorded in pounds force (PF) on the appropriate form without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment record or card.
2. Gather the materials. Select the hand dynamometer and check it for serviceability. (See Figure 3-8.)
 - a. The main dial should be calibrated to "0" pounds force.
 - b. The adjustable gauge dial should be zeroed.
 - c. The hasps on the handpiece should secure onto the dynamometer snugly.

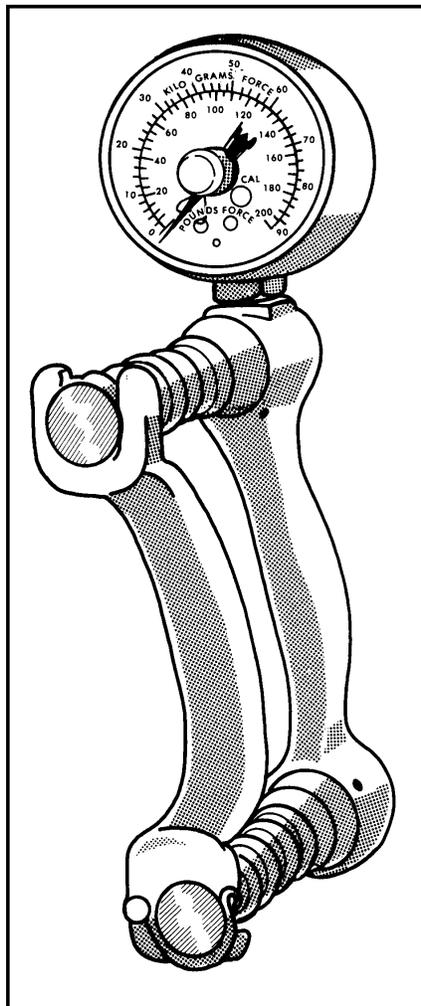


Figure 3-8

3. Explain the procedure to the patient. The measurements will assist in--

Performance Steps

- a. Establishing a strength goal.
- b. Planning therapeutic treatment.

4. Prepare the patient for the procedure.

- a. Ensure the patient's clothing will not restrict the performance of the test. Instruct the patient to remove--
 - (1) Shirt or roll down sleeves, if shirt cuffs are too tight.
 - (2) Hand and wrist jewelry, if the patient cannot achieve the proper grip.
- b. Instruct the patient to assume a base position by either sitting or standing.

NOTE: Patients unable to sit or stand should be tested in a supine position.

5. Demonstrate the correct grip position and procedure to the patient.

6. Instruct the patient to grasp the dynamometer with the uninvolved hand.

7. Position the arm to be tested. Place the patient's arm at the side slightly abducted, elbow flexed to 90° with the forearm in midposition between supination and pronation. (See Figure 3-9.)

NOTE: If the patient is unable to flex the elbow to 90°, test with the elbow extended to 0°. If the patient cannot accommodate either testing position, place the elbow in a comfortable position and document this in the patient's SOAP notes. CAUTION: Ensure the patient's palm is dry before testing by having him or her wipe with a towel. The dynamometer could slip from the patient's hand while squeezing, causing possible harm to the patient and damage to the dynamometer.

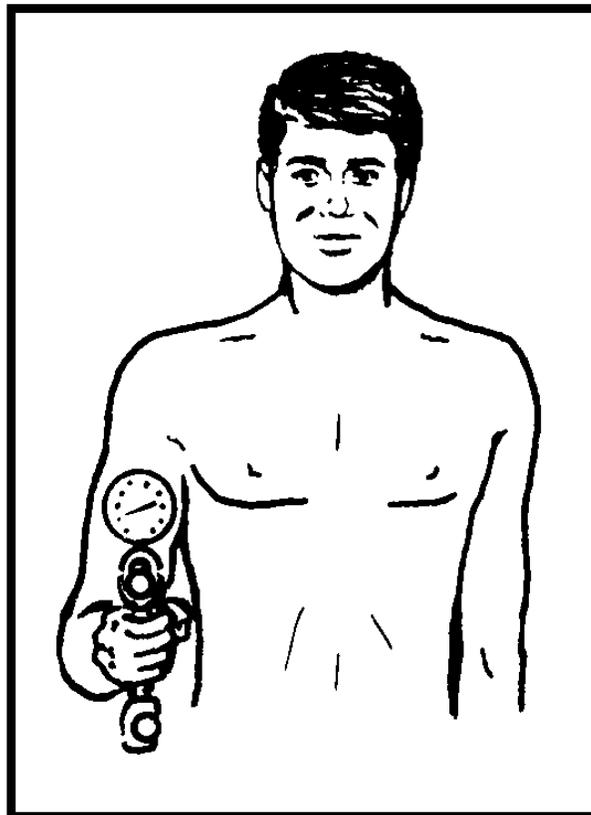


Figure 3-9

8. Adjust the grip of the dynamometer to the uninvolved hand. Move the handgrip so the hand is in a relaxed grip position. (See Figure 3-10.)

Performance Steps

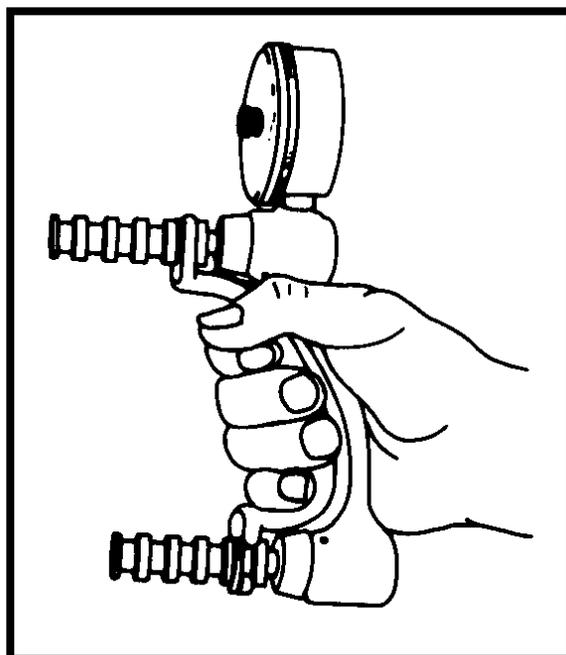


Figure 3-10

9. Zero the dynamometer. Ensure the poundage dial is set at "0" PF by turning the face knob counterclockwise until it rests over the "0" mark.
10. Instruct the patient to squeeze the dynamometer as hard as possible with the hand being tested, and then to relax the grip without releasing the dynamometer.
11. Note the reading. Using the pounds force scale, round off the measurement to the nearest five pound mark achieved. For example, if you measured 87 pounds force on the left hand, you would record (L) 85 PF.
12. Repeat steps 9 through 11 twice more, for a total of three attempts for that side.
13. Perform the procedure three times on the involved side.
14. Choose the correct results. Select the highest of the three readings for each side.
15. Document the results in the "O" portion of the SOAP notes. For example: O: Grip Strength: (R) 100 PF (L) * 85 PF * = affected side

Performance Measures

1. Reviews the patient's treatment record or card.
2. Gathers the materials.
3. Explains the procedure to the patient.
4. Prepares the patient for the procedure.
5. Demonstrates the correct grip position and procedure to the patient.
6. Instructs the patient to grasp the dynamometer with the uninvolved hand.

Results

- | | |
|---|---|
| P | F |
| P | F |
| P | F |
| P | F |
| P | F |
| P | F |

Performance Measures	Results	
7. Positions the arm to be tested.	P	F
8. Adjusts the grip of the dynamometer to the uninvolved hand.	P	F
9. Zeroes the dynamometer.	P	F
10. Instructs the patient to squeeze the dynamometer.	P	F
11. Notes the reading.	P	F
12. Repeats steps 9 through 11 twice more with the uninvolved hand.	P	F
13. Performs the procedure three times on the involved side.	P	F
14. Chooses the correct results.	P	F
15. Documents the results.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

PERFORM GROSS MANUAL MUSCLE TESTING (UPPER EXTREMITY)

081-836-0048

Conditions: The patient has a referral from a physician for a rehabilitation program. Necessary materials and equipment: treatment table (plinth) or mat table, examining gown and shorts, and pen with black or blue black ink.

Standards: The patient's gross manual muscle strength is assessed and recorded, and exercise activity is recommended for the area(s) stated on the patient's referral without causing injury or unnecessary discomfort to the patient.

Performance Steps

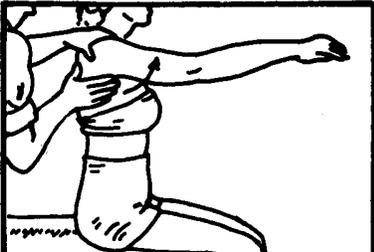
1. Review the patient's referral for the body site(s) to be tested. If contraindications exist which are not documented, notify the physical therapist.
 2. Explain the procedure to the patient. After being positioned for testing, the patient will be instructed to move the joint to be tested against your resistance. The patient's muscle group(s) will be tested to--
 - a. Assess and establish an exercise program.
 - b. Check on progress.
 3. Position the patient for treatment. (See Figure 3-11.)
- NOTE: Begin testing in the "FAIR" position for the joint to be tested.
4. Stabilize the joint to be tested. (See Figure 3-11.)
 5. Provide resistance to the patient's resistance. (See Figure 3-11.)

NOTE: If the patient is unable to initiate muscle movement or move the joint against gravity, reposition the patient for testing in the "POOR" or "TRACE AND ZERO" position. CAUTION: Do not overpower the patient's resistance to the point where it causes pain. It should be only to where the patient can no longer effectively hold or move the joint against your force.

SHOULDER FLEXION to 90°

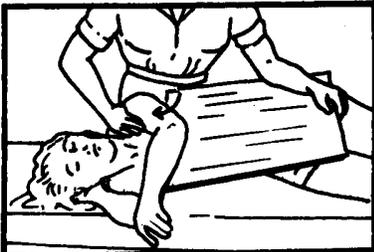
NORMAL, GOOD, & FAIR

Position: Sitting with arm at side
 Stabilization: Scapula
 Resistance: Above the elbow joint



POOR

Position: Sidelying with arm resting on a board
 Stabilization: Scapula
 Movement: The patient brings arm forward from neutral to 90° of flexion



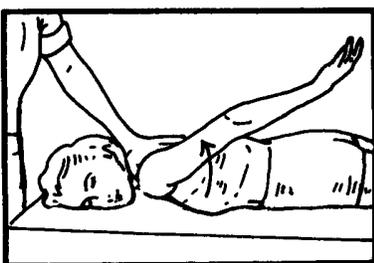
TRACE & ZERO

Palpate the anterior deltoid

SHOULDER EXTENSION

NORMAL, GOOD, & FAIR

Position: Prone with arm at side and palm up
 Stabilization: Scapula
 Resistance: Above elbow joint



POOR

Position: Sidelying with arm resting on a board
 Stabilization: Scapula



TRACE & ZERO

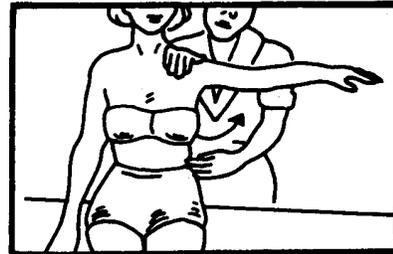
Palpate fibers of Teres major and Latissimus dorsi lateral to the axillary border of the scapula

Figure 3-11 Position Patient For Treatment

SHOULDER ABDUCTION to 90°

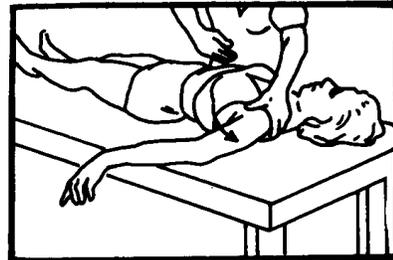
NORMAL, GOOD, & FAIR

Position: Sitting with arm at side
Stabilization: Superior border of scapula
Resistance: Above the elbow joint



POOR

Position: Sidelying with arm at side
Stabilization: Superior border of scapula
Movement: The patient abducts arm to 90° abduction



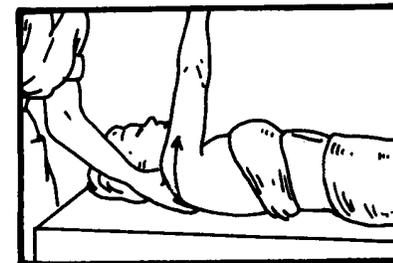
TRACE & ZERO

Palpate the middle deltoid

SHOULDER HORIZONTAL ADDUCTION

NORMAL, GOOD, & FAIR

Position: Supine with arm abducted to 90°
Stabilization: Superior shoulder above superior scapula and clavicle
Resistance: Above the elbow joint



POOR

Position: Sitting with arm in 90° abduction
Stabilization: Superior shoulder region
Movement: The patient horizontally adducts arm



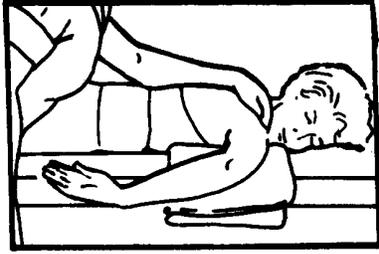
TRACE & ZERO

Palpate the Pectoralis major near the insertion on the humerus

Figure 3-11a Position Patient For Treatment (Continued)

SHOULDER INTERNAL ROTATION**NORMAL, GOOD, & FAIR**

Position: Prone with shoulder abducted to 90°
and forearm hanging over edge of the table
Stabilization: Scapula/upper arm
Resistance: Above wrist joint

**POOR**

Position: Prone with entire arm hanging over edge of
table and in external rotation
Stabilization: Scapula
Movement: Patient rotates the arm through full ROM
from external rotation to internal rotation

TRACE & ZERO

Palpate the Subscapularis deep on anterior surface of
the glenohumeral joint near attachment on the humerus
humerus

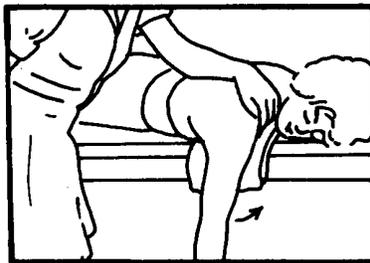


Figure 3-11b Position Patient For Treatment (Continued)

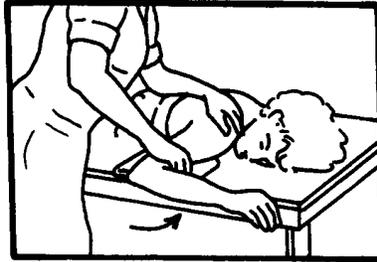
SHOULDER EXTERNAL ROTATION

NORMAL, GOOD, & FAIR

Position: Prone with shoulder abducted to 90°
and forearm hanging over edge of the table

Stabilization: Scapula/upper arm

Resistance: Above wrist joint



POOR

Position: Prone with entire arm hanging over edge of
table and in internal rotation

Stabilization: Scapula

Movement: Patient rotates the arm through ROM
from internal rotation to external rotation

TRACE & ZERO

Palpate the infraspinatus below the spine of the scapula
humerus

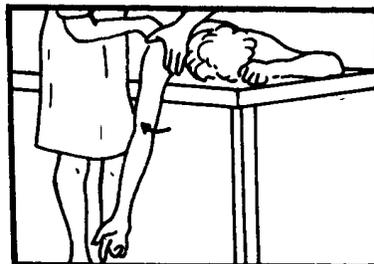


Figure 3-11c Position Patient For Treatment (Continued)

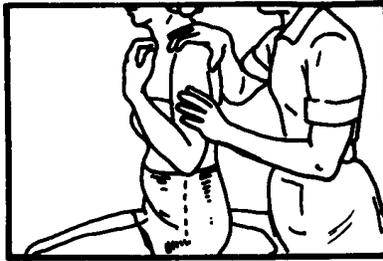
ELBOW FLEXION

NORMAL, GOOD, & FAIR

Position: Sitting with arm at side and in supination

Stabilization: Upper arm

Resistance: Above wrist joint



POOR

Position: Supine with arm abducted and elbow extended

Stabilization: Upper arm

Movement: Patient flexes elbow through full ROM

TRACE & ZERO

Palpate the Biceps tendon



Figure 3-11d Position Patient For Treatment (Continued)

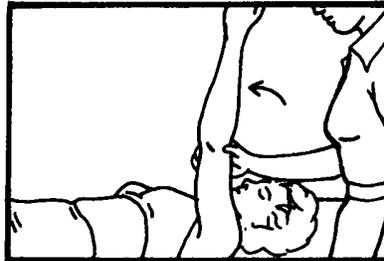
ELBOW EXTENSION

NORMAL, GOOD, & FAIR

Position: Supine with arm held in vertical position

Stabilization: Upper arm

Resistance: Above wrist joint



POOR

Position: Supine with arm abducted and elbow flexed

Stabilization: Upper arm

Movement: Patient extends elbow through full ROM

TRACE & ZERO

Palpate the Triceps tendon

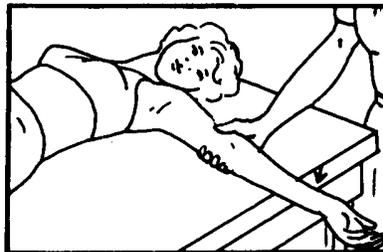


Figure 3-11e Position Patient For Treatment (Continued)

FOREARM SUPINATION**NORMAL, GOOD, FAIR, & POOR**

Position: Sitting with arm at side, elbow flexed to 90°,
and forearm pronated

Stabilization: Upper arm

Resistance: Distal radius and ulna

Movement: Patient supinates elbow through full ROM

NORMAL - Maximum resistance

GOOD - Moderate resistance

FAIR - Full ROM with no manual resistance

POOR - Partial completion of ROM

TRACE & ZERO

Palpate the Supinator on the radial side of the forearm
just distal to the elbow joint



Figure 3-11f Position Patient For Treatment (Continued)

FOREARM PRONATION

NORMAL, GOOD, FAIR, & POOR

Position: Sitting with arm at side, elbow flexed to 90°,
and forearm supinated

Stabilization: Upper arm

Resistance: Distal radius and ulna

Movement: Patient pronates elbow through full ROM

NORMAL - Maximum resistance

GOOD - Moderate resistance

FAIR - Full ROM with no manual resistance

POOR - Partial completion of ROM

TRACE & ZERO

Palpate the Pronator teres on upper 1/3 of volar surface
of the forearm



Figure 3-11g Position Patient For Treatment (Continued)

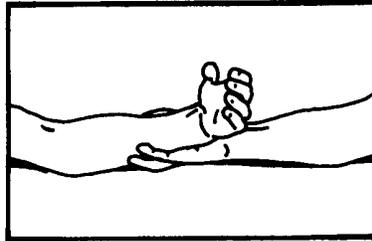
WRIST FLEXION

NORMAL, GOOD, & FAIR

Position: Sitting with forearm resting on the table edge

Stabilization: Forearm

Resistance: Palm



POOR

Position: Lateral border of hand resting on the table

Stabilization: Forearm

Movement: Patient flexes wrist through full ROM

TRACE & ZERO

Palpate the tendons of the wrist flexors on palmar surface of the wrist medially and laterally

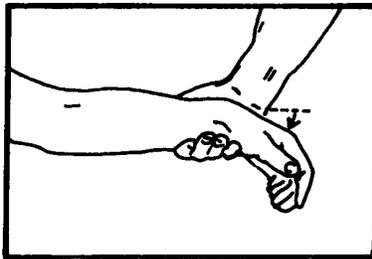


Figure 3-11h Position Patient For Treatment (Continued)

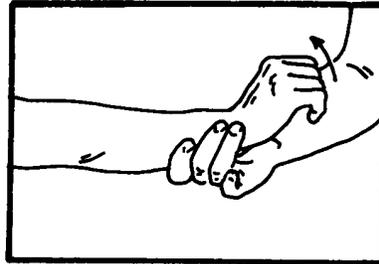
WRIST EXTENSION

NORMAL, GOOD, & FAIR

Position: Sitting with forearm resting on the table
in pronation

Stabilization: Forearm

Resistance: Back of the hand



POOR

Position: Lateral border of hand resting on the table

Stabilization: Forearm

Movement: Patient extends wrist through full ROM

TRACE & ZERO

Palpate the tendons of the wrist extensors on dorsal surface
of the wrist medially and laterally

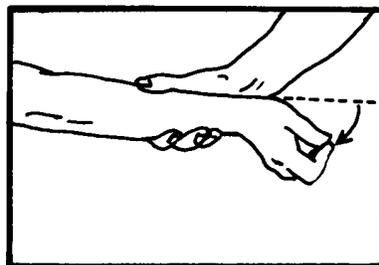


Figure 3-11i Position Patient For Treatment (Continued)

6. Record the muscle grade. (See Figure 3-12.)

WORD	LETTER	NUMERAL	DESCRIPTION	EXERCISE
ZERO	O	0	No evidence of muscle contraction.	Passive.
TRACE	T	1	Slight contraction but NO joint movement. Tendon may become more prominent during contraction.	Passive. Promote and try to achieve active-assistive.
POOR	P	2	Complete ROM with gravity eliminated (lessened).	Active-assistive (against gravity), active with gravity eliminated, i.e., skate or powder board.
FAIR	F	3	Complete ROM against gravity.	Active (against gravity).
GOOD	G	4	Complete ROM against gravity with moderate resistance.	Resistive.
NORMAL	N	5	Complete ROM against gravity with maximum resistance.	Normal activity.

Figure 3-12 Muscle Grade Chart

Performance Measures

1. Reviews the patient's referral.
2. Explains the procedure to the patient.
3. Positions the patient for treatment in the "AIR" position,
4. Stabilizes the joint to be tested.
5. Provides resistance to the patient's resistance.
6. Records the muscle grade.

Results

P	F
P	F
P	F
P	F
P	F
P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

PERFORM GROSS MANUAL MUSCLE TESTING (LOWER EXTREMITY)

081-836-0049

Conditions: The patient has a referral from a physician for a rehabilitation program. Necessary materials and equipment: treatment table (plinth) or mat table, examining gown and shorts, and pen with black or blue black ink.

Standards: The patient's gross manual muscle strength is assessed and recorded, and exercise activity is recommended for the area(s) stated on the patient's referral without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral for the body site(s) to be tested. If contraindications exist which are not documented, notify the physical therapist.
2. Explain the procedure to the patient. After being positioned for testing, the patient will be instructed to move the joint to be tested against your resistance. The patient's muscle group(s) will be tested to--
 - a. Assess and establish an exercise program.
 - b. Check on progress.
3. Position the patient for treatment. (See Figure 3-13.)

NOTE: Begin testing in the "FAIR" position for the joint to be tested.

4. Stabilize the joint to be tested. (See Figure 3-13.)
 5. Provide resistance to the patient's resistance. (See Figure 3-13.)
- NOTE: If the patient is unable to initiate muscle movement or move the joint against gravity, reposition the patient for testing in the "POOR" or "TRACE and ZERO" position. CAUTION: Do not overpower the patient's resistance to the point where it causes pain. It should be only to where the patient can no longer effectively hold or move the joint against your force.

Performance Steps**HIP FLEXION****NORMAL, GOOD, & FAIR**

Position: Sitting with legs over edge of table

Stabilization: Pelvis (Do not allow patient to lean back)

Resistance: Above the knee joint

**POOR**

Position: Sidelying with upper leg supported; trunk, pelvis, and leg straight

Stabilization: Pelvis

Movement: The patient flexes hip through ROM

TRACE & ZERO

Palpate the Psoas major on anterior hip just medial to Sartorius

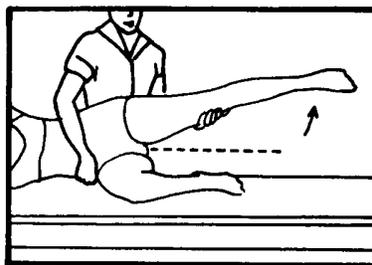


Figure 3-13 Hip Flexion

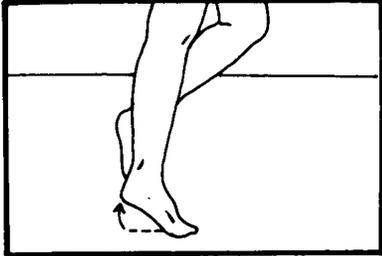
Performance Steps

ANKLE PLANTAR FLEXION

NORMAL, GOOD, & FAIR (Weightbearing test)

Position: Standing with leg extended and nonweight bearing (NWB) on the opposite leg

Movement: Patient raises heel from floor through full ROM



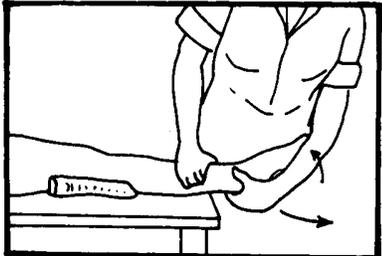
NORMAL - 10 times or more
 GOOD - 5 times
 FAIR - 1 time

NORMAL, GOOD, & FAIR (Nonweightbearing test)

Position: Supine with towel roll or pad under knee

Stabilization: Proximal to ankle

Resistance: Given by exerting a downward pull on the posterior calcaneus and against the plantar surface of the foot



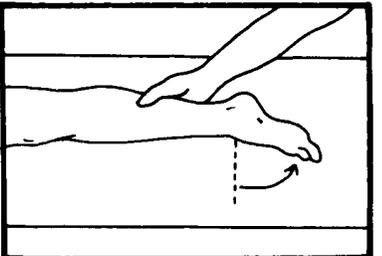
NORMAL - Maximal resistance
 GOOD - Moderate resistance
 FAIR - Slight resistance

POOR

Position: Sidelying with leg to be tested resting on its lateral surface

Stabilization: Proximal to ankle

Movement: Patient plantar flexes through full ROM



TRACE & ZERO

Palpate Achilles tendon

Figure 3-13a Hip Flexion (Continued)

Performance Steps

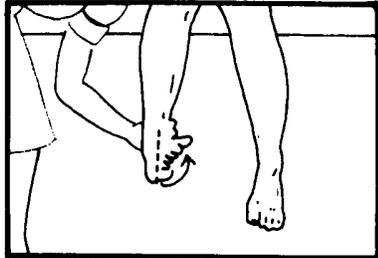
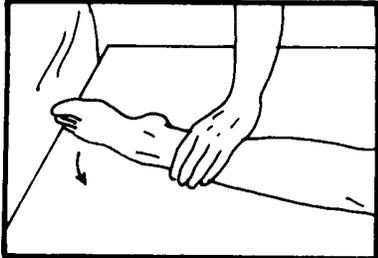
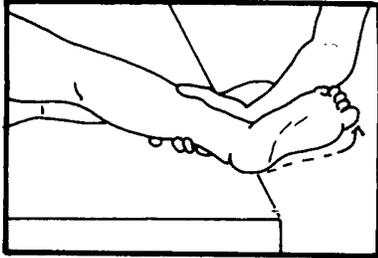
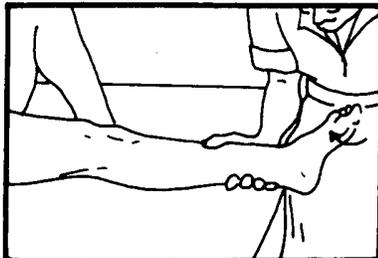
<p><u>ANKLE DORSIFLEXION AND INVERSION</u></p>	
<p>NORMAL, GOOD, & FAIR</p> <p>Position: Sitting with legs over table edge and in plantar flexion Stabilization: Above ankle joint Resistance: Medial dorsal surface of foot</p>	
<p>POOR</p> <p>Position: Sidelying with ankle in plantar flexion Stabilization: Above ankle joint Movement: Patient dorsiflexes through full ROM</p>	
<p>TRACE & ZERO</p> <p>Palpate the Tibialis anterior (TA) tendon</p>	
<p><u>FOOT EVERSION</u></p>	
<p>NORMAL, GOOD, & FAIR</p> <p>Position: Sidelying with foot over table edge and inverted Stabilization: Above ankle joint Resistance: Lateral border of the foot</p>	
<p>POOR</p> <p>Position: Supine with foot inverted Stabilization: Above ankle joint Movement: Patient everts ankle through ROM</p>	
<p>TRACE & ZERO</p> <p>Palpate the tendons of the Peroneus longus and brevis on lateral ankle joint and posterior to the lateral malleolus</p>	

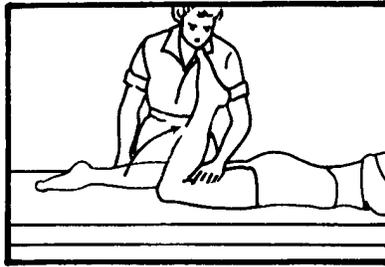
Figure 3-13b Hip Flexion (Continued)

Performance Steps

KNEE FLEXION

NORMAL, GOOD, & FAIR

Position: Prone with knees extended
Stabilization: Thigh/pelvis
Resistance: Above ankle joint



POOR

Position: Sidelying with leg straight and upper leg supported
Stabilization: Thigh
Movement: Patient flexes knee through full ROM

TRACE & ZERO

Palpate the Hamstring tendons

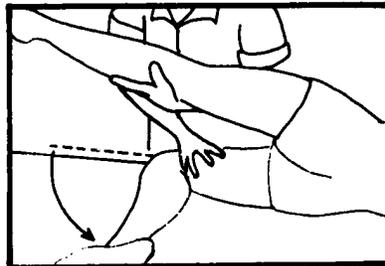


Figure 3-13c Hip Flexion (Continued)

Performance Steps

KNEE EXTENSION

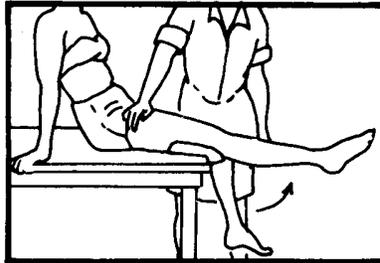
NORMAL, GOOD, & FAIR

Position: Sitting with legs flexed over table.

NOTE: Place towel roll or padding under popliteal area

Stabilization: Thigh

Resistance: Above ankle joint



POOR

Position: Sidelying with upper leg supported and leg to be tested flexed

Stabilization: Thigh

Movement: Patient extends knee through full ROM

TRACE & ZERO

Palpate the Patellar tendon

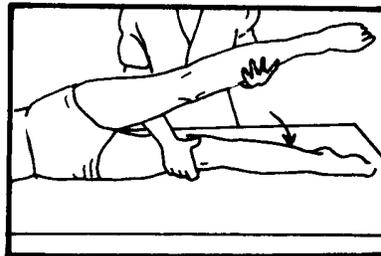


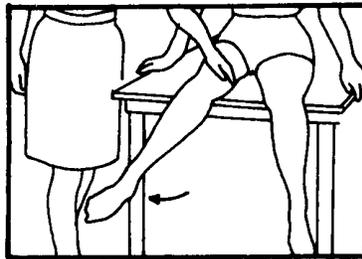
Figure 3-13d Hip Flexion (Continued)

Performance Steps

HIP INTERNAL ROTATION

NORMAL, GOOD, & FAIR

Position: Sitting with hips and knees flexed
Stabilization: Above the knee
Resistance: Above ankle joint on the lateral side



POOR

Position: Supine with leg extended and externally rotated
Stabilization: Pelvis
Movement: Patient rotates the leg through full ROM from external rotation to internal rotation

TRACE & ZERO

Palpate the Tensor fascia latae (TFL) distal and posterior to the anterior superior iliac spine (ASIS)

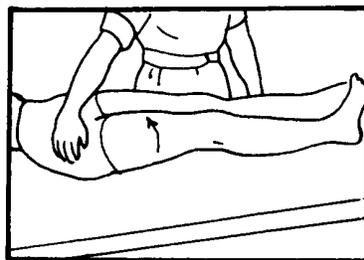


Figure 3-13e Hip Flexion (Continued)

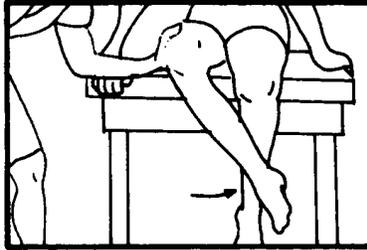
Performance Steps

HIP EXTERNAL ROTATION**NORMAL, GOOD, & FAIR**

Position: Sitting with hips and knees flexed

Stabilization: Above the knee joint

Resistance: Above ankle joint on the medial side

**POOR**

Position: Supine with leg extended and internally rotated

Stabilization: Pelvis

Movement: Patient rotates the leg through ROM from internal rotation to external rotation

TRACE & ZERO

Palpate deep behind the greater trochanter

NOTE: Difficult to palpate.

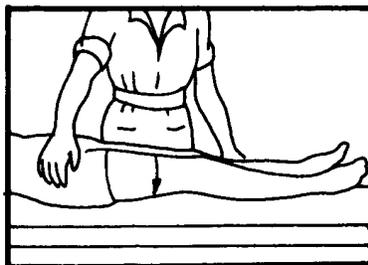


Figure 3-13f Hip Flexion (Continued)

Performance Steps

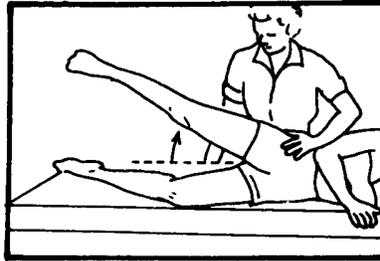
HIP ABDUCTION

NORMAL, GOOD, & FAIR

Position: Sidelying with lower leg flexed for balance

Stabilization: Pelvis

Resistance: Above the knee joint



POOR

Position: Supine with legs extended

Stabilization: Pelvis

Movement: The patient abducts leg through ROM

TRACE & ZERO

Palpate the Gluteus medius above the greater trochanter



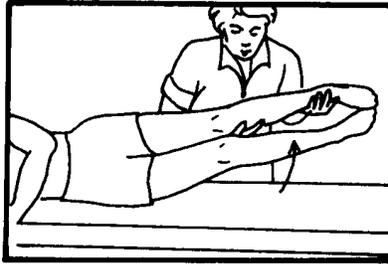
Figure 3-13g Hip Flexion (Continued)

Performance Steps**HIP ADDUCTION****NORMAL, GOOD, & FAIR**

Position: Sidelying with upper leg supported in 25° abduction and leg to be tested resting on table

Stabilization: Upper leg

Resistance: Above the knee joint

**POOR**

Position: Supine with leg to be tested in 45° abduction

Stabilization: Pelvis

Movement: The patient adducts leg through ROM

TRACE & ZERO

Palpate the Adductor muscles on the medial thigh

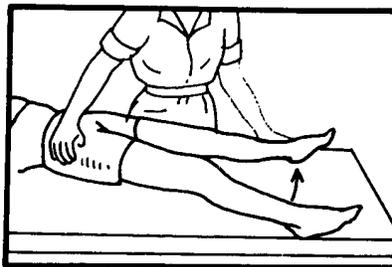


Figure 3-13h Hip Flexion (Continued)

Performance Steps

HIP FLEXION

NORMAL, GOOD, & FAIR

Position: Sitting with legs over edge of table

Stabilization: Pelvis (Do not allow patient to lean back)

Resistance: Above the knee joint



POOR

Position: Sidelying with upper leg supported; trunk, pelvis, and leg straight

Stabilization: Pelvis

Movement: The patient flexes hip through ROM

TRACE & ZERO

Palpate the Psoas major on anterior hip just medial to Sartorius

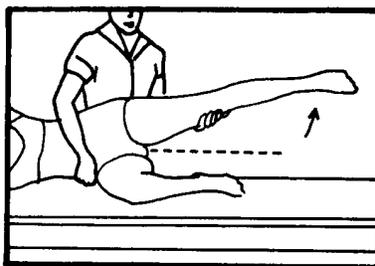


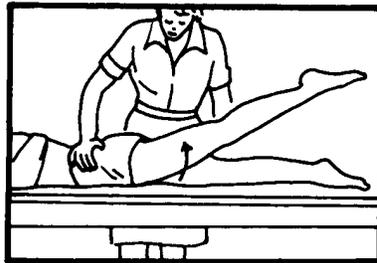
Figure 3-13i Hip Flexion (Continued)

Performance Steps

HIP EXTENSION

NORMAL, GOOD, & FAIR

Position: 1) Prone with knee extended - gluteus maximus & hamstrings
 2) Prone with knee flexed - gluteus maximus
 Stabilization: Pelvis
 Resistance: Above knee joint



POOR

Position: Sidelying with upper leg supported
 Stabilization: Pelvis
 Movement: The patient moves hip through ROM from position of 90° hip flexion

TRACE & ZERO

Palpate Gluteus maximus lateral to the axillary border of the scapula

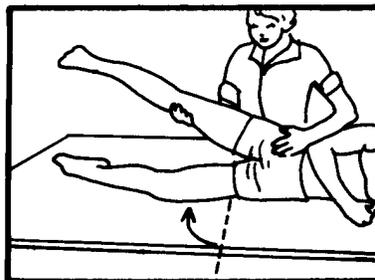


Figure 3-13j Hip Flexion (Continued)

Performance Steps

6. Record the muscle grade. (See Figure 3-14.)

WORD	LETTER	NUMERAL	DESCRIPTION	EXERCISE
ZERO	O	0	No evidence of muscle contraction.	Passive.
TRACE	T	1	Slight contraction but NO joint movement. Tendon may become more prominent during contraction.	Passive. Promote and try to achieve active-assistive.
POOR	P	2	Complete ROM with gravity eliminated (lessened).	Active-assistive (against gravity), active with gravity eliminated, i.e., skate or powder board.
FAIR	F	3	Complete ROM against gravity.	Active (against gravity).
GOOD	G	4	Complete ROM against gravity with moderate resistance.	Resistive.
NORMAL	N	5	Complete ROM against gravity with maximum resistance.	Normal activity.

Figure 3-12 Muscle Grade Chart

Performance Measures

1. Reviews the patient's referral.
2. Explains the procedure to the patient.
3. Positions the patient for treatment in the "FAIR" position.
4. Stabilizes the joint to be tested.
5. Provides resistance to the patient's resistance.
6. Records the muscle grade.

Results

- | | | |
|--|---|---|
| | P | F |
| | P | F |
| | P | F |
| | P | F |
| | P | F |
| | P | F |

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO_GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ASSESS ABNORMAL GAIT PATTERNS

081-836-0050

Conditions: The patient has a completed referral and is seated in a wheelchair or chair. Assistance is available. Necessary materials and equipment: a safety belt or litter strap, wheelchair or chair, and appropriate footwear.

Standards: The patient's gait is identified and documented without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral to determine if the abnormal gait is due to--
 - a. Isolated muscle weakness.
 - b. Associated pain or dysfunction.
 - c. Associated injury or disease involving the central nervous system (CNS).
2. Explain the procedure to the patient. The patient's walking will be observed to--
 - a. Validate other evaluation tools, for example, muscle tests.
 - b. Provide goals for gait training and meaningful exercises.
3. Gather the materials.
4. Raise the patient to a standing position.

NOTE: The patient is raised to a standing position in the same manner as described for fitting a patient for crutches. (See task 081-836-0041.)

5. Instruct the patient to demonstrate his or her walking pattern.

NOTE: Have an assistant ambulate the patient in a predetermined walking area free of obstacles.

CAUTION: Have an assistant provide standby support by securely holding onto the safety belt while the patient demonstrates his or her gait.

6. Observe the patient's ambulation pattern and determine the gait.
 - a. Isolated muscle weakness. (See Figure 3-15.)
 - (1) Gluteus maximus gait.
 - (a) The trunk and pelvis on the affected side are thrown backward just after heel strike with apparent forward protrusion of the affected hip due to trunk motion.
 - (b) The knee of the affected side is in full extension at midstance.
 - (2) Gluteus medius gait - uncompensated.
 - (a) A dropping of the pelvis on the affected side during the stance phase on the affected side.
 - (b) Increased knee and helix of the affected side.
 - (3) Gluteus medius gait - compensated. The shoulder and trunk move markedly over the affected side during the stance phase, employing trunk musculature to keep the pelvis from dropping.
 - (4) Hilexor gait.
 - (a) Starts with push off and lasts throughout the swing phase on the affected side.
 - (b) The trunk and pelvis are thrown back as a unit at push off.
 - (5) Quadriceps gait. A sudden forceful extension of the knee on the affected side at heel strike - a "lurch".

NOTE: This gait keeps the line of gravity anterior to the axis of the joint thereby creating an extension movement.

- (6) Gastroc-soleus gait.
 - (a) A dropping of the pelvis on the affected side during the last part of the stance.
 - (b) An inability to raise the heel on the affected side during push off.
 - (c) Recurvatum in midstance to avoid collapsing.

Performance Steps

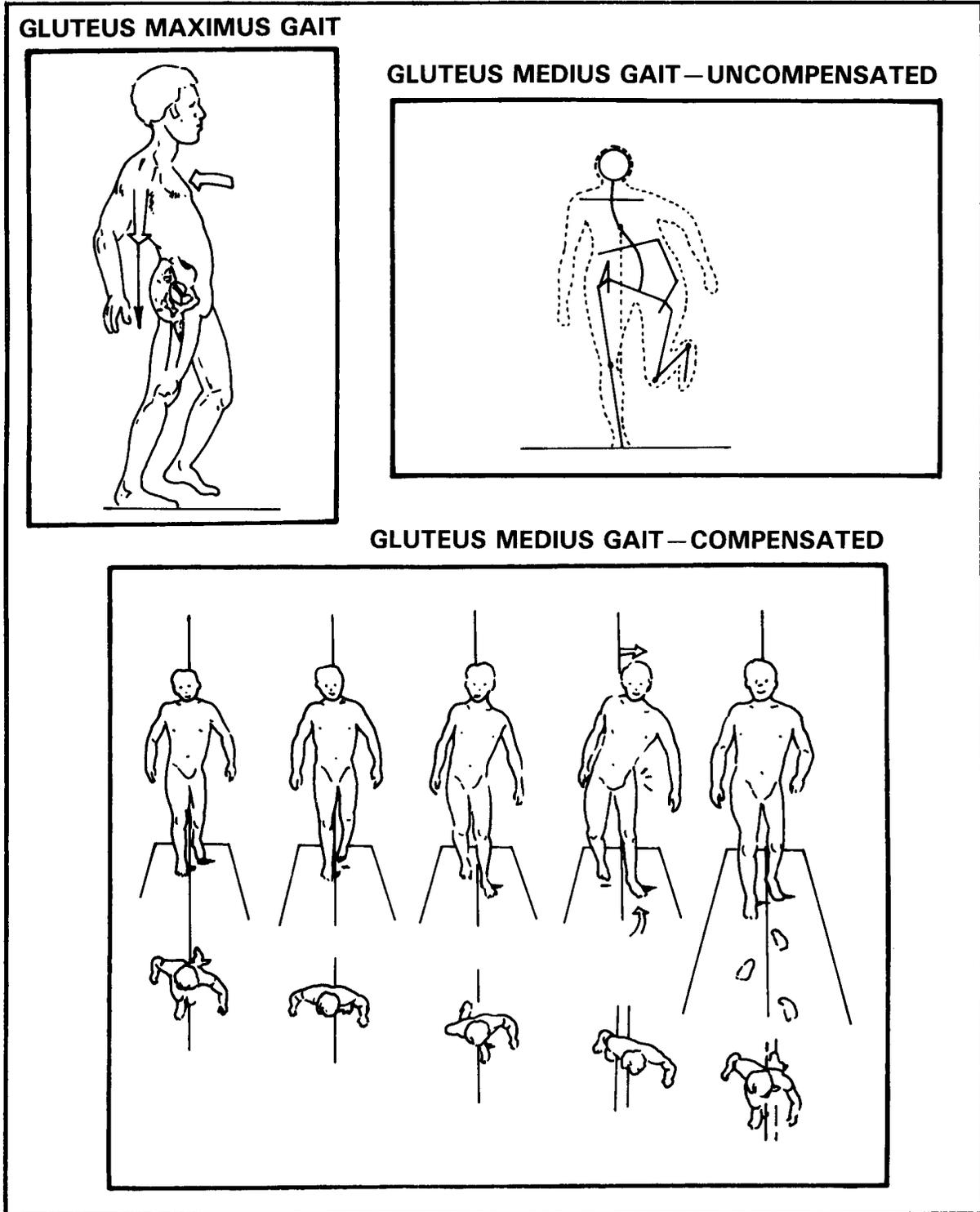
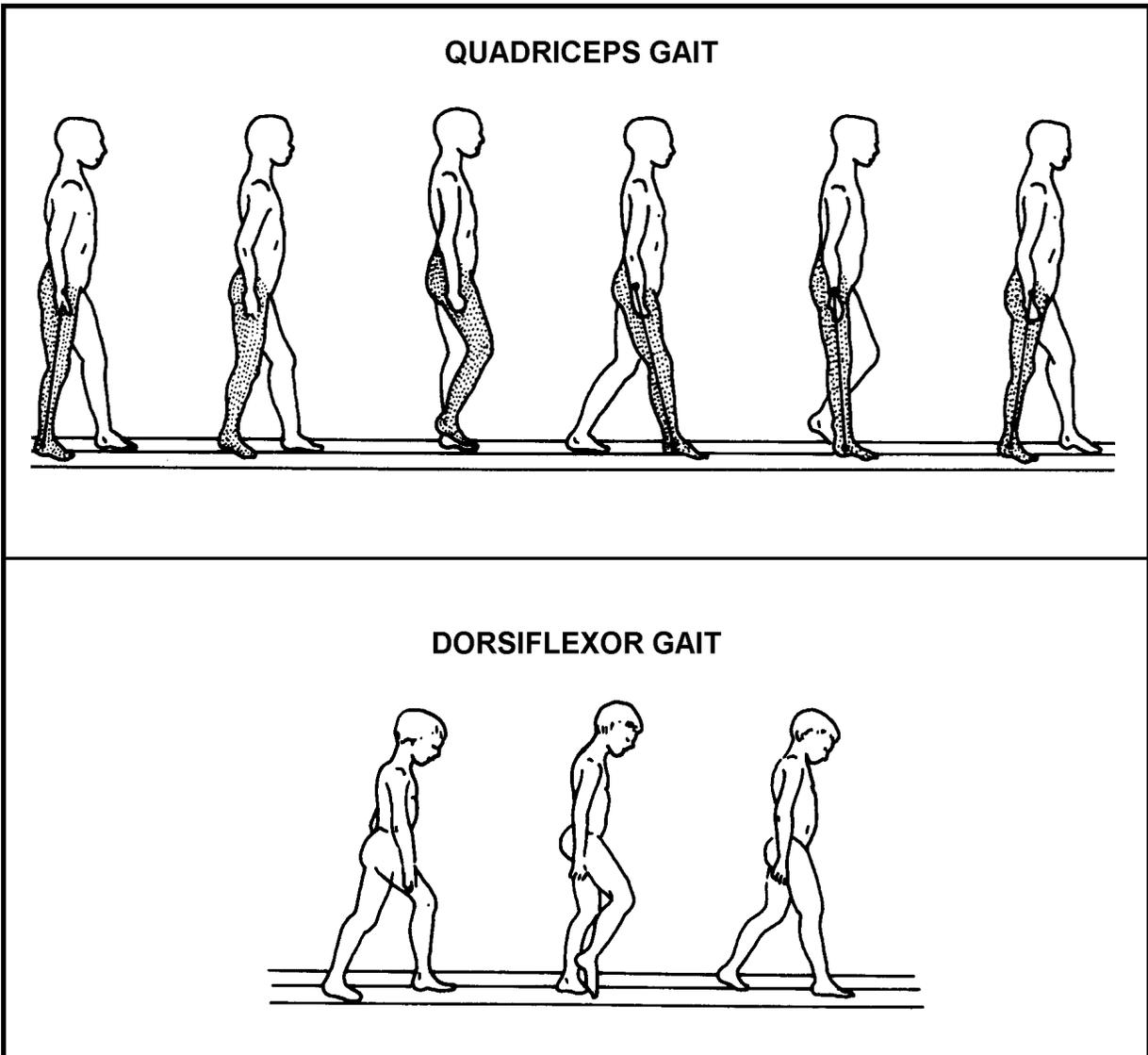


Figure 3-15 Gluteus Medius Gait Chart

Performance Steps



- (7) Dorsiflexor gait.
- (a) Foot drop during the swing phase of the affected side. The toes and forefoot contact at the "heel strike" phase.
 - (b) With moderate weakness, a "foot slap" occurs at heelstrike.
 - (c) Excessive hip and knee flexion on the affected side to clear the foot during the swing phase.
- b. Associated with pain or dysfunction. (See Figure 3-16.)
- (1) Antalgic gait.
 - (a) Associated with pain on weightbearing on the affected side.
 - (b) Shortened step length (swing phase) on the affected side to reduce the time in stance on the affected extremity.
 - (2) Unequal leg length.
 - (a) Walking on the toes of the shortened side during the stance phase.
 - (b) Walking with the knee flexed on the longer side during the stance phase.
 - (c) Circumduction of the longer leg during the swing phase.

Performance Steps

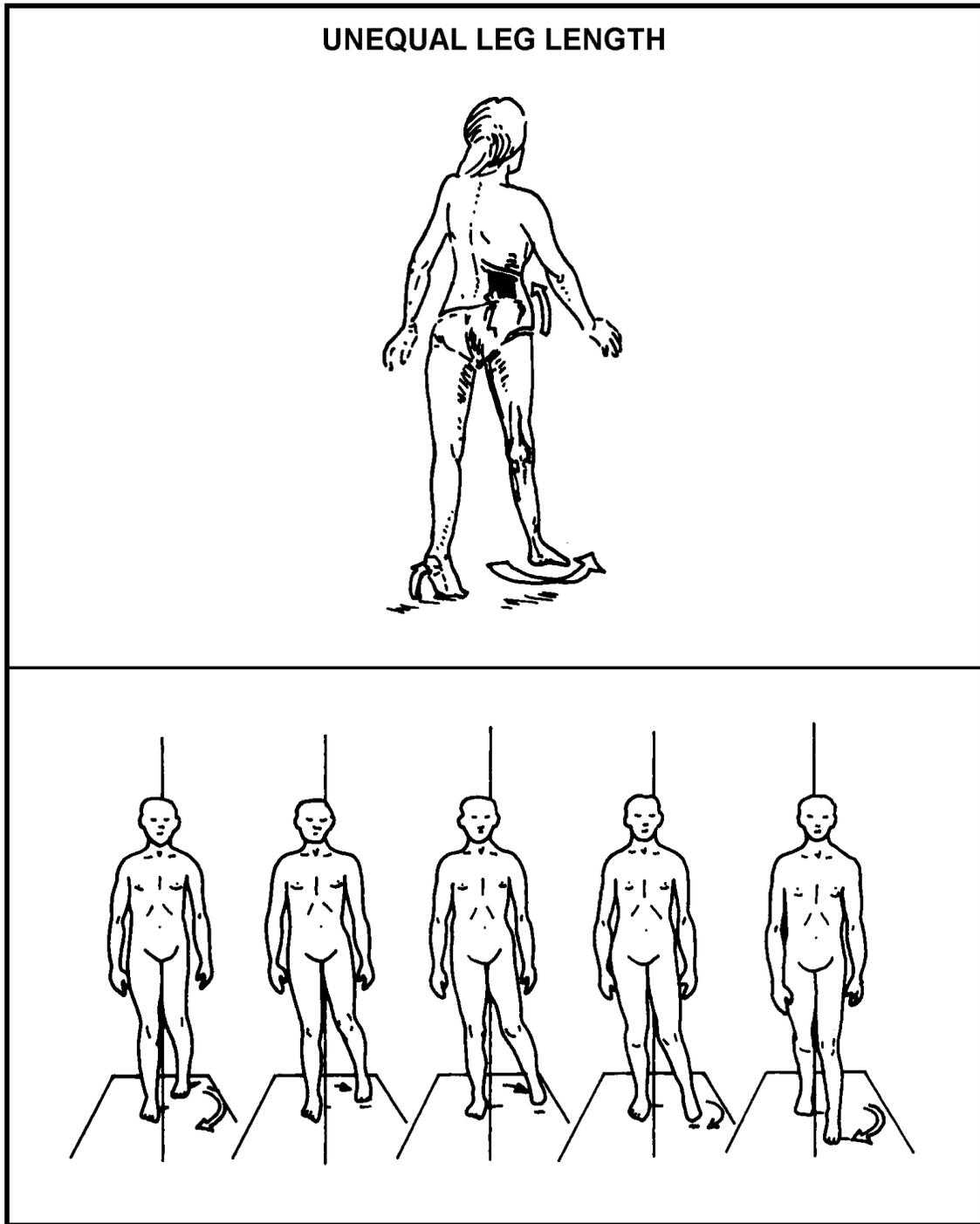


Figure 3-16

Performance Steps

- c. Associated with injury or disease involving the CNS. (See Figure 3-17.)
 - (1) Hemiplegic gait.
 - (a) Classic posturing - knee in extension and foot in equinovarus (PF and inversion).
 - (b) Usually a spastic gait in which the leg is circumducted at the hip during the swing phase to clear the toes from the floor.
 - (2) Ataxic gait (cerebellar or columnar lesion).
 - (a) Very unstable, uncoordinated gait.
 - (b) Patient watches the feet to see where they are.
 - (c) Wide-based gait for increased stability.
 - (3) Scissors gait.
 - (a) Legs are adducted (with PF and IR).
 - (b) Commonly seen in cerebral palsy (CP) children.

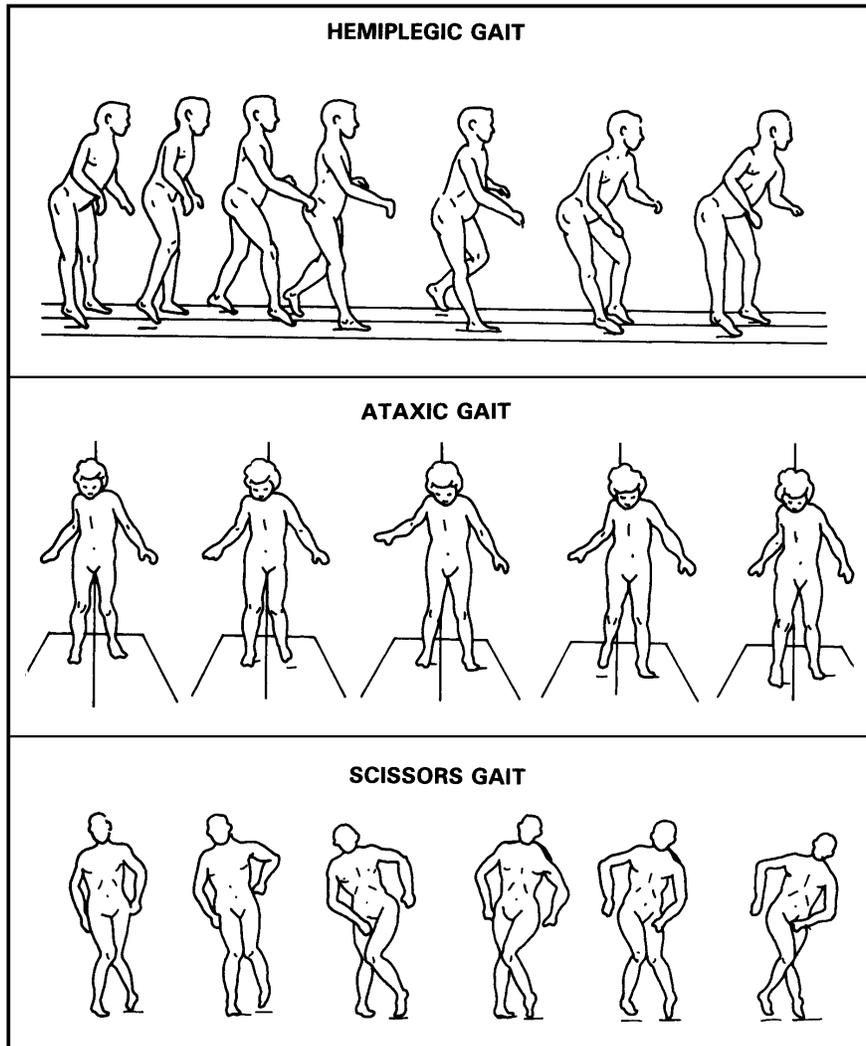


Figure 3-17

Performance Steps

7. Instruct the assistant to return the patient to his or her chair or wheelchair upon completion of the procedure.
8. Write appropriate notes on the patient's referral.

Performance Measures

Results

1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
4. Raises the patient to a standing position.	P	F
5. Instructs the patient to demonstrate his or her walking pattern.	P	F
6. Observes the patient's ambulation pattern and determines the gait.	P	F
7. Instructs the assistant to return the patient to his or her chair or wheelchair upon completion of the procedure.	P	F
8. Writes appropriate notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

Subject Area 4: Hydrotherapy

OBTAIN A SPECIMEN FROM A WOUND**081-835-3014**

Conditions: Necessary materials and equipment: exam gloves, sterile gloves, tape, sterile applicators, culture tube, sterile culturette tube, sterile dressing materials, laboratory request forms, and the patient's clinical record.

Standards: A wound specimen is obtained without contaminating the specimen or causing further injury to the patient.

Performance Measures	Results	
1. Performs a patient care handwash.	P	F
2. Identifies the patient.	P	F
3. Explains the procedure to the patient.	P	F
4. Prepares the patient.	P	F
a. Provides for privacy or screens the patient.	P	F
b. Places the patient in as comfortable a position as is possible.	P	F
c. Completely exposes the area of the wound site.	P	F
5. Puts on exam gloves.	P	F
6. Removes the contaminated dressing.	P	F
a. Notes the presence of any drainage.	P	F
b. Disposes of the dressing and gloves in a container for contaminated waste.	P	F
7. Notes the size and appearance of the wound and looks for evidence of healing.	P	F
8. Notes the color, odor, type, and amount of exudate present.	P	F
9. Aseptically opens the sterile applicator package or sterile culturette tube.	P	F
10. Aseptically removes the sterile applicator.	P	F
NOTE: Puts on sterile gloves if necessary.		
11. Uses the applicator to swab the tissue deep within the wound, obtaining a specimen of any exudate present.	P	F
12. Aseptically places the applicator into the culture tube and recaps the tube.	P	F
13. Cleans and/or irrigates the wound IAW the physician's orders.	P	F
14. Applies a sterile dressing to the wound.	P	F
15. Labels the culture tube, ensuring that the label contains:	P	F
a. The patient's name and identification number.	P	F
b. The date and time of collection.	P	F
c. The source and type of specimen.	P	F
16. Completes the laboratory request form and sends the specimen to the laboratory.	P	F
17. Documents the procedure and significant nursing observations on the appropriate forms IAW local SOP.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required

Related

ADMINISTER A MOIST HEAT PACK TREATMENT (NON-CHEMICAL)**081-836-0005**

Conditions: The patient has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a moist heat pack unit containing water and assorted moist heat packs, terry cloth towels, sheets, plastic sheeting, timer, thermometer, and a bell.

Standards: A moist heat pack treatment is administered using the appropriate size and type of pack without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card.
 2. Explain the procedure to the patient. The patient should experience only a comfortable sensation of warmth. The moist heat should increase heat in the body area to be treated by increasing circulation to that area. It should also decrease pain and increase relaxation.
- CAUTION: Check that the patient does not have any contraindications in the area to be treated. - [1] Impaired sensation. [2] Impaired circulation. [3] Dermatological conditions. [4] Open wounds. - If any contraindications are noted, do not administer treatment. Inform the physical therapist.
3. Position the patient for treatment, as appropriate.
 4. Visually inspect the site to be treated.
 5. Prepare the equipment for use.
 - a. Ensure the heating unit is plugged into a grounded wall receptacle.
 - b. Check the temperature of the water in the heating unit with a thermometer, ensuring it is in the 165° F to 170° F range.

CAUTION: If the water temperature is below 165° F or above 170° F, postpone the treatment until the unit's thermostat is adjusted (per manufacturer's instructions) to the appropriate temperature range.

- c. Select the appropriate type of moist heat pack. (See Figure 3-18.)

NOTE: Ensure the heat pack selected has been preheating in the heating unit for at least 5 minutes.

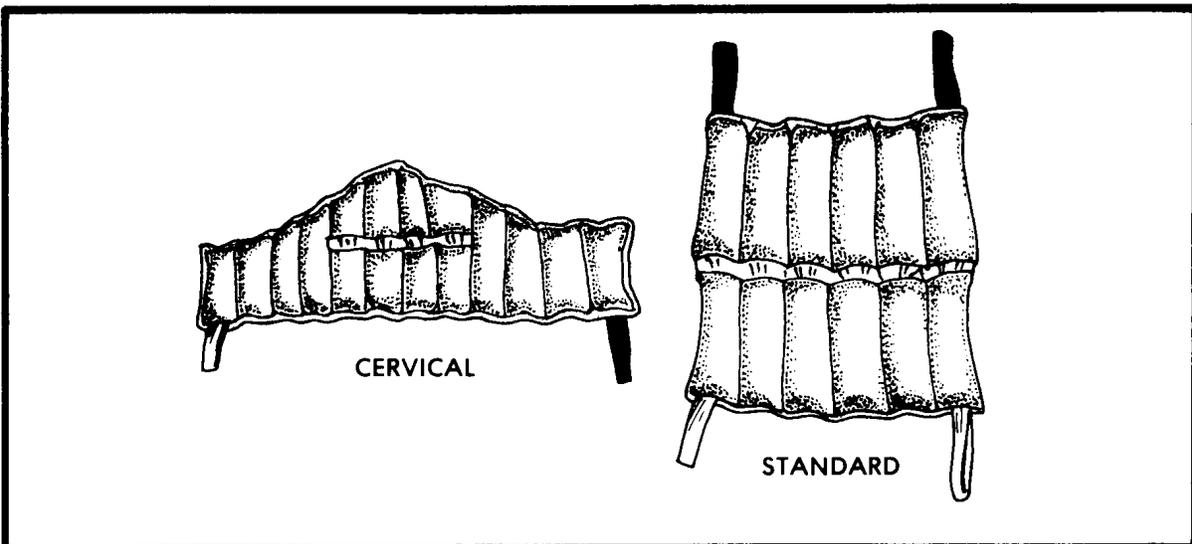


Figure 3-18 Heat Pack

- d. Wrap the heat pack using one of the following.

Performance Steps

- (1) Dry terry cloth towels using the two-towel wrap method (See Figure 3-19), allowing six to eight layers of toweling between the heat pack and the part to be treated.
- (2) Dry commercial moist heat pack covers, if available.

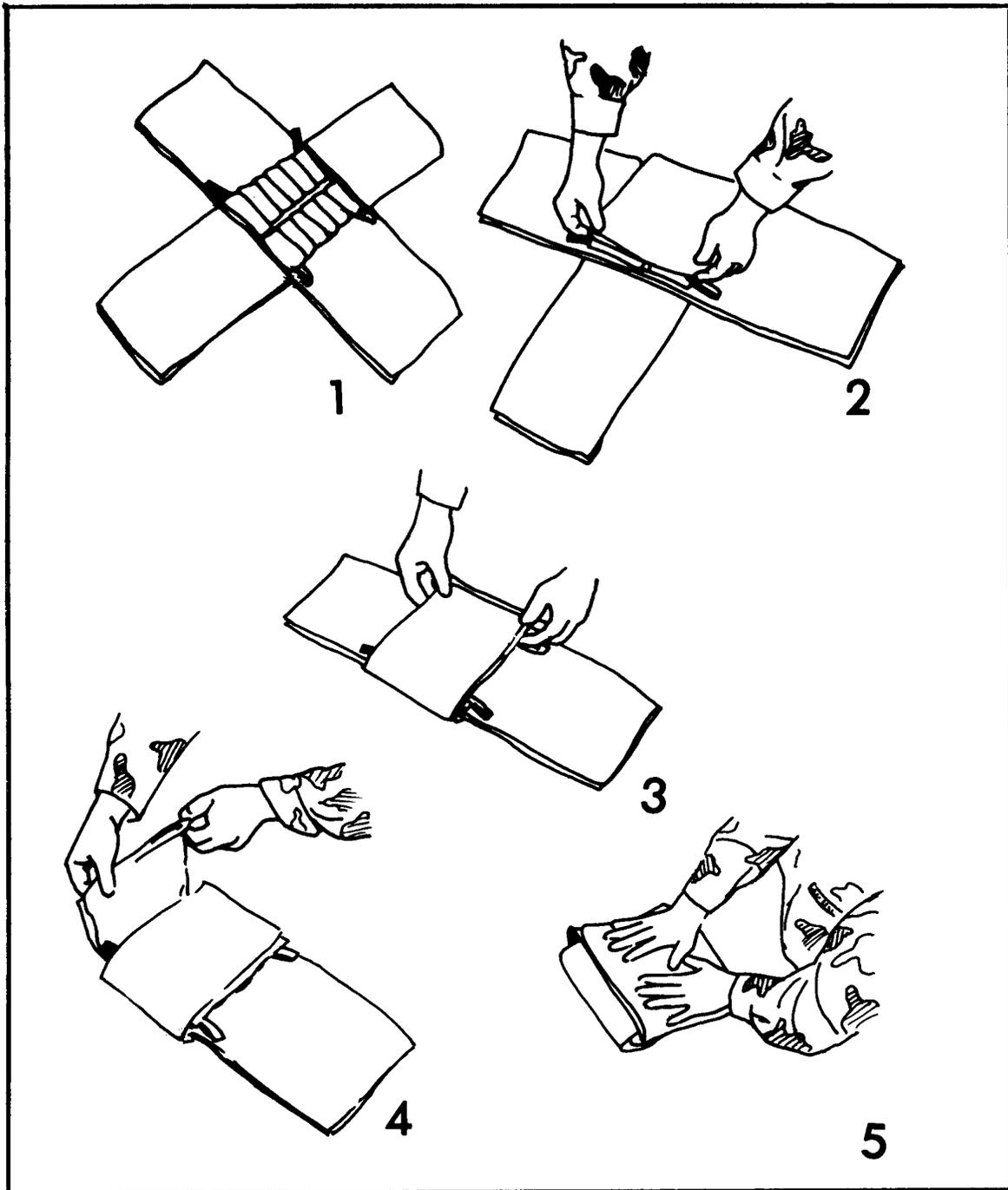


Figure 3-19 Dry Terry Cloth Towels

6. Apply the wrapped heat pack uniformly to the prescribed area.

Performance Steps

7. Drape the heat pack with a terry towel or plastic sheeting.

NOTE: No drape is required when treating with cervical traction.

8. Provide the patient with a bell to ring if the heat pack should become too hot or any adverse reaction should occur during the treatment.

NOTE: If a bell is not available, instruct the patient to call for assistance.

9. Set the timer for the prescribed treatment time. Treatment time is 20 minutes unless otherwise prescribed in the patient instructions or by the physical therapist.

10. Monitor the patient's responses periodically throughout the treatment.

NOTE: The sedating effects of the treatment may cause the patient to fall asleep. Allow the patient to sleep, but check on the status of the pack and the body site periodically.

a. Check the patient's comfort by asking how the treatment is being tolerated and by visually inspecting the body area being treated.

CAUTION: The patient must be instructed to inform you immediately if any of the following occurs. - [1] Any increase in pain. [2] Hot spots. [3] Dizziness. [4] Throbbing. [5] Difficulty breathing. [6] Nausea. - If any of these conditions occurs, the treatment must be stopped by removing the heat packs. NOTE: These subjective feelings should be reported to the physical therapist then noted in the patient's progress notes.

b. Adjust the towel thickness to the patient's heat tolerance allowing no less than six layers of toweling if using the two-towel wrap method. Do not remove the commercial hot pack cover, if used.

11. Remove the heat packs when the timer alarm sounds, leaving a towel draped over the treated area.

12. Return the heat pack to the heating unit, ensuring it is totally submersed in the water.

NOTE: The canvas handles may protrude above the water line.

13. Dry the treated area with the towel drape.

14. Inspect the treated area. A light to moderate erythema (reddening of the skin) should be observed where the pack was placed on the patient.

NOTE: Report any swelling, burns, or blisters observed to the physical therapist.

15. Check the treatment instructions for additional care.

16. Assist the patient out of the position of treatment and back into clothing, if necessary.

CAUTION: Instruct the patient to move slowly. The sedating effects of the treatment and the increased circulation may cause the patient some dizziness.

17. Record observations and write the appropriate notes in the "O" portion of the SOAP notes.

Performance Measures**Results**

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Positions the patient for treatment.	P	F
4. Visually inspects the site to be treated.	P	F
5. Prepares the equipment for use.	P	F
6. Applies the wrapped heat pack.	P	F
7. Drapes the heat pack.	P	F
8. Provides the patient with a bell.	P	F

Performance Measures

Results

9. Sets the timer for the prescribed treatment time.	P	F
10. Monitors the patient's responses.	P	F
11. Removes the heat pack when the timer alarm sounds.	P	F
12. Returns the heat pack to the heating unit.	P	F
13. Dries the treated area with the towel drape.	P	F
14. Inspects the treated area.	P	F
15. Checks the treatment instructions for additional care.	P	F
16. Assists the patient out of the position of treatment.	P	F
17. Writes the appropriate notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER A CRYOTHERAPY TREATMENT
081-836-0051

Conditions: A patient has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a refrigerator freezer with thermometer, prepared ice (frozen in styrofoam cups and cubed, crushed, or cracked), plastic sheeting, cloth towels, pillows, chair, treatment table, sheets, gown and examining shorts, timer bell, bandage scissors, plastic bag, and foot stool.

Standards: A cryotherapy treatment is performed IAW the information on the treatment instructions without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment instructions to determine the area to be treated and method to be used.
2. Explain the procedure to the patient.
 - a. Treatment sensations which will be progressively felt are--
 - (1) Immediate cold.
 - (2) A burning, stinging, or aching.
 - (3) Complete anesthesia (numbness). Numbness will complete the treatment unless otherwise indicated by the treatment instructions or the physical therapist.
 - b. Ice massage. A prepared ice block will be rubbed over the area to be treated.
 - c. Ice pack (Non-chemical). A prepared pack of cubed, crushed, or cracked ice in a plastic bag will be placed on the area to be treated.

CAUTION: Check that the patient does not have any of the following in the area to be treated. - [1] Any vasospastic diseases (Raynaud's, etc.). [2] Hypersensitivity to cold. [3] Compromised local circulation. [4] Anesthetic areas (areas of decreased sensitivity). [5] Rheumatoid conditions (only if an increase in pain and joint stiffness is noted). If any of the above contraindications are noted, do not administer treatment. Inform the physical therapist.

3. Prepare the patient for treatment.
 - a. Assist the patient into the position of treatment, as needed.
 - b. Expose the area to be treated and visually inspect for any contraindications to the treatment.
 - (1) Signs of infection.
 - (2) Open wounds.
 - (3) Dermatological conditions.
 - c. Place plastic sheeting covered by a towel under the area to be treated, with the towel against the patient.

NOTE: If any visual contraindications are noted, do not administer treatment, but inform the physical therapist.

- d. Cover the exposed area with a towel drape.
4. Gather and prepare materials for treatment.
 - a. Ice massage.
 - (1) Remove from the freezer a styrofoam cup which has been two-thirds filled with water and frozen solid to no less than 28ø F (-2.2ø C). Check the thermometer in the freezer.

NOTE: Do not use an ice cup if it is not completely solid.

- (2) Leave approximately 1 inch at the base of the cup and remove the upper portion of the cup by tearing away with the fingers or cutting with a bandage scissors blade.
- (3) Rub the ice against the palm of your hand to smooth off any rough edges.

NOTE: If a moist heat pack unit is available, rub the rough surface of the ice cup on the inner lid of the unit to remove the jagged edges which may have formed on the inner rim of the cup during freezing.

- b. Ice pack.
 - (1) Select a plastic bag and inspect it for holes and tears. If none, fill with ice.
 - (2) Secure the bag opening.

Performance Steps

- (3) Moisten a towel with warm water. Wring the towel to remove all excess water.
- (4) Wrap the ice pack with the damp towel.

5. Initiate the procedure by folding back the towel drape, exposing the area to be treated.
 - a. Ice massage.
 - (1) Rub the ice cup against your palm to moisten the ice.
 - (2) Warn the patient, and place the wet palm against the area to be treated.
 - (3) Warn the patient again, and then place the ice against the treatment site.
 - (4) Continuously move the ice uniformly over the area being treated, avoiding bony prominence. Circular or back and forth movements should be used maintaining a firm but not heavy pressure. Contact between the ice and the patient must be maintained at all times.

NOTE: Prop one of your feet on a footstool to avoid low back pain during this procedure.

- (5) Set the treatment timer for 10 minutes.

NOTE: Add additional toweling to the draped area as the ice melts.

- b. Ice pack.
 - (1) Warn the patient, and then place the palm of one of the hands used to carry the ice pack against the area to be treated.
 - (2) Warn the patient again, and then apply the wrapped ice pack uniformly to the area being treated.

NOTE: Use two wrapped packs to cover a larger area.

- (3) Place a towel drape over the ice pack.
- (4) Provide the patient with a bell to ring if any adverse reaction should occur during the treatment. If a bell is not available, instruct the patient to call out for assistance.
- (5) Set the timer for 15 minutes.

CAUTION: The ice pack should not be allowed to remain in place longer than 15 minutes.

6. Monitor the patient's responses periodically throughout the procedure by --
 - a. Checking the patient's facial expression (when practical).
 - b. Asking the patient how the treatment is being tolerated.
 - c. Lifting the pack periodically to check for any hives or welts if using the ice pack method.

CAUTION: Stop the treatment by removing the modality, and then inform the physical therapist if-- [1] You notice hives or welts appearing in the area. [2] You notice difficulty breathing. [3] The patient complains of nausea.

7. Discontinue the procedure by removing the modality when--
 - a. The patient responds that the area being treated is numb.

NOTE: Numbness is checked by lightly tapping the fingertips on the area treated or by placing fingertips on the area and ask the patient how many fingers are on the site. If the patient can still detect the fingertips on the site, continue the treatment.

- b. The treatment timer alarm sounds.
- c. The patient cannot tolerate the treatment any longer.

8. Drape the treated area with a towel.

9. Dispose of used materials.

- a. Ice massage. Dispose of the used ice cup.
- b. Ice pack.
 - (1) Place the towel used to wrap the pack in a linen hamper.
 - (2) Dispose of melted ice in the sink.
 - (3) Dry and secure the bag, if reusable.

10. Dry the treated body site.

11. Visually inspect the body site. A mild erythema (flushing or slight reddening of the skin) should cover the area treated. Report any frozen (solid) areas, welts, waxy looking skin, or increased pain reported by the patient to the physical therapist.

Performance Steps

NOTE: Mild condensation on the treated part is normal.

12. Check the treatment instructions for additional care as indicated.
13. Write appropriate SOAP notes.

Performance Measures**Results**

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares the patient for treatment.	P	F
4. Gathers and prepares materials for treatment.	P	F
5. Initiates the procedure.	P	F
6. Monitors the patient's responses.	P	F
7. Discontinues the procedure.	P	F
8. Drapes the area.	P	F
9. Disposes of used materials.	P	F
10. Dries the area.	P	F
11. Visually inspects the area.	P	F
12. Checks the treatment instructions for additional care.	P	F
13. Writes SOAP notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

CLEAN A WHIRLPOOL BEFORE OR AFTER TREATMENT

081-836-0052

Conditions: A whirlpool bath needs to be cleaned. Necessary materials and equipment: sanitary brush, patient examining gloves (disposable), waste receptacles, germicidal disinfectant, cloth towels, culturettes, and 4 x 4 sponges.

Standards: The whirlpool bath and immediate area are prepared and cleaned IAW principles of good hygiene.

Performance Steps

1. Prepare the area and tank. (See Figure 3-20.)
 - a. Visually inspect the whirlpool tank for any matter or debris.
 - b. Ensure the power cord is unplugged.
 - c. Ensure the tank has a working thermometer.
 - d. Dry any wet floor areas with towels.
 - e. Ensure the tank drain plug is open.

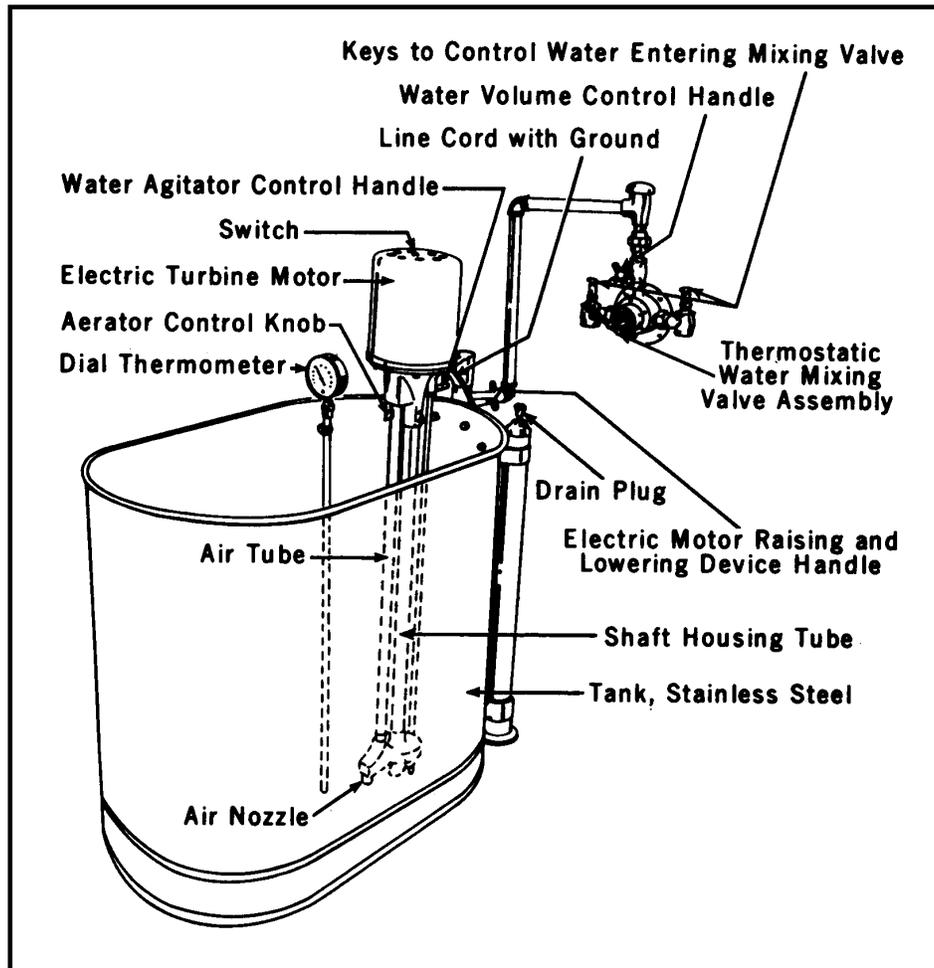


Figure 3-20

2. Gather the materials for cleaning.

Performance Steps

3. Rinse the tank.
 - a. Open the hot water (above 100ø) valve to the fullest setting.
 - b. Use a sanitary brush to scrub all upright surfaces of the tank: the inner walls, shaft housing tube, thermometer, and any additional support devices such as seats or cradles. Ensure to clean the area around the thermometer and turbine shaft housing tube.

NOTE: Raise and adjust the position of the motor unit to rinse, as needed.

- c. Turn the water off.
- d. Remove any foreign matter using gauze and a gloved hand. Dispose of any material in the appropriate waste receptacle IAW local SOP.

4. Clean the tank.
 - a. Ensure the switch on the motor is in the OFF position.
 - b. Plug the power cord into an approved electrical outlet.
 - c. Close the drain plug.
 - d. Fill the tank approximately one-third to one-half full with hot water.
 - e. Lower the shaft housing tube into the tank and secure it in the down position.
 - f. Turn the motor switch to the ON position.
 - g. Adjust the water agitator control handle and the aerator control knob to a moderate, not forceful, setting.
 - h. Add a germicidal disinfectant to the tank.
 - (1) Arm tank--2 ounces.
 - (2) Leg tank--4 ounces
 - (3) Lowboy tank - 6 ounces.

NOTE: NOTE 1: Adjust the water agitator handle and the aerator control knob, as needed, to prevent water jet overflow or excessive sudsing. NOTE 2: If excessive sudsing occurs, use isopropyl alcohol to decrease the effect.

- i. Use a sanitary brush to scrub all upright surfaces of the tank: the inner walls, shaft housing tube, thermometer, and any additional support devices such as seats or cradles.
- j. Continue scrubbing for 3 to 5 minutes, adjusting the motor assembly to gain access to hard to get to areas, as appropriate.
- k. Turn the motor control to the OFF position.

CAUTION: Dry your hands completely, and then unplug the power cord. Drape the cord as appropriate. Do not allow the outlet to lie on the ground.

- l. Open the drain plug.

5. Rinse the tank with hot water and the brush to remove all suds and residue after the tank has drained.
6. Hang up the brush to air dry.
7. Towel-dry the whirlpool. Place the used towels in the appropriate container IAW local SOP.
8. Wash your hands. (See Task 081-831-0007.)
9. Obtain cultures from the drain, air nozzle, and agitator intake.

NOTE: Culture a tank after a patient with an infection has been treated and as often as required by local SOP.

Performance Measures

Results

- | | | |
|--|---|---|
| 1. Prepares the area and tank. | P | F |
| 2. Gathers the materials for cleaning. | P | F |
| 3. Rinses the tank. | P | F |

Performance Measures

Results

4. Cleans the tank.	P	F
5. Rinses the tank.	P	F
6. Hangs up the brush to air dry.	P	F
7. Towel-dries the whirlpool.	P	F
8. Washes hands.	P	F
9. Obtains cultures.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-CO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER A WHIRLPOOL TREATMENT

081-836-0016

Conditions: The patient has been screened for treatment and has a completed referral. Assistance is available, if needed. Necessary materials and equipment: whirlpool bath with accessories, appropriate cleaning materials, stool, gown or swim trunks, hydrotherapy chair with safety belt, timer, and towels.

Standards: A whirlpool treatment is administered in the appropriate whirlpool bath IAW the information on the referral without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the--
 - a. Area of the body to be treated.
 - b. Type of bath to be used.
 - c. Temperature of the water.
 - d. Duration of the treatment.

NOTE: The type of bath used for the treatment will be based on the patient's injury or disability.

2. Prepare the whirlpool bath.
 - a. Select the appropriate whirlpool bath. (See Figure 3-21.)
 - (1) Arm whirlpools are prescribed--
 - (a) To treat upper limbs.
 - (b) For full body immersion of small children.
 - (c) To treat below the knee.
 - (2) Leg whirlpools are prescribed to treat lower limbs. A stool or specially designed sling can be placed inside the tub to immerse adults up to the axilla.
 - (3) Lowboy (a long, low whirlpool bath) is used to immerse the body when the lower limbs must not hang down.

NOTE: If a lower extremity is to be treated in the arm or leg whirlpool baths, a hydrotherapy chair with safety belt should be used.

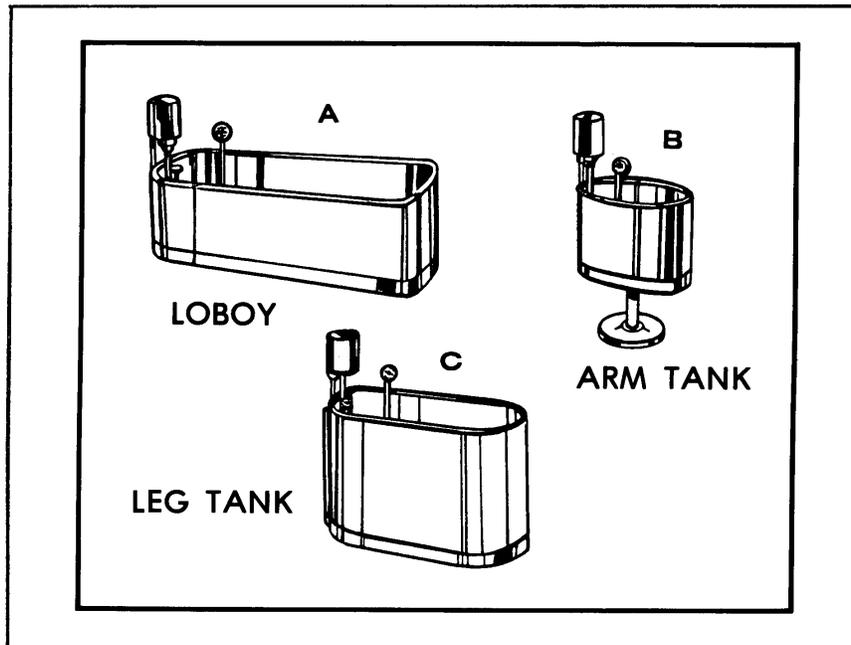


Figure 3-21 Whirlpool Types

- b. Clean the whirlpool. (See task 081-836-0052.)

Performance Steps

- c. Fill the whirlpool with water to a level that will allow immersion of the area to be treated. Use the appropriate water temperature prescribed. (See Figure 3-22.)

NOTE: If the temperature of the water is not indicated, use a temperature from 100ø F to 105ø F.

CAUTION: If the patient has a peripheral vascular disease or a sensory loss, the temperature should not exceed 100ø F.

WATER TEMPERATURES FOR HYDROTHERAPY	
HOT	100° F to 110° F
WARM	95° F to 100° F
TEPID	80° F to 95° F
COOL	65° F to 80° F
COLD	45° F to 65° F

Figure 3-22 Water Temperatures Chart

- d. Add any medications or special solutions, if prescribed.

3. Prepare the patient for treatment.

- a. Explain the procedure to the patient.

- (1) The patient's area to be treated will be immersed into the water for 15 to 30 minutes.

- (2) The heat (if warm or hot water is used) and motion of the water increases circulation, will clean the area of the body, and cause relaxation throughout the entire body.

NOTE: Tell the patient to report immediately any increase of pain or discomfort, as well as any sensation of nausea, difficulty breathing or weakness.

- b. Instruct the patient in the disrobing and gowning procedures appropriate for the body area to be treated. Provide the patient with a gown or swim trunks, if indicated. Assist the patient as appropriate.

NOTE: Provide a female chaperon, as appropriate, for female patients receiving treatment to the trunk or perineum.

- c. Remove bandages, dressings, braces, or splints, carefully and cautiously, if applicable.

CAUTION: Provide adequate support during the treatment and during transfer of the body part when a brace or splint has been removed.

- d. If open wounds are present, use a sterile technique when handling the area. (See task 081-833-0010.)

4. Visually inspect the treatment area to determine the presence of infection, edema, lesions, fever, circulatory disturbances, recent skin grafts, or other adverse conditions which may require additional precautions.

NOTE: If any condition is observed that has not been identified on the patient's treatment card, consult the physical therapist for guidance and record your observations on the referral. Also, record any additional instructions you receive from the physical therapist.

5. Initiate the treatment.

CAUTION: Ensure the floor area around the whirlpool bath is dry before and after transfers to avoid accidental slipping.

- a. Instruct the patient to immerse the body part to be treated into the water to the desired depth.

- (1) When treating an arm, place a folded towel over the rim of the tub to avoid pressure in the axilla.

- (2) When treating a leg, support the unaffected leg by allowing the foot to rest on a stool.

- b. Position the agitator so that the stream of water will not strike an open wound, a sensitive area, a recent graft, or a fracture site that is not well healed.

CAUTION: Warn the patient to keep away from the suction of the agitator.

Performance Steps

- c. Turn on the turbine ejector to the desired degree of agitation using the patient's tolerance as a guide. The water flow should be comfortable for the patient, yet strong enough to adequately treat the area.
- d. Encourage range of motion (ROM) to the affected body part, if prescribed.
- e. Set a timer for the treatment time from 15 to 30 minutes, according to the instructions on the patient's treatment card.
- f. Continuously monitor the patient's response throughout the treatment by--
 - (1) Checking the patient's facial expression.
 - (2) Observing respirations.
 - (3) Asking how he or she is tolerating the treatment.

NOTE: If the patient is being treated in the Lowboy tank, the pulse and respirations should be checked periodically. CAUTION: Do not leave the patient unattended at any time during the treatment period.

- g. If wound debridement is prescribed, it should be performed at this portion of the treatment using sterile technique in handling the patient and wound.

6. Discontinue the treatment when the timer alarm sounds. Turn off the turbine ejector. Instruct the patient to remove the body part from the water or assist the patient out of the tub. Obtain additional assistance if the Lowboy tank is used or if the patient was seated up to the axilla in the leg tank with a seat.

7. Dry the area using cloth towels.

NOTE: Use sterile towels if open wounds were treated.

8. Inspect the treated area. Report any adverse reaction or unusual condition to the physical therapist and record your observations on the patient's referral.

NOTE: If an infection is suspected in an open wound, obtain a culture of the wound, unless otherwise directed by the physical therapist. (See task 081-835-3014.)

9. Replace dressings, bandages, braces, or splints, if applicable. If open wounds are present, use sterile technique when handling the area. (See task 081-833-0010.) Assist the patient to redress, as appropriate.

10. Drain the whirlpool bath by opening the drain plug.

11. Provide the patient with instructions for additional care.

- a. ROM exercises.
- b. Strengthening exercises.
- c. Home treatments and/or return visits.

NOTE: If the patient is being treated in more than one clinic area, return times should be coordinated between the other clinics and ward (if applicable).

12. Write progress notes on the appropriate form(s) ensuring that progress notes are up-to-date and reflect the patient's current condition.

13. Clean the whirlpool and treatment area. (See task 081-836-0052.)

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Prepares the appropriate whirlpool for treatment.	P	F
3. Prepares the patient for treatment.	P	F
4. Visually inspects the area to be treated.	P	F
5. Initiates the treatment.	P	F

Performance Measures	Results	
6. Discontinues the treatment when indicated.	P	F
7. Dries the treated area.	P	F
8. Inspects the treated area.	P	F
9. Replaces items removed for treatment, if applicable.	P	F
10. Drains the whirlpool bath.	P	F
11. Provides the patient with instructions for additional care.	P	F
12. Writes appropriate progress notes.	P	F
13. Cleans the whirlpool and treatment area.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER A CONTRAST BATH TREATMENT
081-836-0017

Conditions: You are to administer a contrast bath treatment to a patient who has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: two clean tubs or buckets large enough for the part to be treated, thermometer, timer or wall clock, gown or swim trunks, ice cubes, towels, and a mop and bucket.

Standards: A contrast bath treatment is administered IAW the information on the treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to obtain the body site to be treated and the specific method to be used.
2. Explain the procedure to the patient.
 - a. He or she will be immersing the area to be treated in hot and cold water containers in timed cycles. Some benefits he or she should receive from the treatment are--
 - (1) Decreased edema.
 - (2) Increased range of motion (ROM).
 - (3) Decreased pain.
 - (4) Reeducation of the peripheral vessels in the skin.
 - b. Instruct the patient in the method to be used during the procedure. (See Figure 3-23.)

ALTERNATION METHODS		
<u>H C H C H C H C H</u>	<u>ALTERNATIONS</u>	<u>TIME</u>
5 2 5 2 5	5	19 minutes
5 2 5 2 5 2 5	7	26 minutes
4 1 4 1 4 1 4	7	19 minutes
4 1 4 1 4 1 4 1 4	9	24 minutes

Figure 3-23 Alternation Methods

- c. Tell the patient to use a timer or wall clock to time the immersion cycles.
 - d. The patient should feel a cold, burning, or stinging sensation in the cold water and while changing cycles. He or she may even feel a tingling sensation in the area being treated. This is normal.
3. Visually inspect the part to be treated.
CAUTION: Check that the patient does not have any contraindications in the area to be treated. - [1] Hemorrhage. [2] Peripheral vascular disease. [3] Arteriosclerosis. - Do not administer treatment if any contraindication exists. Inform the physical therapist.
4. Gather the materials.
5. Prepare the materials for the procedure.
 - a. Spread towels on the floor area where the patient is to be treated.
 - b. Fill both containers two-thirds full with water.
 - (1) Hot water (100° F to 110° F).
 - (2) Cold water (45° F to 65° F).

NOTE: Use a thermometer to check the water temperature. **CAUTION:** A disinfectant should be added to the water if the patient has an open or infected lesion.

Performance Steps

c. Position the containers so the patient can perform the alternations with ease.

6. Prepare the patient for treatment by instructing him or her to remove any clothing or jewelry from the body site to be treated.

NOTE: If treating lower extremities (LE), provide a chair which allows the patient's feet to rest comfortably on the bottom of the containers when immersed or elevate the containers to a comfortable height for the patient. CAUTION: The containers should not be too tall as the edges may cause pressure points under the knee. NOTE: Perform pretreatment girth measurements of the body site, if prescribed. (See tasks 081-836-0031 and 081-836-0045.)

7. Initiate the procedure.

a. Instruct the patient to perform the first immersion cycle in the hot water for the time prescribed.

NOTE: Regardless of the technique used, the treatment will always start and end with the treated area being immersed in the hot water.

b. When the time has elapsed on the hot water cycle, have the patient remove the part from the hot water and immediately immerse the body part into the cold water for the time prescribed.

CAUTION: If you are using the 5 and 2 method and the patient cannot tolerate the entire 2 minute cold cycle, change to the 4 and 1 method using the number of alternations that closely matches the prescribed time.

c. Repeat the cycles for the prescribed number of alternations.

8. Check the temperature of the water in both containers during the treatment.

a. Add ice to the cold water to maintain the appropriate temperature range.

b. Add hot water to the hot water container to maintain the appropriate temperature range.

CAUTION: If hot water needs to be added to the hot water container during the procedure, ensure the patient's body site is not in the container at the time.

9. Monitor the patient's responses periodically throughout the treatment.

10. Conclude the immersions by having the patient remove the body site from the hot water container.

11. Instruct the patient to dry the body site with a cloth towel. Assist the patient, if needed.

12. Inspect the treated body site. A light to moderate erythema (flushing or slight reddening of the skin) should be observed on the body site immersed. Report any adverse reactions or unusual condition not previously noted to the physical therapist.

NOTE: Perform posttreatment girth measurements if pretreatment measurements were performed.

13. Record observations and write appropriate progress notes in the SOAP notes.

14. Empty the water containers in an appropriate manner and wash them with a mild disinfectant and soap after each treatment.

CAUTION: After treating a body site with an infected lesion, have the containers sterilized using local infection control SOP.

15. Dry the floor area and dispose of used linen IAW clinic SOP.

16. Secure the containers in an appropriate area.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Inspects the area to be treated.	P	F
4. Gathers the materials.	P	F

Performance Measures	Results	
5. Prepares the materials for treatment.	P	F
6. Prepares the patient for treatment.	P	F
7. Initiates the procedure.	P	F
8. Checks the water temperatures.	P	F
9. Monitors the patient's responses.	P	F
10. Concludes the immersions.	P	F
11. Dries the part.	P	F
12. Inspects the part.	P	F
13. Writes appropriate SOAP notes.	P	F
14. Empties the water containers.	P	F
15. Dries the floor area.	P	F
16. Secures the containers.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

Subject Area 5: Modalities

ADMINISTER A THERAPEUTIC ULTRASOUND TREATMENT (DIRECT CONTACT METHOD)

081-836-0053

Conditions: The patient has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: an ultrasound unit, appropriate coupling agents, isopropyl alcohol, tongue depressors, and cloth towels.

Standards: A direct contact ultrasound treatment is administered and recorded IAW the information on the treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card.
2. Explain the procedure to the patient.
 - a. Ultrasound (US) increases heat in the body area being treated by a micromassage of the cells and tissues at the molecular level. He or she may or may not experience a sensation of warmth as the transducer (soundhead) moves over the area to be treated.
 - b. The patient is to relax the area to be treated and should feel no pain from the treatment.
 - c. Tell the patient to immediately report any burning sensation or increase of pain in the area being treated.

CAUTION: Check that the patient does not have any contraindications in the area to be treated. - [1] Malignant tumors. [2] A pregnant uterus. [3] Epiphysis of growing bones. [4] Sensory loss. [5] Healing fractures. [6] Circulatory disorders. [7] Acute inflammation. [8] Open wounds. [9] Pacemakers. [10] Recent radiation therapy. - Do not administer treatment if any contraindication exists. Inform the physical therapist for appropriate disposition.

3. Gather the equipment and materials.
4. Prepare the equipment for use.
 - a. Check that all controls are adjusted to the lowest possible setting.
 - b. Ensure that the transducer cord is connected to the machine and the US unit is plugged into a grounded wall receptacle.
 - c. Clean the transducer face by wiping it with an alcohol-moistened towel.
 - d. Secure the appropriate coupling medium.
 - (1) Water base gels.
 - (2) Glycerol base lotions.
 - (3) Mineral oil.
 - (4) Steroids for phonophoresis (for example, hydrocortisone cream or ointment 10% or less).
5. Position and drape the patient for treatment.
6. Visually inspect the body site to be treated.

NOTE: Report any abnormalities observed on the body site to the physical therapist.

7. Clean the area to be treated with a mild soap and warm water, rinsing well. Towel dry the area when finished.
8. Apply the coupling medium by first warning the patient, and then applying it to the area to be treated. Ensure there is a sufficient amount applied to protect the skin from abrasions and to allow the soundhead to be moved freely over the area.

NOTE: If the coupling medium is in a jar, use a tongue depressor to apply the medium to the body site. Do not use fingers or the transducer to "scoop" it out of the jar.

9. Spread the coupling medium evenly over the site to be treated using the transducer face.

Performance Steps

CAUTION: Ensure that all controls are adjusted to the lowest possible setting prior to turning the US unit on.

10. Turn the US unit on.

CAUTION: Do not hold the transducer out of firm contact or keep it in the air with the intensity higher than zero because the transducer crystal can overheat and explode.

- a. Set the intensity gradually to the prescribed level of watts per square centimeter (W/cm²) for continuous or peak watts per square centimeter (PW/cm²) for pulsed setting. (See Figure 3-24.)
- b. Set the timer for the prescribed treatment time. Treatment time is 5 minutes unless otherwise prescribed in the treatment instructions or by the physical therapist.

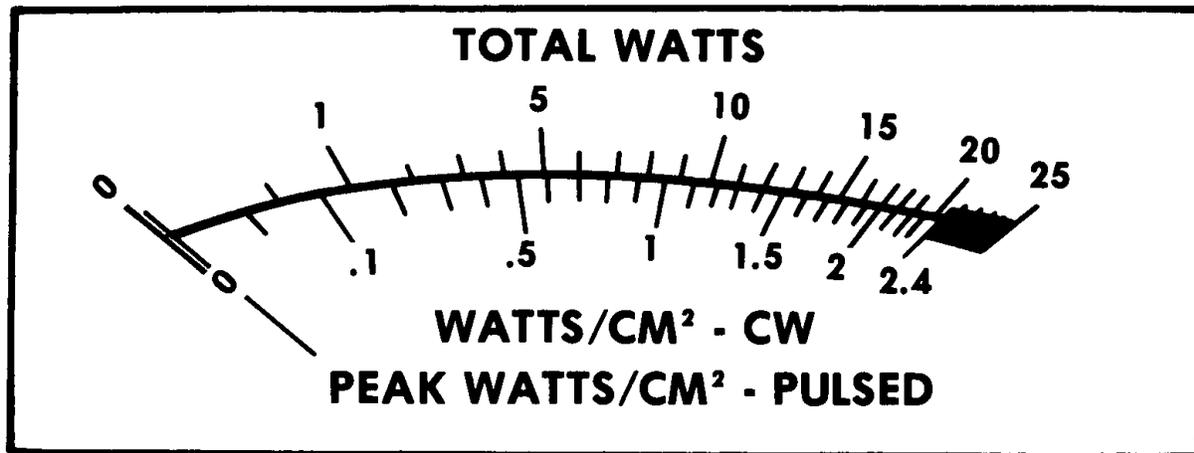


Figure 3-24 Pulsed Meter

11. Move the soundhead over the body site.

CAUTION: Move the transducer continuously over the body site once the unit has been turned on. Move at a rate of one and one-half inches (3 to 4 cm) per second to prevent the development of hot spots and periosteal burns.

12. Monitor the patient's responses throughout the treatment by--
- a. Checking the patient's facial expressions.
 - b. Observing the respirations.
 - c. Asking how the patient is tolerating the treatment.

CAUTION: Adjust the treatment if the patient complains of pain by-- [1] First increasing the rate of motion of the transducer. If pain persists, then, [2] Decrease the intensity. If complaints of pain still persist, then, [3] Discontinue the treatment by adjusting the intensity to the lowest possible setting, and then removing the transducer from the patient. - The physical therapist is notified after the transducer is cleaned and recoupled onto the US unit.

13. Remove the transducer when the automatic timer turns the unit off.
- a. Turn all controls to the lowest possible setting.
 - b. Clean the transducer face with an alcohol-moistened towel, wiping it thoroughly to prevent a film from accumulating.
 - c. Recouple the transducer onto the US unit.
 - d. Unplug the unit power cord from the wall receptacle.

14. Dry the treated body site with a cloth towel.

NOTE: Place used towels in a linen hamper IAW local SOP.

Performance Steps

15. Inspect the treated body site. A light to moderate erythema (flushing or slight reddening) should be observed where the transducer was in contact with the body site.

NOTE: Report any adverse reaction or unusual condition observed to the physical therapist.

16. Check the treatment instructions for additional care.

- a. Other modalities.
- b. Range of motion (ROM) exercises.
- c. Strengthening exercises.
- d. Home treatment and/or return visits.

17. Assist the patient out of the position of treatment and back into clothing, as appropriate.

CAUTION: Instruct the patient to move slowly. The sedating effects of the treatment and the increased circulation may cause the patient some dizziness.

18. Record observations and write the appropriate notes in the "O" portion of the SOAP notes.

NOTE: Intensity will be recorded in W/cm² when treating with continuous or PW/cm² when using pulsed setting.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the equipment and materials.	P	F
4. Prepares the equipment for use.	P	F
5. Positions and drapes the patient for treatment.	P	F
6. Visually inspects the body site to be treated.	P	F
7. Cleans the area to be treated.	P	F
8. Applies the coupling medium.	P	F
9. Spreads the coupling medium.	P	F
10. Turns the US unit on.	P	F
11. Moves the soundhead over the body site.	P	F
12. Monitors the patient's responses throughout the treatment.	P	F
13. Removes the transducer when turned off.	P	F
14. Dries the treated body site.	P	F
15. Inspects the treated body site.	P	F
16. Checks the treatment instructions for additional care.	P	F
17. Assists the patient out of the position of treatment.	P	F
18. Writes the appropriate notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER A THERAPEUTIC ULTRASOUND TREATMENT (UNDERWATER METHOD)**081-836-0054**

Conditions: The patient has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: an ultrasound unit, a watersound container large enough for the body area to be treated, water, isopropyl alcohol, thermometer, cloth towels, chair, treatment table, and examining or surgical gloves.

Standards: An underwater ultrasound treatment is administered IAW the information on the treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card.
2. Explain the procedure to the patient.
 - a. Ultrasound (US) increases heat in the body area being treated by a micromassage of the cells and tissues at the molecular level. He or she may or may not experience a sensation of warmth as the transducer (soundhead) moves over the area to be treated.
 - b. The patient is to relax the area to be treated and should feel no pain from the treatment.
 - c. Tell the patient to immediately report any burning sensation or increase of pain in the area being treated.

CAUTION: Check that the patient does not have any contraindications in the area to be treated. - [1] Malignant tumors. [2] A pregnant uterus. [3] Epiphysis of growing bones. [4] Sensory loss. [5] Healing fractures. [6] Circulatory disorders. [7] Acute inflammation. [8] Open wounds. [9] Pacemakers. [10] Recent radiation therapy. - Do not administer treatment if any contraindications exist. Inform the physical therapist for appropriate disposition.

3. Gather the equipment and materials.
4. Prepare the equipment for use.
 - a. Check that all controls are adjusted to the lowest possible setting.
 - b. Ensure that the transducer cord is connected to the machine and the US unit is plugged into a grounded wall receptacle.
 - c. Clean the transducer face by wiping it with an alcohol moistened towel.
5. Fill the container approximately two-thirds full with water. The water temperature should be from 70ø F to 80ø F, unless otherwise prescribed by the physical therapist.
6. Position and drape the patient for treatment.
7. Visually inspect the body site to be treated.

NOTE: Report any abnormalities observed on the body site to the physical therapist.

8. Clean the area to be treated with a mild soap and warm water, rinsing well. Towel dry the area when finished.
9. Immerse the body site to be treated slowly into the water. The water must completely surround the part to be treated.
10. Immerse the transducer into the water.

NOTE: Put an examining or surgical glove on the hand to be holding the transducer if that hand will be immersed in a metal container, such as a whirlpool tank or stainless steel basin.

11. Position the transducer face at a right angle to the treatment site and at a distance of one-half to one inch from the skin.

CAUTION: Ensure that all controls are adjusted to the lowest setting prior to turning the US unit on.

12. Turn the US unit on.

Performance Steps

CAUTION: Move the transducer continuously over the body site once the unit has been turned on. Move at a rate of one and one-half inches (3 to 4 cm) per second to prevent the development of hot spots and periosteal burns.

- a. Set the intensity gradually to the prescribed level of watts per square centimeter (W/cm²) for continuous or peak watts per square centimeter (PW/cm²) for pulsed setting. (See Figure 3-25.)

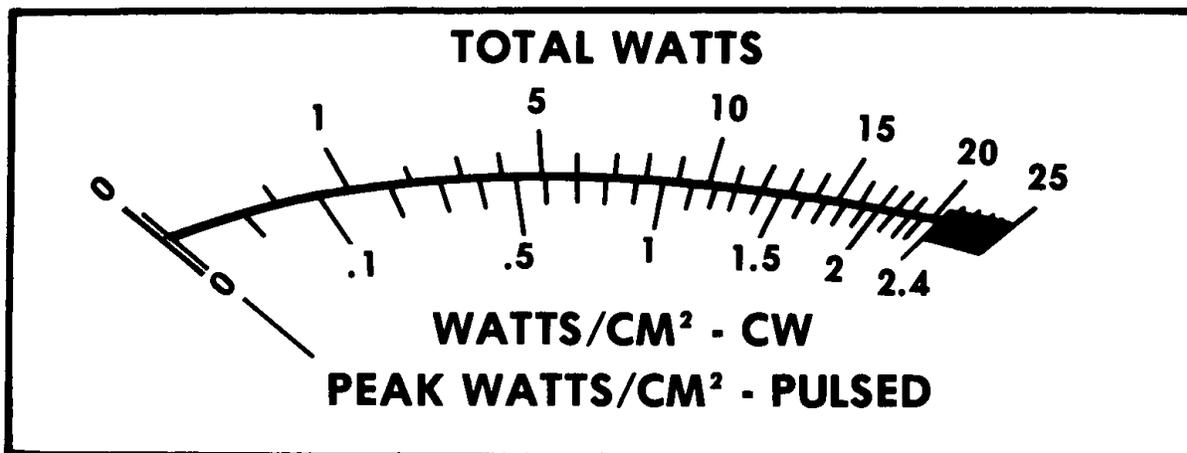


Figure 3-24 Pulsed Meter

- b. Set the timer for the prescribed treatment time. Treatment time is 5 minutes unless otherwise prescribed in the patient instructions or by the physical therapist.

NOTE: When air bubbles appear on the patient's immersed body site or the transducer face, remove them by wiping the surfaces with the gloved hand.

13. Monitor the patient's responses throughout the treatment by--
 - a. Checking the patient's facial expressions.
 - b. Observing the respirations.
 - c. Asking how the patient is tolerating the treatment.

CAUTION: Adjust the treatment if the patient complains of pain by--[a] First increasing the rate of motion of the transducer. If pain persists, then, [b] Decrease the intensity. If complaints of pain still persist, then, [c] Discontinue the treatment by adjusting the intensity to the lowest possible setting, and then removing the transducer from the patient. - The physical therapist is notified after the transducer is cleaned and recoupled onto the US unit.

14. Remove the transducer when the automatic timer turns the unit off.
 - a. Turn all controls to the lowest possible setting after the transducer is removed.
 - b. Clean the transducer face with an alcohol-moistened towel, wiping it thoroughly to prevent a film from accumulating.
 - c. Recouple the transducer onto the US unit.
 - d. Unplug the unit power cord from the wall receptacle.

15. Remove the patient's body part slowly from the water, being careful not to splash or drip water around the treatment area.

16. Dry the treated body site with a cloth towel.

NOTE: Place used towels in a linen hamper IAW local SOP.

17. Inspect the treated body site. A light to moderate erythema (flushing or slight reddening) should be observed where the transducer was in contact with the body site.

NOTE: Report any adverse reaction or unusual condition observed to the physical therapist.

Performance Steps

18. Check the treatment instructions for additional care.
 - a. Other modalities.
 - b. Range of motion (ROM) exercises.
 - c. Strengthening exercises.
 - d. Home treatment and/or return visits.

19. Assist the patient out of the position of treatment and back into clothing, if necessary.
 CAUTION: Instruct the patient to move slowly. The sedating effects of the treatment and the increased circulation may cause the patient some dizziness.

20. Record observations and write the appropriate notes in the "O" portion of the SOAP notes.

21. Dry the treatment area and equipment.

NOTE: Place used towels in a linen hamper IAW local SOP.

Performance Measures**Results**

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the equipment and materials.	P	F
4. Prepares the equipment for use.	P	F
5. Fills the container with water.	P	F
6. Positions and drapes the patient for treatment.	P	F
7. Visually inspects the body site to be treated.	P	F
8. Cleans the body site to be treated.	P	F
9. Immerses the body site.	P	F
10. Immerses the transducer.	P	F
11. Positions the transducer.	P	F
12. Turns the US unit on.	P	F
13. Monitors the patient's responses throughout the treatment.	P	F
14. Removes the transducer.	P	F
15. Removes the patient's body part slowly from the water.	P	F
16. Dries the treated body site.	P	F
17. Inspects the treated body site.	P	F
18. Checks the treatment instructions for additional care.	P	F
19. Assists the patient out of the position of treatment.	P	F
20. Writes the appropriate notes.	P	F
21. Dries the treatment area and equipment.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER A THERAPEUTIC ELECTRICAL STIMULATION TREATMENT
081-836-0055

Conditions: The patient has been screened for treatment and has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a therapeutic electrical stimulation unit with appropriate leads, multiple sizes of electrodes, electrode paste and gel, saline solution and/or tap water, 2 x 2 and 4 x 4 gauze sponges, rubber or elastic straps and sandbag weights, cloth towels, adhesive tape, and treatment table, bed, or chair.

Standards: A therapeutic electrical stimulation treatment is administered IAW the information on the treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the target site, electrical stimulator, and the specific technique to be used.
 - a. Motor point stimulation--used in electrodiagnostic muscle testing and muscle reeducation.
 - b. Monopolar stimulation--used for small muscles or small muscle groups stimulation.
 - c. Bipolar stimulation--used for large muscles or large muscle groups stimulation.
2. Explain the effects of the treatment to the patient. Depending on the specific procedure prescribed, he or she should feel one or more of the following physiologic responses.
 - a. Tingling (sensory response).
 - b. Contracting and relaxing of muscles or muscle fibers (motor response).
 - c. Electrical stimulation to tolerance (pain threshold response).
3. Prepare the patient for the treatment.
 - a. Allow the patient to change into treatment shorts and/or gown, as appropriate.
 - b. Position the patient, as appropriate, for the target site to be stimulated.
 - c. Expose the target site(s).
4. Visually inspect the target site(s).
 - a. If an unusual condition is observed on the target site(s) which is not annotated on the treatment card, do not administer the treatment. Consult the physical therapist.
 - b. Drape the area with a towel when visual inspection is completed.
5. Prepare the equipment for the procedure.
 - a. Ensure the stimulator output controls are set to the lowest setting.
 - b. Obtain the required electrodes. The type of electrodes to be used will depend on the type of treatment to be given, the purpose of the treatment, and the size and location of the target site(s).

CAUTION: Check all electrodes and leads for loose connections and proper insulation. Replace any defective leads and/or wires, as appropriate.

(1) Motor point stimulation.

(a) Obtain one small handheld electrode to be used as the treatment (stimulating) electrode. Securely attach the black lead to the electrode and the negative (-) terminal of the machine.

(b) Secure a larger surface electrode to the positive (+) terminal of the machine. This will be the dispersive electrode.

(2) Monopolar stimulation.

(a) Obtain one surface electrode. Securely attach the black lead to the electrode and the negative (-) terminal of the machine. This will be the stimulating electrode.

NOTE: If more than one target site is to be treated at the same time, bifurcated leads should be used to place the stimulating surface electrodes over the multiple target sites. **CAUTION:** If using bifurcated leads, ensure the sum of the areas of the stimulating electrodes do not exceed the size of the nontreatment (dispersive) electrode.

Performance Steps

- (b) Secure a larger surface electrode to the positive (+) terminal of the machine. This will be the dispersive electrode.
- (3) Bipolar stimulation. Obtain two or more surface electrodes of the same type and size. Ensure the leads are securely connected, one lead or set of leads to the positive (+) terminal and the other lead or set of leads to the negative (-) terminal.
- c. Place the appropriate size of electrode sponge inserts onto the electrodes, as appropriate.
- d. Cover all electrodes that have electrode sponges with the appropriate size of gauze sponges.
- e. Apply the appropriate coupling agent to the electrodes. Use tap water or saline solution to thoroughly moisten the electrode sponges.

NOTE: NOTE 1: If electrode paste or gel is prescribed with the motor point technique, gauze will not be used to cover the active electrode. NOTE 2: Only electrode gel will be used on the electrodes when treating with a transcutaneous electrical nerve stimulation (TENS) unit.

- 6. Place the electrodes onto the appropriate site(s) prescribed. (See Figure 3-26.) Apply the electrodes securely to the target site where full contact is possible.
 - a. Motor point technique. Position the dispersive electrode so that the active electrode can be moved over the target site freely.

NOTE: The stimulating electrode will be placed over the specified motor points and stimulated for the prescribed time.

- b. Monopolar technique. Position the active electrode over the target site(s). Position the dispersive electrode so that it is over nontarget tissue.
- c. Bipolar technique. Position the surface electrodes over the target site(s).

NOTE: Secure the surface electrodes with rubber or elastic straps, sandbag weights, or tape, as appropriate.

Performance Steps

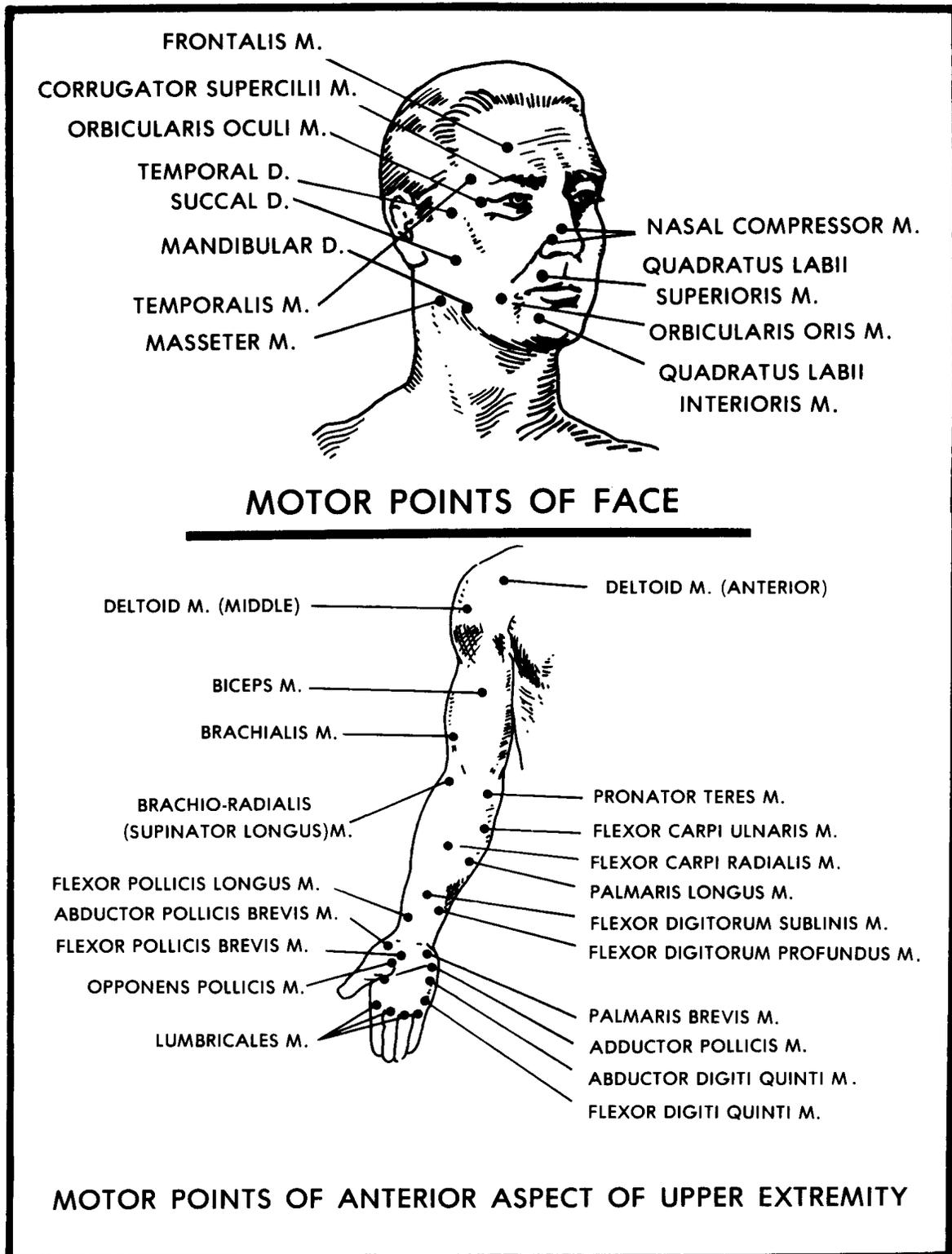


Figure 3-26 Motor Points Of Face & Extremity

Performance Steps

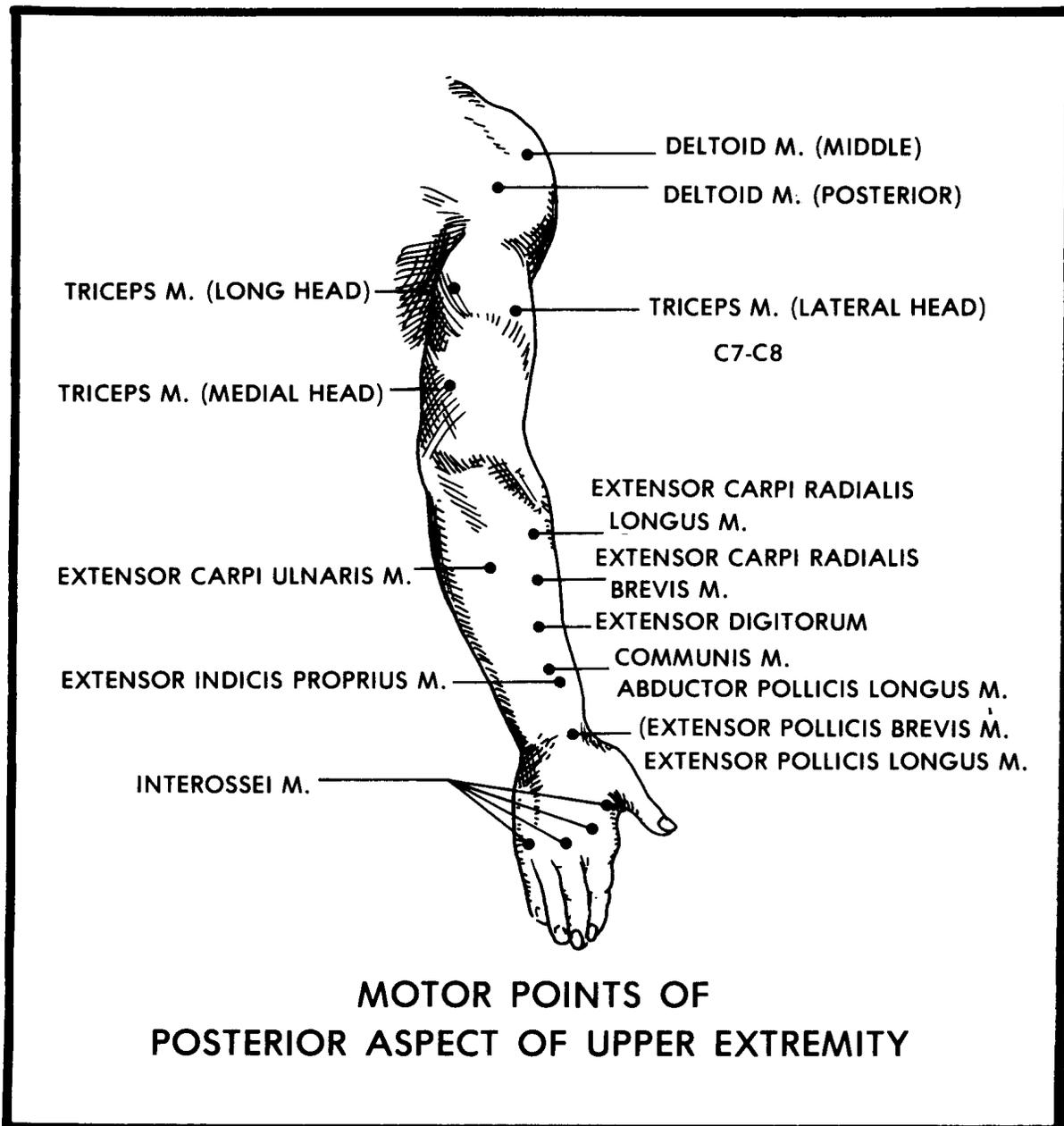


Figure 3-26a Motor Points of Face & Extremity (Continued)

Performance Steps

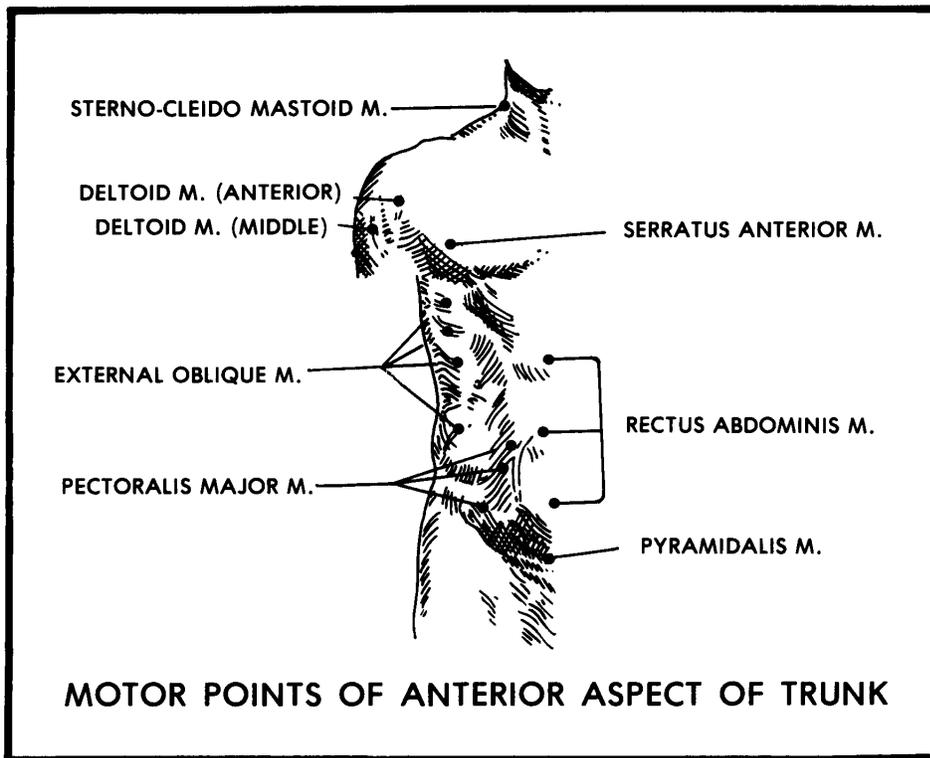


Figure 3-26b Motor Points of Face & Extremity (Continued)

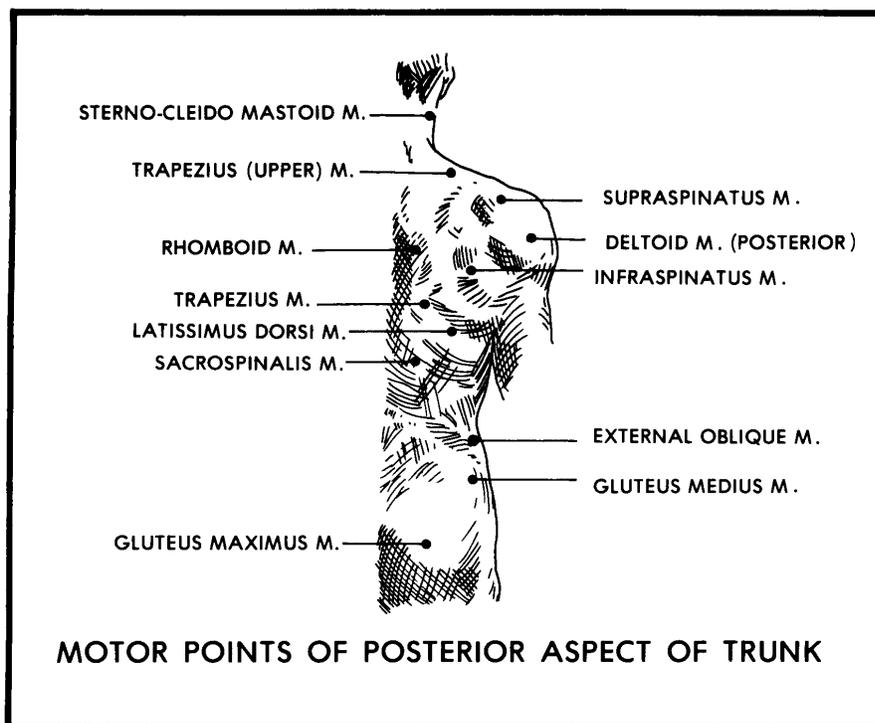


Figure 3-26c Motor Points Of Face & Extremity (Continued)

Performance Steps

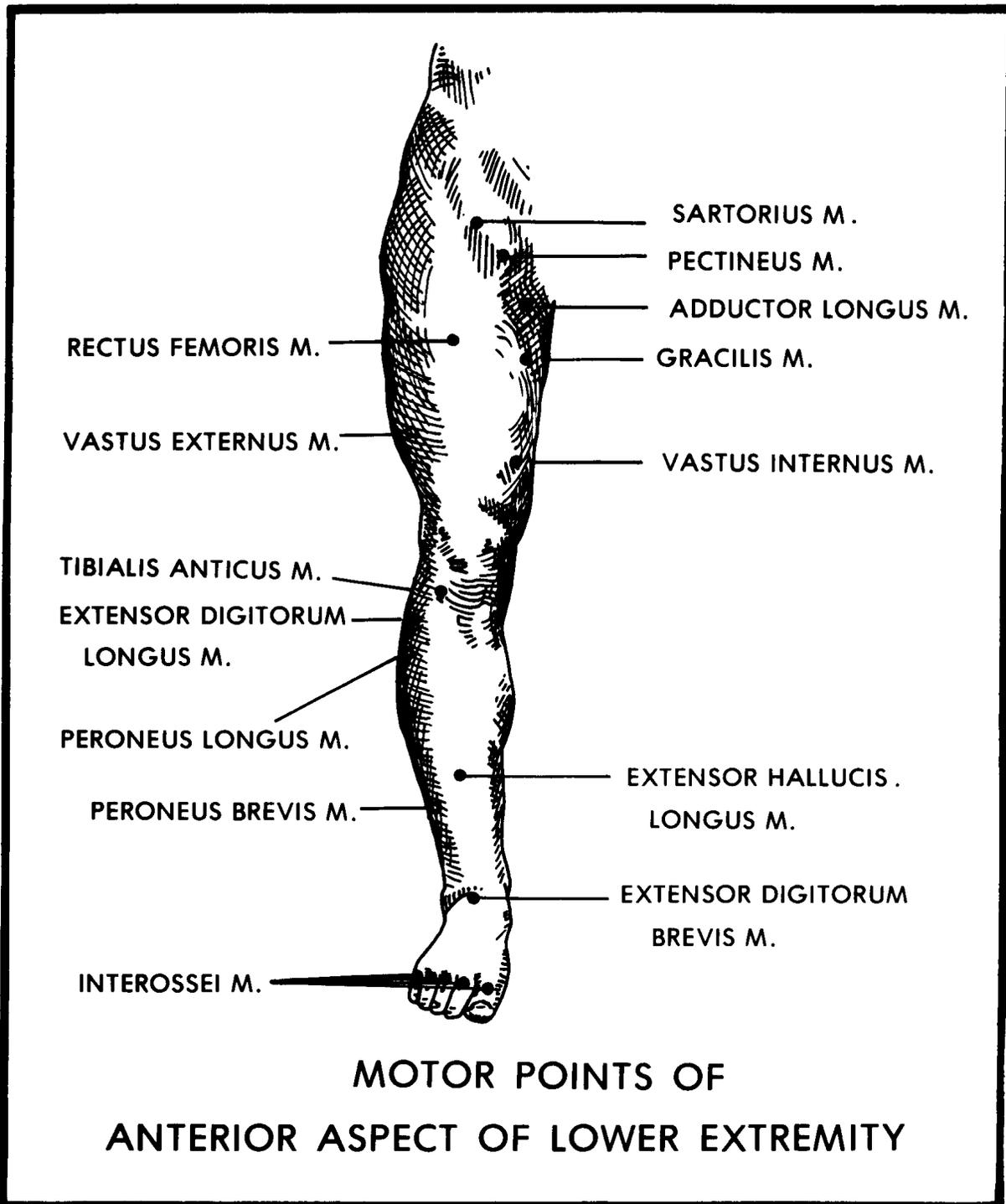


Figure 3-26d Motor Points Of Face & Extremity (Continued)

Performance Steps

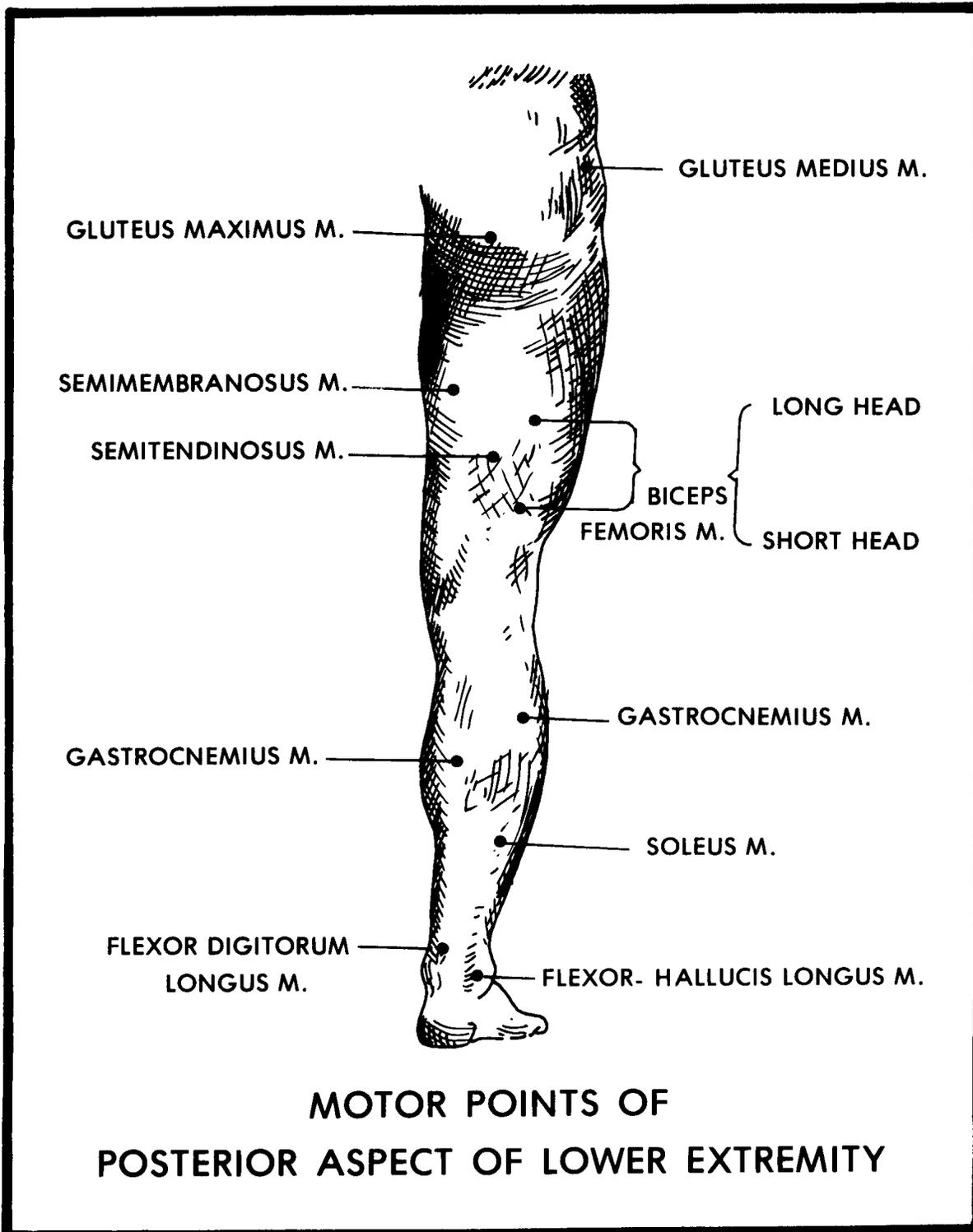


Figure 3-26e Motor Points Of Face & Extremity (Continued)

Performance Steps

7. Activate the unit.
 - a. Plug the unit power cord into an approved electrical outlet.

NOTE: If the unit is powered by batteries, ensure they are charged and installed properly.

- b. Turn the unit on.

CAUTION: Slowly adjust the intensity and controls to the level and setting prescribed.

8. Monitor the patient's responses throughout the treatment.
 - a. Reposition the electrodes if the stimulation is not producing the desired effects.

CAUTION: If the patient complains of a perception of sensory stimulation under the dispersive electrode, reduce the intensity settings and reposition the electrode. If sensory stimulation continues, decrease the size of the stimulating electrode(s).

- b. Check any areas of sensory loss frequently for evidence of electrical burning.

CAUTION: If any burning is detected, discontinue the treatment by reducing all controls to the lowest setting and removing all electrodes.

- c. Report any adverse treatment responses to the physical therapist.

9. Discontinue the treatment when prescribed.
 - a. Return all output controls to the lowest settings.
 - b. Unplug the unit power cord if the unit is not battery operated.
 - c. Remove all electrodes from the patient and disengage the leads.
 - d. Remove all electrode sponges and allow them to dry.
 - e. Wipe any gel off the electrodes with a towel.

10. Dry the electrode sites with towels.

NOTE: Dispose of used linen, gauze, and tape IAW local SOP.

11. Visually inspect the electrode sites. Report any welts, burns, or blistering on the sites to the physical therapist.
12. Conclude the visit by assisting the patient out of the position of treatment and back into clothing, as appropriate.
13. Write appropriate progress notes to include, at a minimum, the unit, treatment method, settings, and treatment time used.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the effects of the treatment to the patient.	P	F
3. Prepares the patient for the treatment.	P	F
4. Visually inspects the target site(s).	P	F
5. Prepares the equipment for the procedure.	P	F
6. Places the electrodes onto the appropriate site(s).	P	F
7. Activates the unit.	P	F
8. Monitors the patient's responses throughout the treatment.	P	F
9. Discontinues the treatment when prescribed.	P	F
10. Dries the electrode sites.	P	F
11. Visually inspects the electrode sites.	P	F

Performance Measures

12. Assists the patient out of the position of treatment.
13. Writes appropriate progress notes.

Results

P	F
P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

**ADMINISTER A COMBINATION THERAPEUTIC ULTRASOUND WITH ELECTRICAL THERAPY
TREATMENT
081-836-0004**

Conditions: The patient has a completed treatment card and a patient care handwash has been performed. Necessary materials and equipment: an ultrasound (US) unit with electrical therapy capabilities and attachments, appropriate waste receptacles, appropriate coupling agents, rubber strap or sand bag weight, 4 x 4 sponges, isopropyl alcohol, cloth towels, and plastic sheeting.

Standards: The combination treatment of US and electrical therapy is administered IAW the information on the patient's treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine--
 - a. The body area to be treated.
 - b. The time of the treatment.
 - c. The dosage of the treatment.
 - d. The technique to be used.
2. Explain the effects of the procedure to the patient.
 - a. Ultrasound (US) increases heat in the body area being treated by a micromassage of the cells and tissues at the molecular level. He or she may or may not experience a sensation of warmth as the transducer (soundhead) moves over the area to be treated.
 - b. The patient should feel the muscles being treated contract and relax with the movement of the soundhead over the area.
 - c. He or she should relax the area to be treated and should feel no pain from the treatment.

NOTE: Tell the patient to immediately report any burning sensation or increase of pain caused by the soundhead or the electrode.

3. Prepare the equipment for the treatment.
 - a. Ensure all controls are turned to the lowest settings.
 - b. Inspect the wire lead for proper insulation, and then securely attach the lead to the dispersive electrode.

CAUTION: If the wire lead has cracks, worn insulation, or loose wires, replace it with a functional lead prior to the treatment. - NOTE: The US transducer will be the active electrode.

- c. Obtain an electrode of appropriate size for the area to be treated. Ensure the same size of sponge insert is used with this electrode.

NOTE: This will be the dispersive electrode.

- d. Thoroughly moisten the dispersive electrode sponge with saline solution or tap water and cover the electrode completely with a moistened gauze sponge.
 - e. Apply the dispersive electrode to an area where full contact is possible on the side of the body that is to be treated. If necessary, the dispersive electrode may be held in place by a rubber strap or a light sandbag weight.
 - (1) When treating an extremity, place the dispersive electrode on the patient's trunk or torso.
 - (2) When treating the trunk or torso, place the dispersive electrode so the active electrode can be moved over the entire area to be treated.
 - f. Plug the power cord into an approved electrical outlet.

4. Initiate the treatment, using the settings prescribed on the treatment card.
 - a. The mode selector switch for the electrical stimulation should be set at TETANIZE or PULSED, IAW the treatment instructions.
 - b. Warn the patient, and then apply an appropriate coupling agent to the area to be treated.
 - (1) Ensure there is a sufficient amount of the coupling agent applied to protect the skin from abrasions and to allow the soundhead to be moved freely over the area to be treated.

Performance Steps

- (2) Place the transducer in contact with the body and use the transducer to evenly spread the coupling agent over the area to be treated.

NOTE: Do not use mineral oil as a coupling agent for combined therapy since it is not a good conductor.

- c. Set the mode selector switch for the ultrasound at CONTINUOUS or PULSE, IAW the treatment instructions.
- d. Turn the unit on by rotating the timer knob clockwise.
- e. Gradually set the ultrasound intensity to the desired level while continuously moving the transducer over the area to be treated to prevent the development of hotspots.
- f. Adjust the stimulator output control until a visible contraction is achieved or the current reaches the patient's tolerance, whichever is first.
- g. Recheck both the timer and intensity dials to ensure they have been set according to the instructions on the treatment card.
- h. Continuously monitor the patient's responses throughout the treatment. At a minimum, you should check the patient's comfort by--
 - (1) Asking how he or she is tolerating the treatment.
 - (2) Checking facial expressions, when practical.
 - (3) Observing the patient's respirations.

CAUTION: If the patient complains of pain-- [1] First, increase the speed of the soundhead. [2] If no relief, then reduce the intensity of the ultrasound output. [3] If the complaint of pain continues, reduce the stimulator current. [4] If the pain continues after these actions have been taken, discontinue the treatment by reducing all controls to the lowest setting, remove all electrodes from the patient, and then inform the physical therapist.

- 5. Discontinue the treatment when the automatic timer turns off the unit.
 - a. Reduce all control dials to the lowest setting.
 - b. Wipe the transducer with a dry towel to prevent accumulation.
 - c. Remove the dispersive electrode from the patient.
 - d. Remove and dispose of the gauze and disengage the lead wire from the dispersive electrode. Allow the dispersive electrode sponge to dry.
- 6. Dry both electrode sites with a towel.
- 7. Inspect both electrode sites used. Report any electrical burns or raised welts to the physical therapist.
- 8. Conclude the procedure by assisting the patient out of the position of treatment and back into clothing, as necessary. Provide the patient with instructions for additional care as indicated on the treatment card.
- 9. Record the appropriate progress notes.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares the equipment for treatment.	P	F
4. Initiates the treatment.	P	F
5. Discontinues the treatment when indicated.	P	F
6. Dries both electrode sites.	P	F
7. Inspects both electrode sites.	P	F

Performance Measures

Results

- | | | |
|--|---|---|
| 8. Assists the patient out of the position of treatment and provides instructions for additional care, as appropriate. | P | F |
| 9. Writes appropriate progress notes. | P | F |

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER A CERVICAL TRACTION TREATMENT

081-836-0013

Conditions: A patient with complaints of neck pain has been screened and has a completed treatment card. You have performed a patient care handwash. Necessary materials and equipment: a traction machine with traction table or chair, traction head halter, pillows, facial tissue, towels, and bell.

Standards: A cervical traction treatment is administered IAW the information in the treatment instructions without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment instructions.
2. Explain the procedure to the patient.
 - a. The traction should put a gradual stretch on the posterior cervical muscles.
 - b. The pull should be on the back of the upper neck (on the occiput) and only a very minimal amount of pressure should be present on the chin.

NOTE: The patient should be instructed to relax during the treatment.

3. Prepare the patient for treatment.
 - a. Expose the patient's entire cervical area.
 - b. Ensure that the patient's hair will not interfere with the treatment.
 - c. Inspect the area to be treated to ensure that dentures and all jewelry, including glasses, have been removed by the patient.
 - d. Prepare a moist heat pack, if ordered. (See task 081-836-0005.)
4. Position the patient for treatment.
 - a. If the semireclining position is to be used.
 - (1) Instruct the patient to lie supine in direct line with the pull of the traction unit.
 - (2) Adjust the traction table to elevate the patient's head and shoulders. Do not use pillows to elevate the patient's head and shoulders.

NOTE: If the traction table is not adjustable, the patient will remain supine.

- (3) Flex and support the patient's knees.
 - (4) Support the patient's arms and lower legs by placing them securely on pillows.
 - b. If the sitting position is to be used.
 - (1) Place a footstool under the patient's feet to elevate both knees higher than the hips.
 - (2) Place pillows in the patient's lap to support both arms.
5. Initiate the treatment.
 - a. Place the head halter on the patient. Care must be used to ensure that the--
 - (1) Patient's ears are not confined.
 - (2) Head halter pulls evenly on both sides.
 - (3) Spreader bar is level.
 - (4) Head halter is snug but not restrictive.

NOTE: If padding is needed for the chin area of the halter for a patient with a beard or a small chin, use a folded facial tissue.

- b. Apply tension upward on the cord, pulling the spreader bar and halter to show the patient how the traction pull should feel. Check the halter to ensure that it is securely in place and will not slip when the traction is applied.
 - c. Visually inspect to ensure that the traction will pull the head into 10° to 20° of forward flexion.
 - d. Determine from the patient's treatment instructions the type of traction to be used and adjust the machine accordingly (STATIC, INTERMITTENT, or PROGRESSIVE INTERMITTENT). The time span between the pulling and releasing actions is 2:1 ON/OFF.
 - e. Check the traction poundage control to ensure that it is adjusted to zero, and then turn on the traction timer.
 - f. Gradually adjust the poundage to the prescribed weight.

Performance Steps

NOTE: Poundage should not exceed 40 pounds unless specified by the physical therapist. CAUTION: If it is necessary to make adjustments to the head halter or reposition the patient, the poundage control must be returned to zero prior to performing either of these actions.

- g. Reset the traction timer for the prescribed time as indicated in the patient's treatment instructions.
- h. Provide the patient with a bell to ring if any adverse reaction should occur during the treatment. The bell must be placed on the pillow near the patient's hand to minimize movement. If a bell is not available, instruct the patient to call out to you.

NOTE: Place the emergency cutoff control on the pillow next to or into the patient's hand and instruct the patient how to use it. CAUTION: Instruct the patient to stop the treatment by activating the cutoff control if-- [a] The machine malfunctions. [b] Any of the following occur: any increase of pain, throbbing, headache, dizziness, feelings of nausea, radiating pains, or complaints of weakness or difficulty in breathing. - NOTE: These subjective should be reported to the physical therapist.

- 6. Monitor the patient's responses periodically throughout the treatment by--
 - a. Checking the facial expression during the "pull" and "relax" phases of the treatment.
 - b. Observing the respirations.
 - c. Asking the patient how the treatment is being tolerated.

NOTE: NOTE 1: Tell the patient to respond by voice or hand signals only when traction is in the "relax" position. NOTE 2: The sedating effects of the treatment may cause the patient to fall asleep. Allow the patient to sleep, but check on the status of the moist heat pack (if used), the machine line of pull, and the poundage periodically.

- 7. Discontinue the treatment when the automatic timer turns off the traction by returning the poundage dial back to zero. Remove the emergency cutoff control, bell (if available), moist heat pack (if used), halter from the patient's head, and pillows.

NOTE: If the traction unit cuts itself off after the treatment time has expired, pull the cord downward to increase the slack in the cord while supporting the patient's head.

- 8. End the procedure by assisting the patient out of the position of treatment.

CAUTION: The patient must be instructed to move slowly at first. The sedating effect of the treatment may cause dizziness. The patient must be observed at all times for adverse reactions.

- 9. Write appropriate progress notes.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares the patient for treatment.	P	F
4. Positions the patient for treatment.	P	F
5. Administers the treatment.	P	F
6. Monitors the patient's responses.	P	F
7. Discontinues the treatment when indicated.	P	F
8. Assists the patient out of the position of treatment.	P	F
9. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

Subject Area 6: Chest Physical Therapy

MEASURE CHEST EXPANSION

081-836-0056

Conditions: The patient has a completed referral. Necessary materials and equipment: body stockinette, bandage scissors, a tape measure (1/4" width) with centimeter markings.

Standards: The patient's chest expansion measurements are taken without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
4. Prepares the patient for the procedure.	P	F
a. Instructs the patient to remove all clothing above the waist.	P	F
NOTE: If a male technician performs the measurements on a female patient, cuts a length of body stockinette long enough to fit the torso. Cuts openings where appropriate for the arms. Instructs her to wear the stockinette for the measurement.		
b. Has the patient stand in an upright position with good posture, shoulders relaxed, not hiked.	P	F
5. Locates the xiphoid process by palpation.	P	F
6. Places the tape measure circumferentially at the level of the xiphoid.	P	F
7. Takes the first measurement.	P	F
a. Instructs the patient to fully exhale and hold the position.	P	F
b. Pulls the tape measure snug and notes the measurement.	P	F
c. Tells the patient to continue breathing.	P	F
d. Measurement is taken within 10 seconds.	P	F
8. Takes the second measurement.	P	F
a. Instructs the patient to fully inhale and hold the position.	P	F
b. Pulls the tape measure snug and notes the measurement.	P	F
c. Tells the patient to continue breathing.	P	F
d. Measurement is taken within 10 seconds.	P	F
9. Records the measurements.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO_GO if any steps is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

PERFORM AUSCULTATION OF THE LUNGS

081-830-3005

Conditions: You have performed a patient care handwash and have obtained the physician's order. Necessary materials and equipment: consultation form, stethoscope, cleaning solution, and cloth.

Standards: Identify and locate normal and abnormal breath sounds correctly.

Performance Steps

1. Read and verify the order on the consultation form.
2. Identify the patient by asking his or her name and checking his or her armband.
3. Explain the procedure to the patient and answer any questions he or she may have about the procedure.
4. Auscultate the patient's lungs.

a. Instruct the patient to remove all clothing from the chest and back regions.

NOTE: If the therapist is male and the patient is female, a female chaperon must be present during the examination.

b. Direct the patient to sit in an upright position.

NOTE: If the patient is unable to sit upright, position the patient first on one side and then on the other side.

c. Tell the patient to inhale deeply and exhale slowly with his or her mouth open.

d. Following the pattern of movement shown in Figure 3-x, move the bell or diaphragm of the stethoscope and compare the breath sounds of one side to the other.

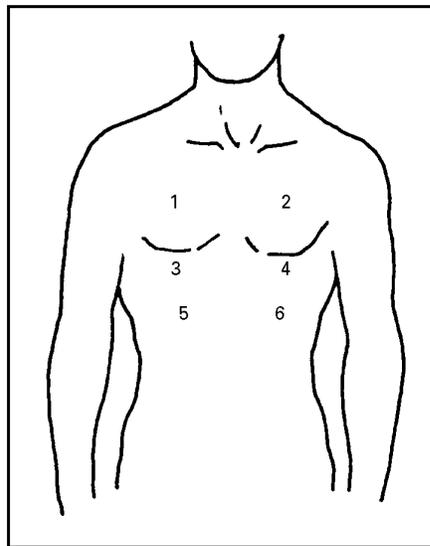


Figure 3-27

e. Auscultate both anteriorly and posteriorly, covering all lobes.

NOTE: Listen to at least one cycle of inspiration and expiration in each area of the chest, both anteriorly and posteriorly.

f. Note the presence or absence of normal breath sounds in each lobe.

Performance Steps

NOTE: Unless the patient has had all or part of a lung removed, some sound should be heard during auscultation. Absence of sound indicates an abnormal condition such as atelectasis, pleural fluid, pneumothorax, or lung consolidation.

- (1) A high pitched, harsh tubular sound may be heard over the mainstem bronchus.
 - (2) A moderate pitched, muffled blowing sound may be heard over the large air passages.
 - (3) A low pitched, soft rustling sound may be heard over the smaller air passages at the peripheral areas of the lungs.
- g. Note the type and location of adventitious (abnormal) breath sounds.
- (1) Rales--crackling or bubbly noises heard during inspiration and not cleared by coughing. This is commonly a result of air movement into alveoli or small airways containing fluid.
 - (2) Rhonchi--loud, low pitched, coarse sounds, like a snore, heard at any point during inspiration or expiration. This is commonly caused by accumulation of fluid or secretions in larger airways.

NOTE: Coughing may clear this if the sounds are caused by mucous accumulation in large airways.

- (3) Wheeze--musical noise sounding like a squeak, usually louder during expiration than inspiration. The sound is produced by high velocity airflow through restricted passages.
- (4) Pleural friction rub--a dry, rubbing or grating sound usually caused by inflammation of pleural surfaces. This will be heard during both inspiration and expiration.
- (5) Stridor--high-pitched crowing, usually due to tracheal narrowing. Stridor may be the result of vocal cord edema, tracheal stenosis, epiglottitis, tumor, or foreign body.

5. Instruct the patient to put his or her clothing back on.
6. Record the findings on the consultation form.
7. Clean the stethoscope bell with a cloth moistened with cleaning solution.

Performance Measures**Results**

- | | | |
|---|---|---|
| 1. Read and verify orders. | P | F |
| 2. Identify the patient. | P | F |
| 3. Explain the procedure. | P | F |
| 4. Auscultate the patient's lungs. | P | F |
| 5. Instruct the patient to replace his or her clothing. | P | F |
| 6. Record the findings. | P | F |
| 7. Clean the stethoscope. | P | F |

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

ADMINISTER POSTURAL DRAINAGE AND PERCUSSION ON AN ADULT
081-830-3007

Conditions: You have performed a patient care handwash and have obtained the physician's order.
Necessary materials and equipment: consultation form, towel, two pillows, patient's X-rays, sputum cups, box of tissues, stethoscope, and a bed.

Standards: Administer postural drainage and percussion without causing further injury to the patient.

Performance Steps

1. Read and verify the order on the consultation form.

CAUTION: Chest physiotherapy is contraindicated for patients with tuberculosis, hemoptysis, or severe pain or discomfort. Consult with the physician prior to administering therapy.

2. Identify the patient by asking his or her name and by checking his or her armband.
3. Explain the procedure to the patient and answer any questions about the therapy.
4. Auscultate the patient's lungs. (See task 081-830-3005.)
5. Cover the affected area with a thin towel.

NOTE: If the area to be treated was not specified in the physician's order, consult with the physician or review the patient's X-rays to determine the affected area.

6. Place the patient in the proper position to drain the appropriate segment. (See Figure 3-28 for an illustration of the various lung segments.)

Performance Steps

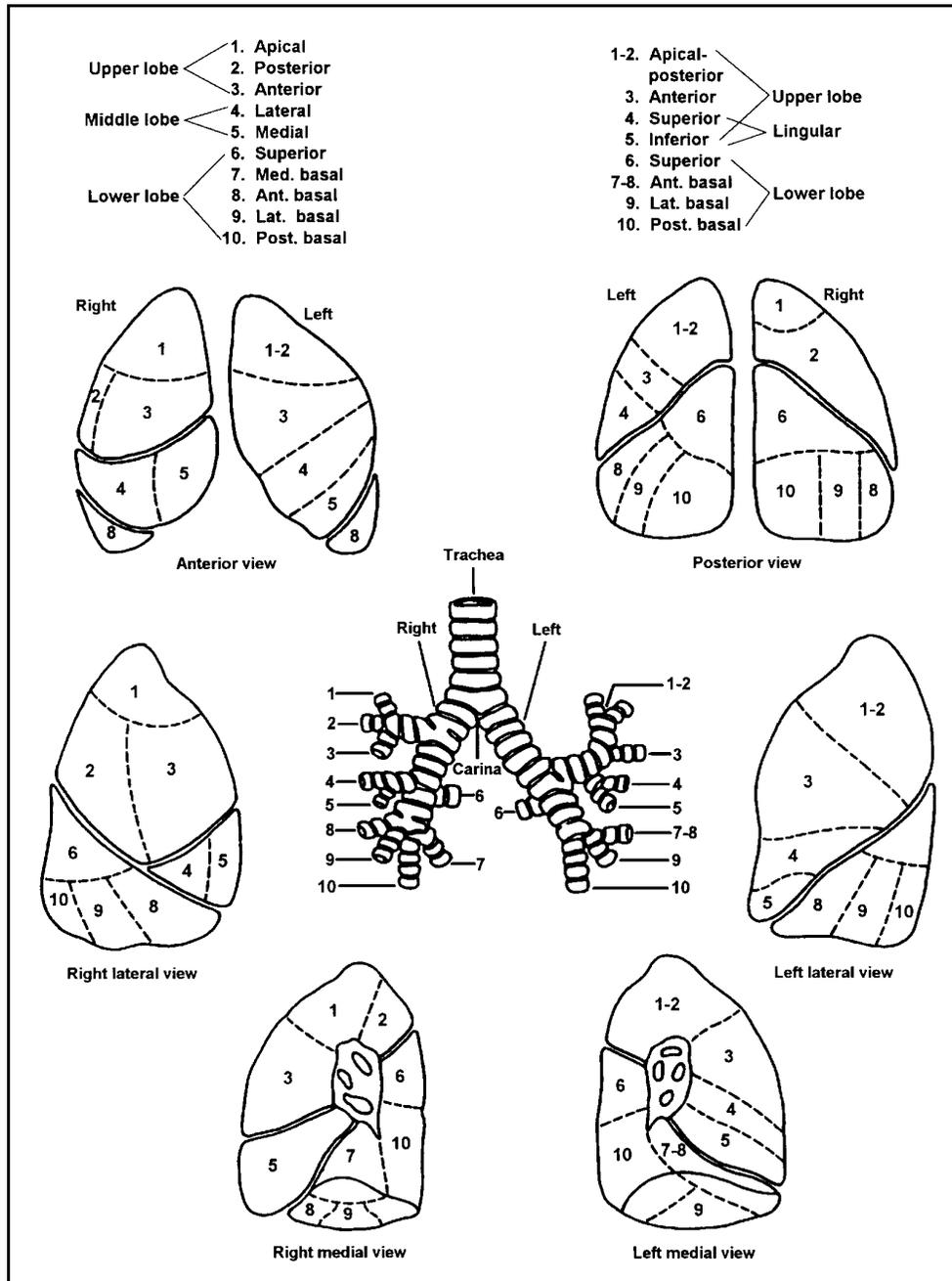


Figure 3-28

NOTE: Inform the patient that the postural drainage position is held for 15 minutes to 1 hour, depending on the patient's ability to stay in one position.

7. Perform the therapy. (See Figure 3-29.)

Performance Steps

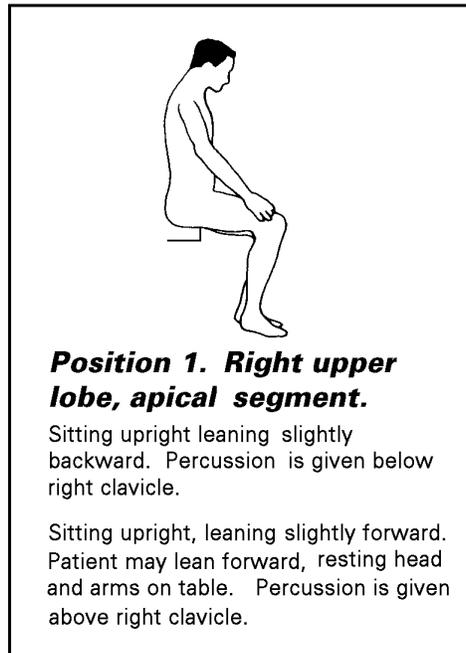


Figure 3-29

Performance Steps

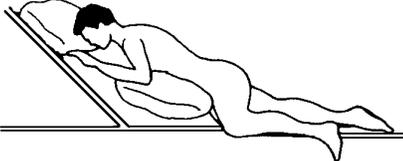
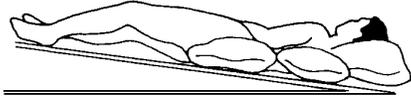
 <p>Position 2. Left upper lobe, apical-posterior segment.</p> <p>Lying on right side with body turned forward 45°, pillow under left arm, and pillow under head, head of bed elevated about 45°. Percussion is given over left scapula.</p>	 <p>Position 3. Right upper lobe, posterior segment.</p> <p>Lying on left side with body turned forward 45°, pillow under right arm, and pillow under head. Percussion is given over right scapula.</p>
 <p>Position 4. Right and left upper lobes, anterior segments.</p> <p>Supine with pillow under knees and pillow under head. Percussion is given several inches below clavicle.</p>	 <p>Position 5. Left upper lobe, superior and inferior lingula.</p> <p>Supine with body turned 45° to right with pillow under head, and pillow under left side of back from shoulder to hip. Foot of bed elevated, head lowered. Percussion is given below left nipple.</p>

Figure 3-29

Performance Steps

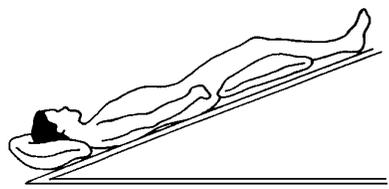
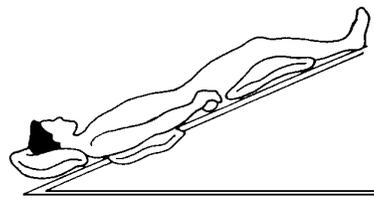
 <p>Position 6. Right middle lobe, medial and lateral segments. Supine with body turned 45° to left with pillow under right side of back from shoulder to hip. Foot of bed elevated, head lowered. Percussion is given below right nipple.</p>	 <p>Position 7. Right and left lower lobes, superior segments. Prone, pillow under lower abdomen and pillow under ankles. Percussion is given below both scapulas.</p>
 <p>Position 8. Right lower lobe, medial basal segment. Supine with pillow under head and pillow under knees. Foot of bed elevated, head lowered. Percussion is given over right lower ribs.</p>	 <p>Position 9. Right lower lobe, anterior basal segment. Supine with pillow under right side and pillow under head. Foot of bed elevated, head lowered. Percussion is given over right lower ribs.</p>

Figure 3-29

Performance Steps

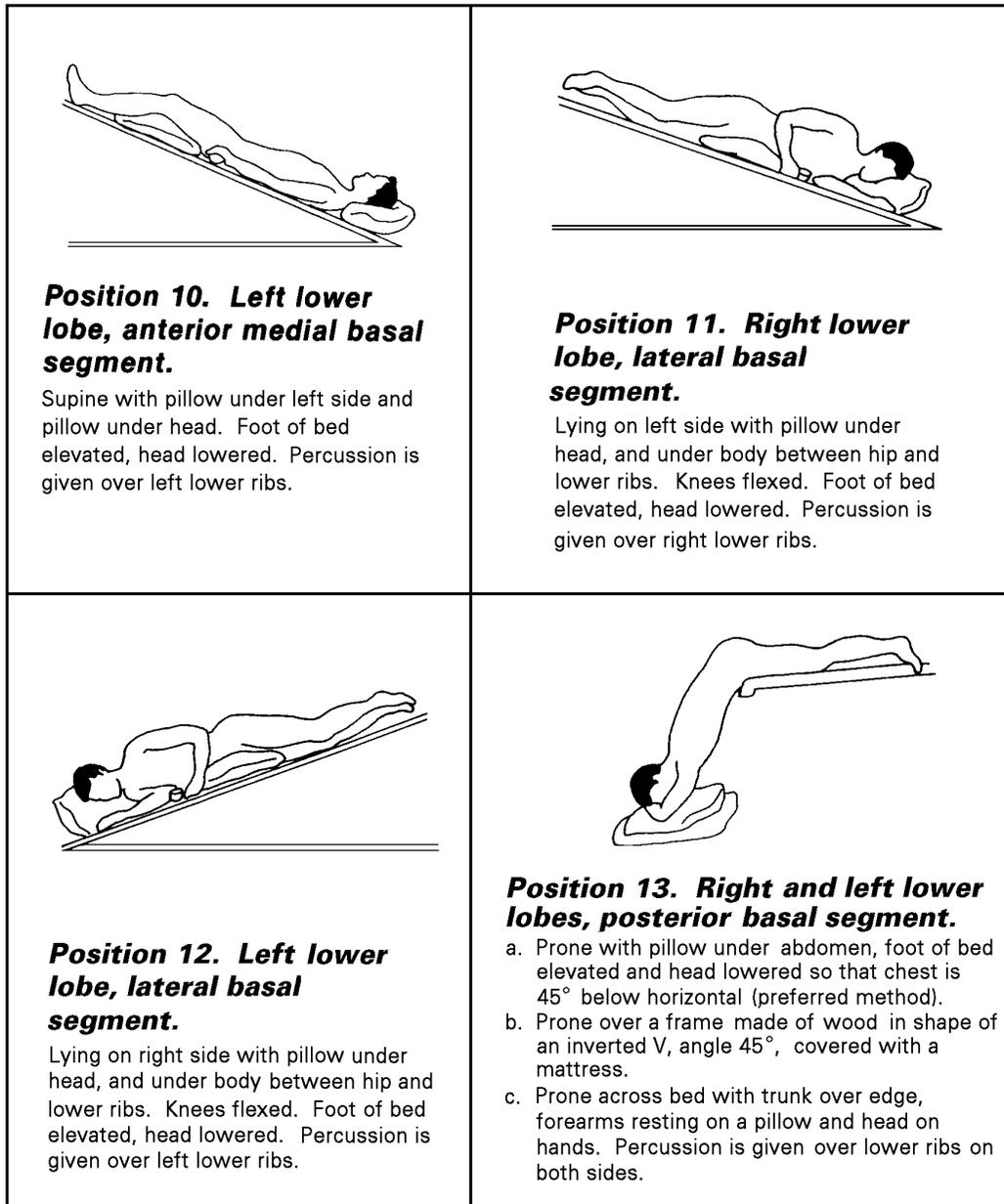


Figure 3-29

NOTE: Percussion therapy for each affected area will last 3 to 5 minutes. If pain or an adverse reaction is noted, stop the procedure. Avoid percussing over surgical wounds, breasts, floating ribs, and the spine.

8. Vibrate the affected area.
 - a. Position the hands over the affected area so that the fingers are spread. One thumb is crossed over the other, and the index fingers are touching at the tips.
 - b. Direct the patient to take a slow, deep breath.

Performance Steps

- c. Direct the patient to exhale slowly through pursed lips.
- d. Vibrate the affected area with both hands until the end of the patient's exhalation.

NOTE: Vibration is accomplished by either tensing the muscles causing "tremors" at the hands or by pushing up and down rapidly. CAUTION: Do not pinch the patient's skin.

- e. Repeat steps 8b through 8d two more times.
- f. Direct the patient to resume normal breathing.

9. After the patient has remained in the postural drainage position for the prescribed time, return the patient to a normal resting position and readjust the bed.
10. Direct the patient to practice diaphragmatic breathing .
 - a. Tell the patient to place his or her hands on his or her abdomen.
 - b. Instruct the patient to inhale through his or her nose while moving the abdomen downward and outward.
 - c. Tell the patient to exhale slowly through his or her mouth with his or her lips pursed.
 - d. Repeat steps 10a through 10c at least two more times.
11. Direct the patient to initiate a cough at least three times. If sputum is produced, direct the patient to put it in a sputum cup.

NOTE: For a surgical patient have him or her hold a pillow over the abdomen or surgical site (splinting). Have tissues or an emesis basin for the patient to cough into.

12. Auscultate the patient's lungs. (See task 081-830-3005.)
13. Record the treatment results on the consultation form.
 - a. Date and time.
 - b. Type of treatment.
 - c. Area of treatment (specify the lung segments).
 - d. The patient's tolerance and status.
 - e. Pre- and post-auscultation findings.
 - f. Sputum observation.
 - g. Signature.

Evaluation Preparation: Setup: This task should not be simulated. It must be performed on a patient. Brief soldier: Tell the soldier to administer the postural drainage and percussion therapy.

Performance Measures	Results	
1. Read and verify the orders.	P	F
2. Identify the patient.	P	F
3. Explain the procedure to the patient.	P	F
4. Auscultate the patient's lungs.	P	F
5. Cover the affected area with a thin towel.	P	F
6. Place the patient in the proper position.	P	F
7. Perform the therapy.	P	F
8. Vibrate the affected area.	P	F
9. Return the patient to the normal resting position and readjust the bed.	P	F
10. Direct the patient to practice diaphragmatic breathing.	P	F
11. Direct the patient to initiate a cough.	P	F

Performance Measures

12. Auscultate the patient's lungs.
13. Record the treatment results.

Results

P	F
P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

Subject Area 7: Therapeutic Exercises

INSTRUCT PENDULUM (CODMAN'S) EXERCISES**081-836-0057**

Conditions: The patient has been screened for treatment and has a completed referral. Necessary materials and equipment: treatment table (plinth) or chair.

Standards: The exercises are instructed without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient. The exercises will----	P	F
a. Maintain the range of motion (ROM).	P	F
b. Prevent joint tightness.	P	F
c. Prevent muscle shortening.	P	F
3. Demonstrates the exercises to the patient.	P	F
a. Stands facing a plinth or chair.	P	F
b. Bends forward at the waist and rests the unaffected arm or shoulder on the plinth or chair.	P	F
c. Allows the affected arm to hang down in the anatomical position.	P	F
d. Rocks the body to move the affected arm in the desired direction.	P	F
(1) Clockwise.	P	F
(2) Counterclockwise.	P	F
(3) Front to back.	P	F
(4) Side to side.	P	F
CAUTION: Does not actively use the muscles in the shoulder to move the arm.		
4. Instructs the patient to perform the exercises.	P	F
a. Positions the patient for the treatment.	P	F
b. Has the patient initiate the motions and continues each for 1 minute.	P	F
5. Monitors the exercises. Places one hand over the scapula of the affected shoulder and ensures the patient is not actively using the muscles to move the joint.	P	F
NOTE: If scapular movement is detected, instructs the patient to relax and not use the shoulder muscles.		
6. Writes the appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

PERFORM PASSIVE EXERCISES**081-836-0033**

Conditions: The patient has been screened for exercises and has a completed referral. A patient care handwash has been performed. Necessary materials and equipment: treatment table (plinth), bed, chair, or mat table; towels; and swim trunks or gown, if necessary.

Standards: Passive exercises are performed on the patient IAW the information in the referral without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's referral to determine the patient's disability and the possible need for special precautions during the exercise session.	P	F
2. Explains the procedure to the patient.	P	F
a. The purpose of a passive exercise program is to--	P	F
(1) Maintain the range of motion.	P	F
(2) Prevent joint tightness.	P	F
(3) Prevent muscle shortening.	P	F
b. An outside force is used to gently move the affected part through the entire range of motion without the patient using the muscles in the part being moved.	P	F
3. Prepares the patient for treatment.	P	F
a. Assists the patient to remove clothing from the area to be exercised and drapes the patient, as appropriate.	P	F
b. Provides the patient with a gown or swim trunks, if necessary.	P	F
c. Positions the patient ensuring that the entire body is supported so relaxation can occur.	P	F
d. Visually inspects and palpates the extremity. Any abnormalities that are observed, especially signs of swelling, infection, or inflammation must be reported to the physical therapist and recorded on the patient's referral.	P	F
4. Performs the exercise procedure ensuring that all joints in the extremity are exercised equally.	P	F
a. Firmly grasps the extremity above and below the joint to be moved.	P	F
b. Instructs the patient to completely relax all muscles in the area, and then moves the joint through all of the motions appropriate for the joint while supporting and stabilizing the other joints in the extremity.	P	F
NOTE: NOTE 1: When exercising shoulder motion on a patient in a bed with a headboard, flexes the elbow to 90° to work flexion and abduction. NOTE 2: When exercising a shoulder on a patient who can stand, instruct him or her in pendulum (Codman's) exercises. (See task 081-836-0057.) NOTE 3: Instructs the patient to use the uninvolved extremity to exercise the involved one, if appropriate.		
c. Monitors the patient's reactions by closely observing the verbal and facial expressions of the patient. If indications of pain are observed, moves the joint only within the patient's tolerance.	P	F
5. Checks the patient's referral to determine whether other treatments are required to complete the visit.	P	F
6. Assists the patient out of the position of treatment, if needed.	P	F
7. Provides the patient with instructions for additional care as indicated on the referral.	P	F
8. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required

TC 8-640

Related

ADMINISTER ASSISTIVE EXERCISES**081-836-0034**

Conditions: The patient has been screened for exercises and has a completed referral. All information pertinent to the patient's treatment and condition has been recorded on the treatment card. Necessary materials and equipment: a treatment table (plinth), bed, chair, or mat table; standing mirrors (if available); towels; and swim trunks or gown, if necessary.

Standards: Assistive exercises are administered to the patient IAW information on the referral without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's treatment instructions to determine the patient's disability and the possible need for special precautions during the exercise session.	P	F
2. Explains the procedure to the patient.	P	F
a. The purpose of an assistive exercise program is to maintain the normal range of motion of all joints.	P	F
b. As the muscle strength improves, the assistance will be decreased until he or she can move the area independently.	P	F
3. Prepares the patient for treatment.	P	F
a. Assists the patient in removing clothing, if required, and provides a gown or swim trunks to maintain the patient's privacy.	P	F
b. Positions the patient according to the area to be treated.	P	F
NOTE: If the exercises are to be performed while sitting or standing, positions the patient in front of mirrors or next to a wall so that he or she can observe and maintain proper body posture while performing the exercises.		
c. Visually inspects and palpates the extremity. Any abnormalities which are observed, especially signs of swelling, infection, or inflammation, must be reported to the physical therapist and recorded on the patient's referral.	P	F
4. Assists the patient with the performance of the exercises. Ensures that all affected and contralateral joints are exercised equally.	P	F
NOTE: Instructs the patient to use the uninvolved extremity to exercise the involved limb, if applicable.		
a. Applies additional stretch to the muscle to increase the range of motion. This is done by moving the joint in the opposite motion of the muscle's primary action.	P	F
CAUTION: Prior to stretching any area, checks with the physical therapist to ensure there are no contraindications.		
b. Encourages the patient to use the muscles as much as possible to move the part and provides only enough assistance to help the patient achieve the motion.	P	F
NOTE: If equipment, such as overhead pulley, wand, fingers ladder, or shoulder wheel are to be used to provide the assistance, demonstrates the proper usage of the equipment.		
c. Monitors the patient's reactions by closely observing the verbal and facial expressions during the entire program. If indications of pain are observed, informs the physical therapist and records the observations on the referral.	P	F
d. Watches for and corrects substitution patterns.	P	F
NOTE: If "substitutions" are made by the patient (compensatory actions in lieu of correct ROM or posture), makes the patient aware of what he or she is doing wrong and how to avoid it during the exercise.		
5. Checks the patient's treatment card to determine if other treatments are required to complete the visit.	P	F
6. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

INSTRUCT IN ACTIVE HAND AND WRIST EXERCISES

081-836-0058

Conditions: The patient has been screened for active exercises for the hand and wrist and has a completed referral. Necessary materials and equipment: a table and chair.

Standards: The patient is instructed in hand and wrist exercises without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral to determine his or her disability.
2. Explain the procedure to the patient. The exercises should--
 - a. Increase or maintain range of motion.
 - b. Decrease pain.
 - c. Assist in digital coordination.
3. Gather the materials.
4. Demonstrate the exercises for the patient.

NOTE: Show only those exercises prescribed.

- a. Finger flexion/extension.
 - (1) Hold the hand upright with all fingers fully extended.
 - (2) Slowly flex the distal interphalangeal (DIP), the interphalangeal (IP), and the proximal interphalangeal (PIP) joints, in order, to form a loose fist.
 - (3) Reverse the procedure to the fully extended position.
 - (4) Repeat the procedure for three sets of ten repetitions.
- b. Thenar movement.
 - (1) Hold the hand upright with all fingers fully extended and the thumb abducted.
 - (2) Move the thumb using palmar abduction, rotation, and flexion bringing it to the base of the proximal phalanx of the little finger.
 - (3) Reverse the procedure to the fully extended position.
 - (4) Repeat the procedure for three sets of ten repetitions.
- c. Opposition.
 - (1) Hold the hand upright with all fingers fully extended with the thumb slightly abducted.
 - (2) Move the tip of the thumb so it touches the tip of the little finger (fifth digit) and then return the thumb to the starting position.
 - (3) Continue this procedure with the ring, middle, and index fingers.
 - (4) Repeat the procedure for three sets of ten repetitions.
- d. Finger spread.
 - (1) Place the hand and forearm on a table in a prone position with all fingers fully extended and the thumb abducted.
 - (2) Spread all digits outward across the table as far as possible.
 - (3) Hold the position for 5 seconds.
 - (4) Return the digits to the starting position.
 - (5) Repeat the procedure for three sets of ten repetitions.
- e. Wrist extension.
 - (1) Place the hand and forearm on a table in a prone position.
 - (2) Extend the wrist as far as possible keeping the forearm on the table.
 - (3) Hold the position for 5 seconds.
 - (4) Return the wrist to the starting position.
 - (5) Repeat the procedure for three sets of ten repetitions.
- f. Wrist flexion.

NOTE: Due to the tenodesis effect, the fingers will assume a slightly flexed position as the wrist is extended.

Performance Steps

- (1) Place the hand and forearm on a table in a supine position.
- (2) Flex the wrist as far as possible keeping the forearm on the table.

NOTE: Due to the tenodesis effect, the fingers will assume a slightly extended position as the wrist is flexed.

- (3) Hold the position for 5 seconds.
- (4) Return the wrist to the starting position.
- (5) Repeat the procedure for three sets of ten repetitions.
- g. Wrist radial deviation.
 - (1) Place the hand and forearm on a table in a prone position with the fingers extended and thumb abducted.
 - (2) Pivot the hand at the wrist medially as far as possible keeping the forearm stationary.
 - (3) Hold the position for 5 seconds.
 - (4) Return the wrist to the starting position.
 - (5) Repeat the procedure for three sets of ten repetitions.
- h. Wrist ulnar deviation.
 - (1) Place the hand and forearm on a table in a prone position with the fingers extended and thumb abducted.
 - (2) Pivot the hand at the wrist laterally as far as possible keeping the forearm stationary.
 - (3) Hold the position for 5 seconds.
 - (4) Return the wrist to the starting position.
 - (5) Repeat the procedure for three sets of ten repetitions.

5. Allows the patient to perform the exercises.

NOTE: Makes corrections to the exercises, as needed.

6. Writes appropriate notes.

Performance Measures

Results

1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
4. Demonstrates the exercises.	P	F
5. Allows the patient to perform the exercises.	P	F
6. Writes appropriate notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

INSTRUCT QUADRICEPS STRENGTHENING EXERCISES

081-836-0037

Conditions: A patient has been screened for exercises and has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a treatment table (plinth) or mat table, examining shorts or gown, terry towels, and treatment stool.

Standards: A quadriceps (QUAD) program is administered IAW instructions on the patient's treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the patient's disability and the possible need for special precautions during the exercise session.
2. Gather the materials.
3. Explain the procedure to the patient.
 - a. The exercises will assist in--
 - (1) Decreasing muscle atrophy.
 - (2) Increasing muscle tone.
 - (3) Increasing strength to the quads (when resistance is used).
 - b. The SLR and SAQ exercises will maintain and/or increase range of motion (ROM).
 - c. Instruct the patient to breathe normally during the exercise.
 - d. If the patient cannot hold the repetition for the full 5 seconds, have him or her hold as long as possible.
 - e. If the patient cannot perform ten repetitions, have him or her perform as many as possible.
4. Prepare the patient for the treatment.
 - a. Instruct the patient to remove his or her footgear.
 - b. Instruct the patient to expose both lower extremities (LE) to at least the mid-thigh area.

NOTE: Ensure that pant cuffs do not constrict the blood flow or restrict knee motion, if rolled up over the thigh. If so, provide the patient with examining shorts or a gown to change into.
5. Instruct the patient to get onto the treatment table or mat table.

NOTE: Offer the patient use of a treatment stool to ascend onto the table, if needed.
6. Instruct the patient to assume the base position for the exercises.
 - a. The patient is supporting the upper body with the palms of the hands while in a sitting position.
 - b. Ensure the patient's uninvolved leg is flexed with that foot flat on the table surface.
 - c. Ensure the involved leg is extended as close to zero degrees as possible without hyperextending and is totally supported and the ankle is in the neutral position. (See Figure 3-29.)

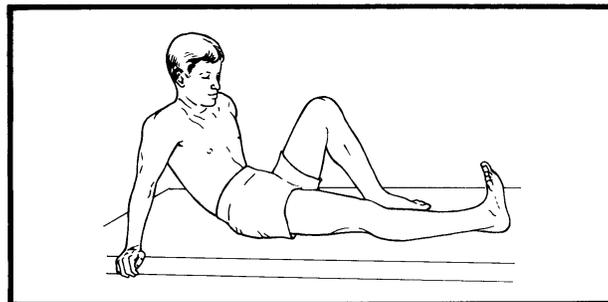


Figure 3-29 Treatment Table

7. Inspect the knee and surrounding structures.

Performance Steps

- a. Visually look for abnormalities.
 - (1) Effusion.
 - (2) Erythema.
 - (3) Ecchymosis.
 - (4) Open wounds.
- b. Palpate for abnormalities.
 - (1) Loose bodies.
 - (2) Increased temperature.
 - (3) Edema or effusion.
 - (4) Increased sensitivity to touch.
 - (5) Areas of decreased sensation.

CAUTION: Report to the physical therapist any abnormalities that are not documented on the patient's treatment card, especially signs of swelling, infection, or inflammation. Document any abnormality observed or palpated which is not already entered in the "O" portion of the SOAP notes.

- 8. Instruct the static quad (SQ) exercise.
 - a. Instruct the patient to position the ankle on the involved leg with the toes pointing straight up.
 - b. Instruct the patient to tighten the quads (thigh muscles) on the involved LE without hyperextending the knee joint.

NOTE: You should observe a well defined vastus medialis oblique (VMO) upon proper muscle contraction. If not, point out to the patient that this muscle should be toned for good patellar tracking and stabilization.

- c. Tell the patient to hold the contraction for 5 seconds, and then relax for 5 seconds.
 - d. Instruct the patient to repeat the procedure, performing the exercise for ten repetitions.
 - e. Make corrections to the patient's performance, as needed.
- 9. Instruct the straight leg raise (SLR) exercise.
 - a. Instruct the patient to assume the base position for the exercise. (See Figure 3-29.)
 - b. Instruct the patient to perform an SQ with the involved leg.
 - c. Ensure the knee is locked in as full extension as possible without hyperextending.
 - d. Instruct the patient to slowly lift the involved leg 6 inches off the table, holding at that height for 5 seconds. (See Figure 3-30.)

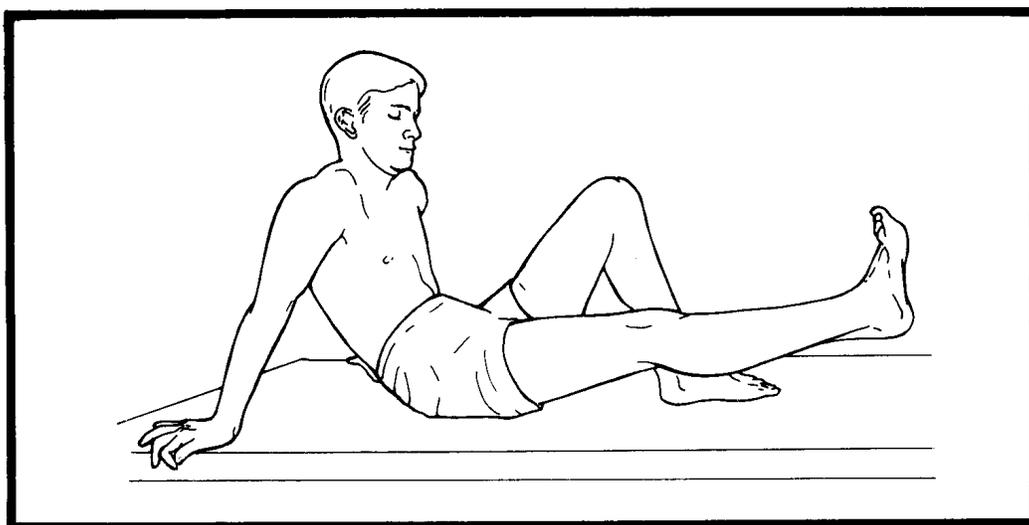


Figure 3-30 SAQ Exercise Step a

- e. Tell the patient to slowly lower the involved leg onto the table, maintaining the extension until the leg is completely supported again.

CAUTION: Do not allow the patient to drop the leg onto the table.

Performance Steps

- f. Instruct the patient to relax the SQ once the involved leg is fully supported, and then relax for 5 seconds.
- g. Instruct the patient to repeat the procedure, performing the exercise for ten repetitions.
- h. Make corrections to the patient's performance, as needed.

NOTE: The patient's load-bearing equipment should be used, if available, in lieu of weight if resistance is prescribed.

10. Instruct the short arc quad (SAQ) exercise.

- a. Instruct the patient to assume the base position for the exercise. (See Figure 3-29.)
- b. Place a firm towel roll, 3 to 4 inches in diameter, under the patient's involved thigh, just proximal to the popliteal area, allowing no more than 45° of knee flexion. (See Figure 3-31.)

NOTE: The patient's LBE or helmet/helmet liner should be used, if available, in place of the towel roll. Ensure the equipment is draped with a towel for comfort. The LBE can be used in lieu of weight if resistance is prescribed.

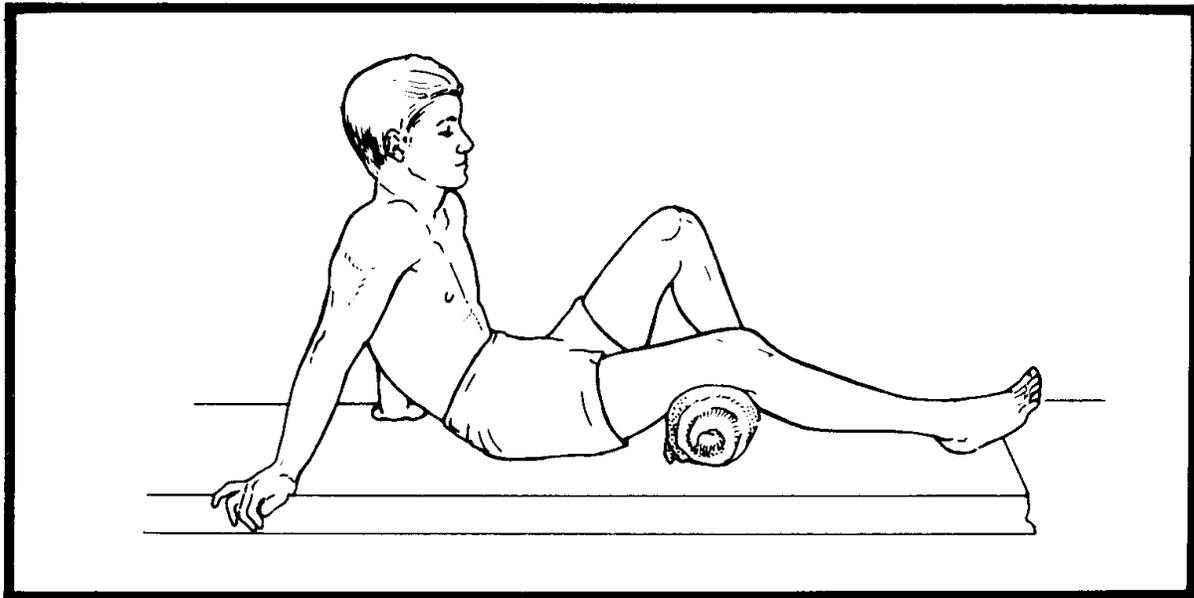


Figure 3-31 SAQ Exercise Step b

- c. Instruct the patient to perform an SQ, straightening the involved leg by tightening the quads. This action should raise the heel of the involved leg off the table until the knee is in as full extension as possible without hyperextending. (See Figure 3-32.)

NOTE: Ensure the patient does not raise or lift the involved leg from the towel roll at any time during the exercise.

Performance Steps

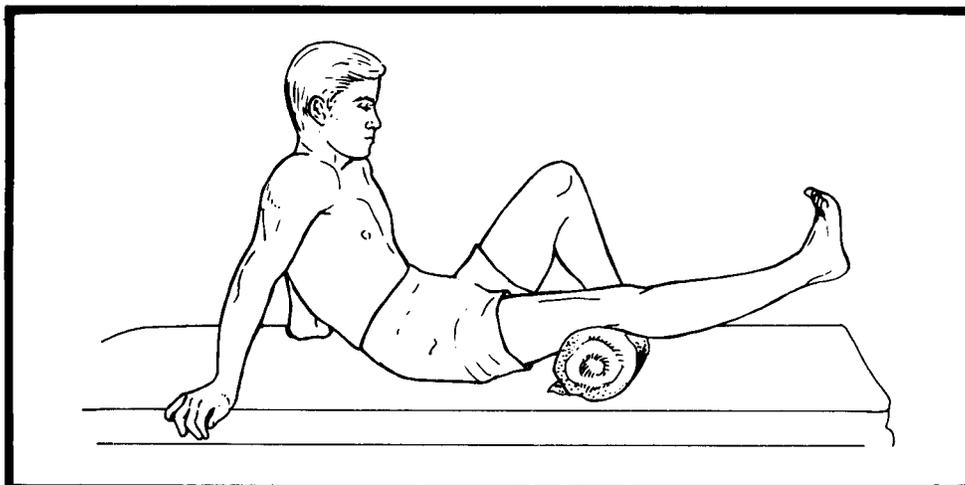


Figure 3-32 SAQ Exercise Step c

- d. Instruct the patient to maintain the extended position for 5 seconds.
 - e. Tell the patient to slowly relax the quads, lowering the heel of the involved leg to the table.
- CAUTION:** Do not allow the patient to drop the leg onto the table.
- f. Have the patient relax for 5 seconds once the heel is back on the table.
 - g. Instruct the patient to repeat the procedure, performing the exercise for ten repetitions.
 - h. Make corrections to the patient's performance, as needed.
11. Record observations and write the appropriate notes in the "O" portion of the SOAP notes.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Gathers the materials.	P	F
3. Explains the procedure to the patient.	P	F
4. Prepares the patient for the treatment.	P	F
5. Instructs the patient to get onto the treatment table or mat table.	P	F
6. Instructs the patient to assume the base position.	P	F
7. Inspects the knee and surrounding structures.	P	F
8. Instructs the static quad (SQ) exercise.	P	F
9. Instructs the straight leg raise (SLR) exercise.	P	F
10. Instructs the short arc quad (SAQ) exercise.	P	F
11. Writes the appropriate notes in the "O" portion of the SOAP notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

INSTRUCT BACK FLEXION EXERCISES

081-836-0038

Conditions: The patient has been screened for exercises and has a completed referral. Necessary materials and equipment: a treatment table (plinth) or mat table, swim trunks or gown (if indicated), and cloth towels.

Standards: The patient is instructed in back flexion exercises IAW the information on the referral without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral to determine the patient's disability and the possible need for special precautions during the exercise session.
 2. Explain the procedure to the patient.
 - a. The exercise will--
 - (1) Help decrease low back pain.
 - (2) Strengthen the abdominal muscles.
 - (3) Stretch the low back muscles.
 - (4) Assist in good posture.
 - b. Instruct the patient to breathe normally during the exercise.
 - c. If the patient cannot hold the repetition for the full 5 seconds, have him or her hold as long as possible.
 - d. If the patient cannot perform ten repetitions, have him or her perform as many as possible.
 3. Prepare the patient for treatment.
 - a. Instruct the patient to loosen or remove restrictive clothing. Provide the patient with swim trunks or a gown, as appropriate.
 - b. Assist the patient onto the plinth or mat table and into a supine position. Flex the patient's hips and knees placing the feet flat on the surface approximately 6 to 8 inches apart. Instruct the patient to place both arms alongside his or her body.
- NOTE: This position will be the base position for all four exercises. CAUTION: Do not place a pillow under the patient's head.
4. Instruct the patient in the pelvic tilt.
 - a. Instruct the patient to squeeze the buttocks together and roll the pelvis backward, flattening the lower back against the plinth. (See Figure 3-33).

NOTE: Ensure that the patient does not push on the feet or lift the buttocks off the plinth.

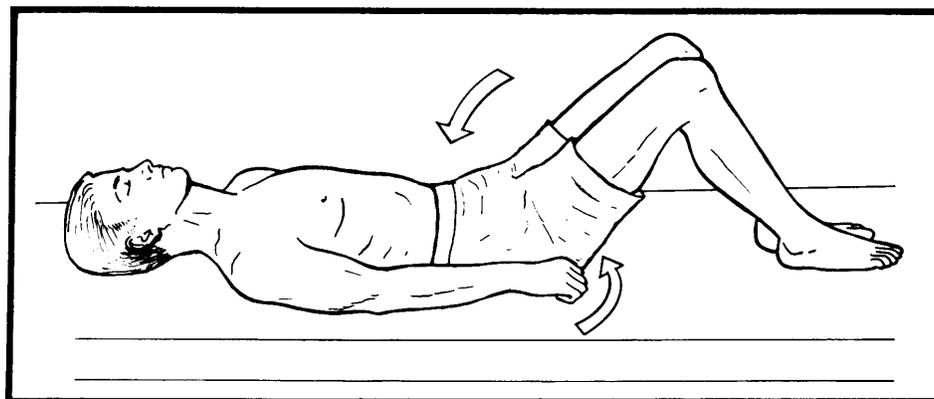


Figure 3-33 Buttocks Exercise

- b. Tell the patient to hold the position for 5 seconds, and then to completely relax for 5 seconds.

Performance Steps

- c. Have the patient repeat the procedure performing the exercise for ten repetitions. Correct the patient's performance as needed.
5. Instruct the patient in the alternate knee-to-chest.
 - a. Instruct the patient to perform a pelvic tilt.
 - b. Have the patient bring one bent knee off the plinth and grab it with both hands. Have him or her pull the knee slowly toward the chest and slightly out toward the armpit in one smooth motion. The opposite leg is maintained in the knee-flexed position and the head remains on the plinth.
 - c. Tell the patient to tuck the chin and slowly curl the head and shoulders off the plinth, as if trying to curl into a ball. (See Figure 3-34).

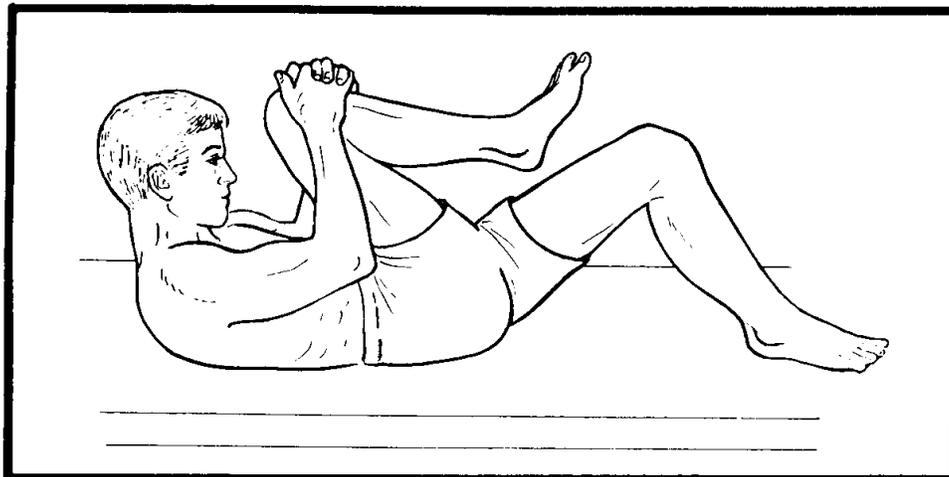


Figure 3-34 Pelvic Tilt Exercise

NOTE: If the patient has increased knee pain when grasping the leg inferior to the knee, instruct him or her to grasp posteriorly at the distal thigh. (See Figure 3-35.)

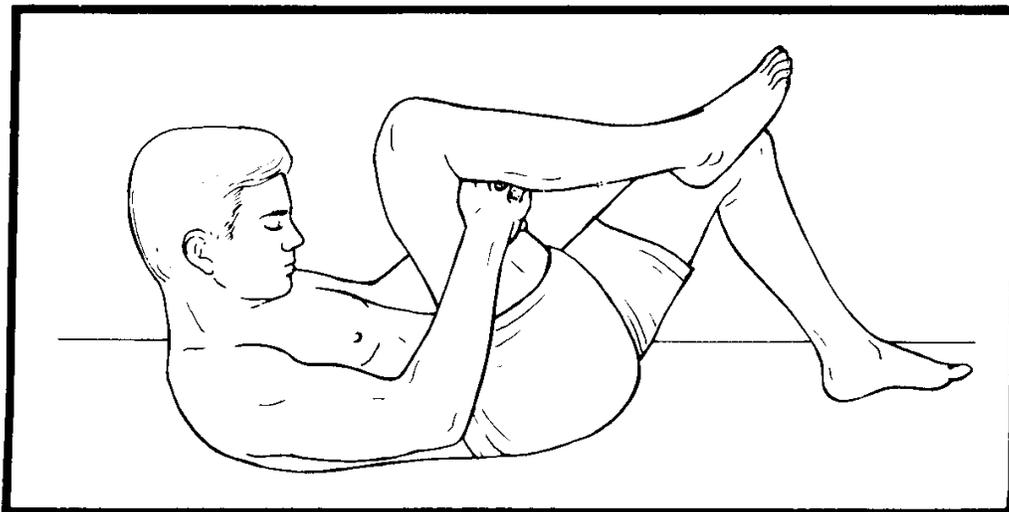


Figure 3-35 Knee Lift Exercise

- d. Tell the patient to hold the position for 5 seconds, and then to reverse the procedure. Have him or her completely relax for 5 seconds.

Performance Steps

- e. Have the patient repeat the procedure, performing the exercise for ten repetitions. Correct the patient's performance as needed.
- f. Have the patient perform the exercise with the opposite leg. Corrections to the patient's performance are made as needed.

6. Instruct the patient in the double knee-to-chest.

- a. Instruct the patient to slowly raise one bent leg and grasp it with the hand on that side, and then to raise the opposite leg in the same manner.

NOTE: If the patient has increased knee pain when grasping the legs inferior to the knee, instruct him or her to grasp posteriorly at the distal thigh.

- b. Have the patient slowly pull both bent legs toward the chest and slightly out toward the armpits as far as possible.
- c. Tell the patient to tuck the chin and slowly curl the head and shoulders off the plinth, as if trying to curl into a ball.

NOTE: If the patient is not able to lift the head and shoulders due to neck pain, have him or her add this part of the exercise when able.

- d. Have the patient hold the position for 5 seconds, and then have him or her
 - (1) Slowly uncurl the head and shoulders back onto the plinth, maintaining the tucked chin position.
 - (2) Untuck the chin, placing the head gently on the plinth.
 - (3) Slowly relax both bent legs to arms length position.
 - (4) Slowly release one leg to the bent knee starting position with the foot flat on the plinth.
 - (5) Release the other leg in the same manner.
- e. Have the patient repeat the procedure, performing the exercise for ten repetitions. Correct the patient's performance as needed.

7. Instruct the patient in the partial (modified) sit-up. (See Figure 3-36.)

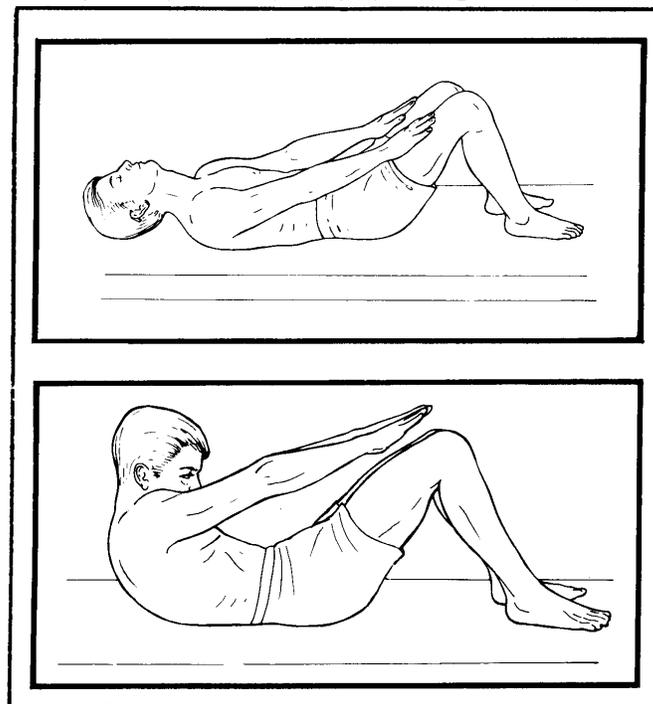


Figure 3-36 Sit-Up Exercise

- a. Instruct the patient to assume the pelvic tilt position. Have the patient also place both hands on the top of the thighs, palms down.

Performance Steps

b. Have the patient tuck the chin and slowly curl the head and shoulders off the plinth while reaching toward the knees with both hands.

NOTE: Ensure the patient does not grasp the knees or hold his or her breath.

c. Tell the patient to hold the position for 5 seconds, and then reverse the procedure.

NOTE: Ensure the patient holds the pelvic tilt during the entire partial sit-up.

d. Have the patient repeat the procedure, performing the exercise for ten repetitions. Correct the patient's performance as needed.

8. Monitor the patient's reactions by closely observing the verbal and facial expressions during the entire program. If indications of pain are observed, inform the physical therapist and record your observations on the referral.

9. Provide the patient with instructions for additional care, such as home treatments or exercise handout.

10. Write appropriate progress notes.

Performance Measures

Results

1. Reviews the patient's referral card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares the patient for treatment.	P	F
4. Instructs the pelvic tilt exercise.	P	F
5. Instructs the alternate knee-to-chest exercise.	P	F
6. Instructs the double knee-to-chest exercise.	P	F
7. Instructs the partial (modified) sit-up exercise.	P	F
8. Monitors the patient's reactions.	P	F
9. Provides the patient with instructions for additional care.	P	F
10. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

INSTRUCT BACK EXTENSION EXERCISES

081-836-0059

Conditions: The patient has been screened for the exercises and has a completed treatment card. Necessary materials and equipment: a treatment table (plinth) or mat.

Standards: The patient is properly instructed in back extension exercises without causing injury or unnecessary discomfort to the patient.

Performance Measures

Results

- | | | |
|--|---|---|
| 1. Reviews the patient's referral. | P | F |
| 2. Explains the procedure to the patient. | P | F |
| a. The exercises should-- | P | F |
| (1) Increase his or her range of motion (ROM). | P | F |
| (2) Decrease stiffness and or discomfort. | P | F |
| (3) Help maintain good posture of the lumbar spine. | P | F |
| b. The patient may feel some different pain in the small of the back, in the arms, or between the shoulder blades. This new pain should diminish as the exercises are continued. | P | F |
| c. Instructs the patient to breathe normally during the exercises. | P | F |
| 3. Instructs the patient in the exercises. | P | F |

NOTE: Demonstrates the appropriate exercises to the patient, simulating the patient's injury. Allows the patient to perform the exercises after being instructed in the procedure.

- | | | |
|---|---|---|
| a. Exercise I (Lying prone). (See Figure 3-37.) | P | F |
| (1) Has the patient assume a prone position on the plinth. | P | F |
| (2) Has him or her place both arms alongside the body with the head turned to one side. | P | F |
| (3) Instructs the patient to relax completely. | P | F |
| (4) Has the patient maintain the position to his or her tolerance or 2 minutes, whichever is greater. | P | F |

NOTE: When the patient can tolerate 2 minutes, progresses to the next exercise.

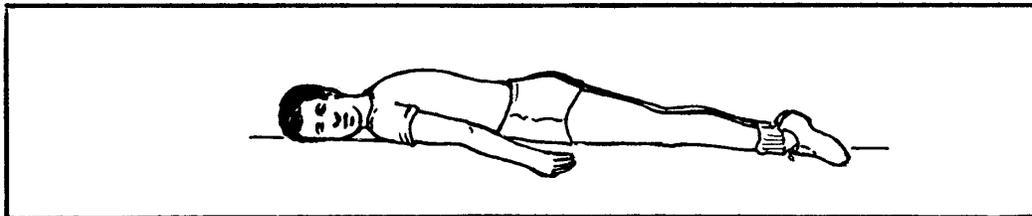


Figure 3-37 Exercise I (Lying Prone)

- | | | |
|---|---|---|
| b. Exercise II (Lying prone on elbows). (See Figure 3-38.) | P | F |
| (1) Has the patient assume a prone position on the plinth. | P | F |
| (2) Has him or her raise and support the upper body on both elbows. | P | F |
| (3) Instructs the patient to relax the low back completely. | P | F |
| (4) Has the patient maintain the position to his or her tolerance or up to 2 minutes, whichever is greater. | P | F |

NOTE: When the patient can tolerate 2 minutes, progresses to the next exercise.

Performance Measures

Results

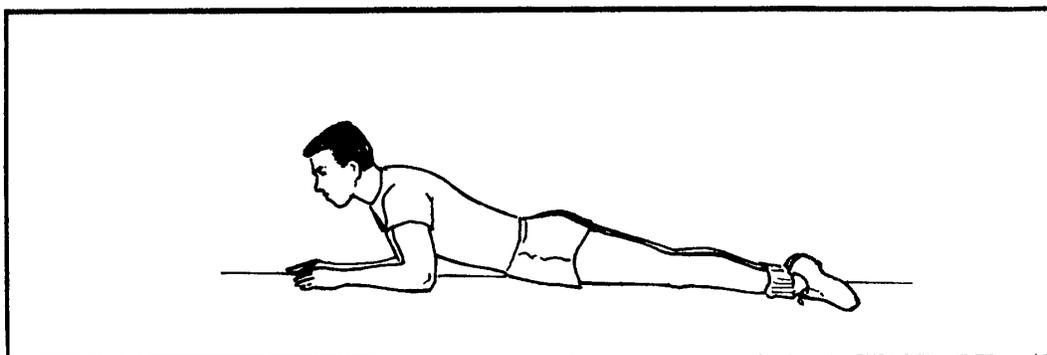


Figure 3-38 Exercise II (Lying Prone On Elbows)

- | | | |
|---|---|---|
| c. Exercise III (Pressups). (See Figure 3-39.) | P | F |
| (1) Has the patient assume a prone position on the plinth with both hands palm down and shoulderwidth apart. | P | F |
| (2) Instructs the patient to raise the upper body by extending the elbows and keeping the front of the hips (anterior pelvis) on the table. | P | F |
| (3) Has the patient hold the position for 1 second, and then slowly lower the body to the plinth. | P | F |
| (4) Repeats the exercise for ten repetitions. | P | F |

NOTE: Has the patient lift the body higher with each repetition if the elbows are not fully extended.

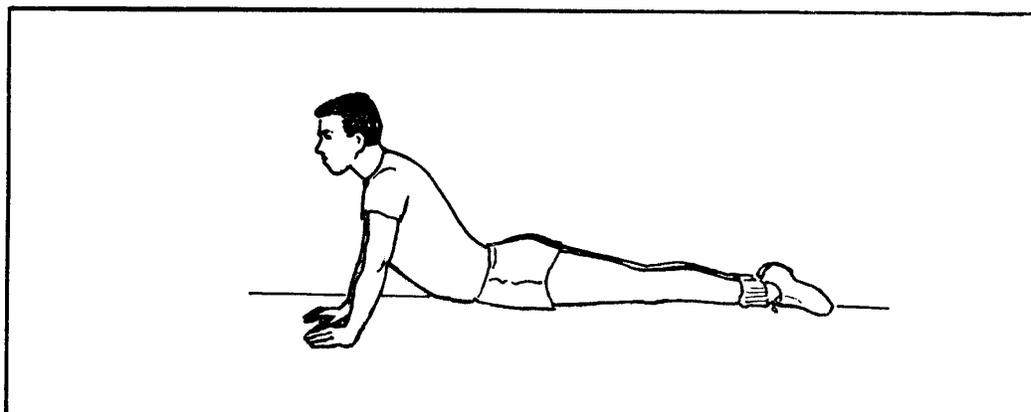


Figure 3-39 Exercise III (Pressups)

- | | | |
|---|---|---|
| d. Exercise IV (Backbend). | P | F |
| (1) Has the patient stand upright with the feet shoulderwidth apart. | P | F |
| (2) Has him or her place the palms of the hands on the back of the iliac crests. | P | F |
| (3) Instructs the patient to extend the back at the waist using the hands as a fulcrum while bending. | P | F |
| NOTE: Ensures the knees are not bent during the exercise. | | |
| (4) Has the patient hold the position for 1 second, and then slowly return to the upright position. | P | F |
| (5) Repeats the exercise for ten repetitions. | P | F |
| 4. Assists the patient in the exercises and makes corrections as needed. | P | F |
| 5. Monitors the patient during the exercises. | P | F |

Performance Measures

Results

CAUTION: Discontinues the exercises immediately if the patient states that his or her pain moves in to the leg(s) (radicular symptoms) or becomes intolerable after the exercise repetition. Consults the physical therapist immediately and notes the incident on the treatment card.

6. Writes appropriate progress notes.

P F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required

Related

TC 8-640

INSTRUCT ACTIVE EXERCISES**081-836-0035**

Conditions: The patient has been screened for exercises and has a completed referral. Necessary materials and equipment: bed, chair, a treatment table (plinth) or mat table, towels, and swim trunks or gown.

Standards: The patient is instructed in the performance of his or her exercises IAW the information on the referral without causing unnecessary discomfort or injury to the patient.

Performance Measures	Results	
1. Reviews the patient's treatment card to determine the patient's disability and the possible need for special precautions during the exercise session.	P	F
2. Explains the procedure to the patient. The purpose of an active exercise program is to--	P	F
a. Maintain the normal range of motion (ROM) of all joints in the involved extremity by having him or her move the part without assistance or resistance.	P	F
b. Have the weight of the body part being exercised help maintain and/or increase the muscle strength.	P	F
3. Prepares the patient for treatment.	P	F
a. Assists the patient in removing clothing and provides a gown or swim trunks, as appropriate.	P	F
b. Positions the patient as appropriate for the area to be treated.	P	F
c. Visually inspects and palpates the extremity. Any abnormalities that are not documented must be reported to the physical therapist and recorded on the patient's referral.	P	F
4. Instructs the patient in the exercises.	P	F
NOTE: Demonstrates the appropriate exercises to the patient, simulating the patient's condition. Allows the patient to perform the exercises after being instructed in the procedure.		
a. Ensures that the patient moves the part(s) slowly through the ROM and ensures that all affected and contralateral joints are exercised equally. Corrects the patient's performance, as needed. Examples of active exercises are:	P	F
(1) For upper extremities.	P	F
(a) Shoulder shrugging.	P	F
(b) Coordination activities.	P	F
(c) Prehension/opposition (hand).	P	F
(2) For the trunk.	P	F
(a) Back flexion. (See task 081-836-0038.)	P	F
(b) Back extension. (See task 081-836-0059.)	P	F
(3) For lower extremities (LE).	P	F
(a) Frenkel's exercises.	P	F
(b) Quadriceps strengthening. (See task 081-836-0037.)	P	F
NOTE: If "substitutions" are made (compensatory actions in lieu of correct ROM or posture), makes the patient aware of what he or she is doing wrong and how to avoid it during the exercise.		
b. If muscle contractures or pain prevent the patient from achieving the complete ROM of a joint, encourages the patient to use additional effort to move the part past the restriction trying to stretch the muscle and increase the ROM.	P	F
NOTE: Stretching is done by moving the joint in the opposite direction of the muscle's primary motion. CAUTION: Prior to stretching any area, check with the physical therapist to ensure there are no contraindications.		

Performance Measures

Results

- | | | |
|--|---|---|
| 5. Monitors the patient's reactions by closely observing his or her verbal and facial expressions. If indications of pain are observed, informs the physical therapist and records the observations on the referral. | P | F |
| 6. Checks the patient's referral to determine if other treatments or procedures are required to complete the visit. | P | F |
| 7. Writes appropriate progress notes. | P | F |

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

INSTRUCT ANKLE STRENGTHENING EXERCISES

081-836-0060

Conditions: The patient has been screened for ankle strengthening exercises and has a completed referral. Assistance is available. Necessary materials and equipment: nonmetallic rubber tubing, stockinette, cloth tape, bandage scissors, a ledge or stair, towels, a level surface, a treatment table or mat table, and a chair.

Standards: The patient is properly instructed in ankle strengthening exercises using motion and resistance without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral to determine the disability.
2. Explain the procedure to the patient.
 - a. He or she will be instructed in ankle strengthening exercises using motion, weightbearing, and/or resistance.
 - b. Isotonic exercises will allow the ankle to be moved through the range of motion (ROM) using the same resistance throughout the ROM.
 - c. Instruct the patient to breathe normally during the exercises.
 - d. The patient will be given the rubber tubing exerciser for home use (if isotonic exercises are prescribed).

NOTE: The patient will be instructed in only the exercises prescribed by the physical therapist.

3. Instruct the patient to remove all footgear, if not already removed.
4. Gather the materials.
 - a. If isotonic exercises are prescribed.
 - (1) Measure and cut approximately a 24-inch length of rubber tubing and approximately a 12-inch length of stockinette.
 - (2) Fold the stockinette in half width-wise and cut a small hole centered near the cut ends. Reinforce with cloth tape as necessary.
 - (3) Loop one end of the rubber tubing through the cut hole.
 - (4) Secure the rubber tubing in a loop by tying the ends with a nonslip knot or by using cloth tape.

NOTE: If securing with cloth tape, have an assistant overlap the ends of the rubber tubing and pull the ends taut. Wrap strips of cloth tape around the stretched tubing.

- b. If weight bearing exercises are prescribed, ensure the walking surface is level and free of obstacles.

5. Instruct the patient in the exercises.

NOTE: Demonstrate the appropriate exercises to the patient, simulating the patient's injury. After the patient is shown the appropriate exercise, allow him or her to perform the procedure.

- a. AROM exercises.
 - (1) Instruct the patient to support the upper body with the palms of the hands on the table while in a sitting position. Both lower extremities (LE) will be supported on the table.
 - (2) Elevate the patient's affected LE by either placing a towel roll or the patient's draped load-bearing equipment under the calf muscle of the affected side.
 - (3) Have the patient perform each of the following motions for three sets of ten repetitions.
 - (a) Plantarflexion.
 - (b) Dorsiflexion.
 - (c) Inversion.
 - (d) Eversion.
 - (4) Have the patient hold each position for 5 seconds, and then relax.

NOTE: Instruct the patient to perform ankle circles (clockwise and counterclockwise) or write the alphabet in the air with the toes using capital letters if he or she has difficulty with the motions stated above.

Performance Steps

- b. Isometric (rubber tubing) exercises.
 - (1) Instruct the patient to assume the position as in paragraph 5a(1) and 5a(2).
 - (2) Loop the stockinette portion of the rubber tubing exerciser over the affected foot and stabilize one end of the rubber tubing opposite the direction of pull.

NOTE: Instruct the same four motions as in paragraph 5a(3).

- (3) Have the patient resist the direction of pull and hold that position for 5 seconds.
 - (4) Instruct the patient to repeat the procedure, performing each motion for three sets of ten repetitions.
- c. Towel-drag exercises. Have the patient sit in a chair or on the edge of a mat table with the both feet flat on the floor and both knees flexed to 90°.
 - (1) Lateral-to-medial pull. Instruct the patient to--
 - (a) Place one end of an unfolded towel under the forefoot of the affected ankle, keeping the heel in contact with the floor. The bulk of the towel should be placed lateral to the foot.
 - (b) Pivot on the heel and reach laterally with the forefoot and toes as far as possible without lifting or sliding the heel from the starting position.
 - (c) Grasp the towel with the toes and pull medially as far as possible.
 - (d) Repeat the procedure until the end of the towel is reached.
 - (e) Reposition the towel and continue the routine for ten repetitions.
 - (2) Medial-to-lateral pull. Instruct the patient to--
 - (a) Place one end of an unfolded towel under the forefoot of the affected ankle, keeping the heel in contact with the floor. The bulk of the towel should be placed medial to the foot.
 - (b) Pivot on the heel and reach medially with the forefoot and toes as far as possible without lifting or sliding the heel from the starting position.
 - (c) Grasp the towel with the toes and pull laterally as far as possible.
 - (d) Repeat the procedure until the end of the towel is reached.
 - (e) Reposition the towel and continue the routine for ten repetitions.
 - (3) Toe-curl pull. Instruct the patient to--
 - (a) Place one end of an unfolded towel under the forefoot of the affected ankle, keeping the heel in contact with the floor. The bulk of the towel should be placed forward to the foot.
 - (b) Pivot on the heel and reach forward with the toes as far as possible without lifting or sliding the heel from the starting position.
 - (c) Grasp the towel with the toes and pull the heel as far as possible.
 - (d) Repeat the procedure until the end of the towel is reached.
 - (e) Reposition the towel and continue the routine for ten repetitions.

NOTE: If increased resistance is prescribed, dampen the towel with water or place weight, as tolerated by the patient, onto the towel.

- d. Heel/toe walk. Have the patient walk a prescribed distance taking short steps on his or her heels only and return walking on the balls of the feet (metatarsal heads) only. Have the patient continue for a total of 5 minutes increasing the distance daily.
- e. Hopping. Have the patient hop on both feet simultaneously springing lightly on the balls of the feet (metatarsal heads). Have the patient continue hopping for three sets of ten repetitions. Progress to hopping on only the affected LE when tolerated by the patient.

NOTE: Ensure the patient bends both knees slightly and does not land on the heels.

- f. Toe raises. Instruct the patient to--
 - (1) Stand on the edge of a stair or ledge with the balls of the feet (metatarsal heads).

NOTE: Allow the patient to hold onto an assistant, rail, or wall to keep balance.

- (2) Raise the body up slowly by pushing down on the balls of the feet (metatarsal heads) as far as possible. Keep the knees fully extended.
 - (3) Hold the position for 5 seconds.
 - (4) Slowly lower the body so the heel is below the step and the heel cord is on a good stretch. Keep the knees fully extended.
 - (5) Hold the position for 5 seconds.

Performance Steps

- (6) Repeat steps 5f(2) through 5f(5) for three sets of ten repetitions.
- 6. Write appropriate notes on the patient's referral, to include--
 - a. Which exercises were instructed.
 - b. If the patient had difficulty with any exercise.

Performance Measures

Results

1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Instructs the patient to remove all footgear.	P	F
4. Gathers the materials.	P	F
5. Instructs the patient in the exercises.	P	F
6. Writes appropriate notes on the patient's referral.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

INSTRUCT SHOULDER ISOTONIC STRENGTHENING EXERCISES

081-836-0061

Conditions: The patient has been screened for isotonic shoulder exercises and has a completed referral. Assistance is available. Necessary materials and equipment: nonmetallic rubber tubing, cloth tape, bandage scissors, and a fixed stationary object to which the tubing can be attached.

Standards: An isotonic exerciser is manufactured and the patient is properly instructed in the isotonic exercises using the rubber tubing without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's referral to determine his or her disability.
2. Explain the procedure to the patient.
 - a. He or she will be instructed in isotonic exercises for the shoulder using a loop of rubber tubing.
 - b. Isotonic exercises will allow the shoulder to be moved through the range of motion (ROM) using the same resistance throughout the ROM.
 - c. Instruct the patient to breathe normally, keep the feet approximately shoulder-width apart, and stand upright using good posture during the exercises.
 - d. The patient will be given the rubber tubing exerciser for home use.
3. Gather the materials.
 - a. Measure and cut approximately a 24-inch length of rubber tubing.
 - b. Secure the tubing in a loop by tying the ends with a nonslip knot or by using cloth tape.

NOTE: If securing with cloth tape, have an assistant overlap the ends of the rubber tubing and pull the ends taut. Wrap strips of cloth tape around the stretched tubing.

4. Attach the rubber tubing securely to a fixed stationary object (for example, doorknob or metal pipe) at a point approximately waist-high to the patient.
- NOTE: Pull forcefully once or twice to ensure that the rubber tubing is securely attached.

5. Instruct the patient in the exercises. (See Figure 3-40.)
NOTE: NOTE 1: Demonstrate the appropriate exercises to the patient, simulating the patient's injury. Allow the patient to perform the exercises after being instructed in the procedure. NOTE 2: If "substitutions" (compensatory actions in lieu of correct ROM or posture) are made, make the patient aware of what he or she is doing and how to avoid it during the exercise.

- a. Flexion.
 - (1) Grasp the rubber-tubing with the hand of the affected side. Stand facing 180° away from the point where the rubber tubing is attached.
 - (2) Keep the arm straight along the side of the body with the palm facing medially.
 - (3) Slowly pull the tubing forward in a straight line of flexion as far as possible keeping the elbow at 0°.
 - (4) Hold the position for 5 seconds, and then slowly relax to the starting position.
 - (5) Repeat the exercise for three sets of ten repetitions.
- b. Extension.
 - (1) Grasp the rubber tubing with the hand of the affected side. Stand facing the point where the rubber tubing is attached.
 - (2) Keep the arm straight along the side of the body with the palm facing medially.
 - (3) Slowly pull the tubing backward in a straight line of extension as far as possible keeping the elbow at 0°.
 - (4) Hold the position for 5 seconds, and then slowly relax to the starting position.
 - (5) Repeat the exercise for three sets of ten repetitions.

Performance Steps

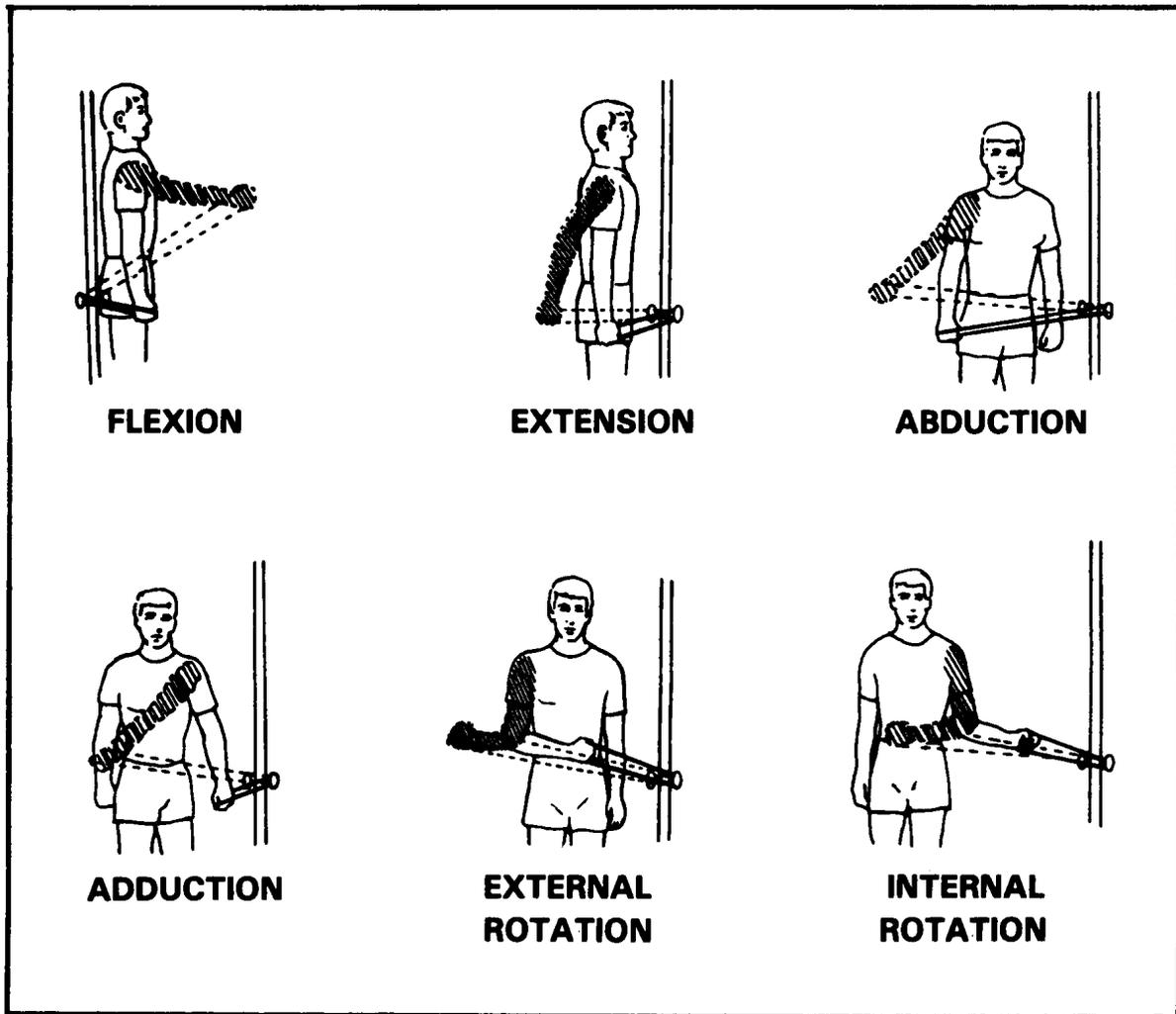


Figure 3-40 Exercise Chart

c. Abduction.

- (1) Grasp the rubber tubing with the hand of the affected side. Stand facing 90° away from the point where the rubber tubing is attached keeping the affected side farthest from the point of attachment.
- (2) Keep the arm straight along the side of the body with the palm facing medially.
- (3) Slowly pull the tubing away from the body in a straight line of abduction as far as possible keeping the elbow at 0°.

NOTE: Have the patient externally rotate the affected arm 90° while abducting.

- (4) Hold the position for 5 seconds, and then slowly relax to the starting position.
- (5) Repeat the exercise for three sets of ten repetitions.

d. Adduction.

- (1) Grasp the rubber tubing with the hand of the affected side. Stand facing 90° away from the point where the rubber tubing is attached keeping the affected side nearest the point of attachment.
- (2) Move to a point where the arm is straight but is resting at approximately 45° abducted from the side of the body with palm facing medially.

Performance Steps

- (3) Slowly pull the rubber tubing flush to the side of the body (0° adduction) keeping the elbow as straight as possible.
- (4) Hold the position for 5 seconds, and then slowly relax to the starting position.
- (5) Repeat the exercise for three sets of ten repetitions.
- e. External rotation.
 - (1) Grasp the rubber tubing with the hand of the affected side. Stand facing 90° away from the point where the rubber tubing is attached keeping the affected side farthest from the point of attachment.
 - (2) Place the affected arm at the side with the upper arm against the trunk wall. Keep the elbow flexed to 90° with the forearm resting across the front of the body and in midposition between supination and pronation.
 - (3) Slowly pull the tubing away from the point of attachment in a horizontal line away from the body as far as possible, keeping the elbow against the trunk wall.
 - (4) Hold the position for 5 seconds, and then slowly relax to the starting position.
 - (5) Repeat the exercise for three sets of ten repetitions.
- f. Internal rotation.
 - (1) Grasp the rubber tubing with the hand of the affected side. Stand facing 90° away from the point where the rubber tubing is attached keeping the affected side nearest to the point of attachment.
 - (2) Place the affected arm at the side with the upper arm against the trunk wall. Keep the elbow flexed to 90° with the forearm in midposition between supination and pronation.
 - (3) Slowly pull the tubing away from the point of attachment in a horizontal line toward the body as far as possible keeping the elbow against the trunk wall.
 - (4) Hold the position for 5 seconds, and then slowly relax to the starting position.
 - (5) Repeat the exercise for three sets of ten repetitions.
- 6. Write appropriate notes on the patient's referral.
 - a. Which exercises were instructed.
 - b. If the patient had difficulty with any ROM.

Performance Measures

Results

1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
4. Attaches the rubber tubing securely.	P	F
5. Instructs the patient in the exercises.	P	F
6. Writes appropriate notes on the patient's referral.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
TC 8-640

Related

ADMINISTER RESISTIVE EXERCISES**081-836-0036**

Conditions: The patient has been screened for the exercises and has a completed referral. Necessary materials and equipment: bed, chair, a treatment table (plinth) or mat table, towels, standing mirrors, cloth towels, swim trunks or gown (if necessary), assorted weights, and appropriate resistive exercise equipment.

Standards: The resistive exercise program is administered to the patient IAW the information on the referral card without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's referral.	P	F
a. Determines the type of exercise program most beneficial to the disability and appropriate to the desired outcome.	P	F
b. Notes the need for special precautionary measures, if applicable.	P	F
2. Explains the procedure and the desired outcome of the exercise program to the patient.	P	F
3. Prepares the patient for the exercises.	P	F
a. Assists the patient in removing clothing and provides a gown or swim trunks, as appropriate.	P	F
b. Assists the patient in assuming a comfortable position.	P	F
NOTE: If the patient is sitting or standing, places a mirror, if available, in front of the patient to ensure the correct body posture is maintained.		
c. Inspects and palpates the involved area and reports any abnormalities which are not documented to the physical therapist.	P	F
d. Uses manual resistance to grade the strength of the individual muscles to determine the amount of resistance or weights to be used. (See tasks 081-836-0048 and 081-836-0049.)	P	F
4. Instructs the patient in the performance of the exercise program required.	P	F
NOTE: Demonstrates the appropriate exercises to the patient, simulating the patient's condition. Allows the patient to perform the exercises after being instructed in the procedure.		
CAUTION: Uses manual resistance with patients too weak or disabled to grasp the weights.		
a. Physical reconditioning (PR) - used to improve uninvolved body areas only.	P	F
b. Progressive resistive exercise (PRE) - used for the treatment of the involved areas.	P	F
(1) Delorme Method. Instructs the patient to lift 1/2 the estimated repetitive maximum (RM) for 10 repetitions, then 3/4 the RM for 10 repetitions, and then the full RM for 10 repetitions.	P	F
(2) Oxford Method. Instructs the patient to lift the full (RM) for 10 repetitions, then 3/4 the RM for 10 repetitions, and then 1/2 of the RM for 10 repetitions.	P	F
CAUTION: Applies resistance only to proximal fracture sites. NOTE: NOTE 1: Decreases the weight to the point where the patient can perform the exercise, if he or she cannot achieve the full ROM. NOTE 2: Cautions the patient to pause between repetitions to avoid the pendulum effect in exercises involving free weights. NOTE 3: Makes the patient aware of what he or she is doing wrong and how to avoid it during the exercise if "substitutions" are made (compensatory actions in lieu of correct ROM or posture).		
5. Monitors the patient's verbal and facial responses for indications of pain during the exercise program.	P	F
6. Provides the patient with instructions for additional care as indicated on the referral.	P	F
7. Writes observations in the "O" portion of the SOAP notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required
FM 21-20

Related

Subject Area 8: Foot and Ankle Care

FABRICATE A FELT HEEL PAD

081-836-0062

Conditions: The patient has medical records, including x-rays, and a completed referral requesting a heel pad for a patient with a calcaneal spur. Necessary materials and equipment: treatment table or chair, 1/4 or 1/2 inch felt, bandage scissors and a pen or grease pencil.

Standards: The heel pad is fabricated affording comfort to the foot with a calcaneal spur without causing injury or unnecessary discomfort to the patient.

Performance Measures

Results

- | | | |
|---|---|---|
| 1. Reviews the patient's referral. | P | F |
| 2. Explains the procedure to the patient. The patient's foot will be measured for a heel pad which should help relief the discomfort of the calcaneal spur. | P | F |
| 3. Prepares the pattern. | P | F |
| a. Instructs the patient to remove all footgear. | P | F |
| b. Traces the boot or shoe of the affected side or paper, from the posterior aspect of the heel to the mid-shank on each side. (See Figure 3-41.) | P | F |
| c. Draws a line 1/4 inch inside the tracing of the boot or shoe. | P | F |
| d. Trims the pattern on the inner line with the proper thickness of felt. | P | F |
| CAUTION: Heel pads should be no more than 3/8 inch thick. | | |
| e. Bevels the anterior margin to a feather edge sloping downward. | P | F |

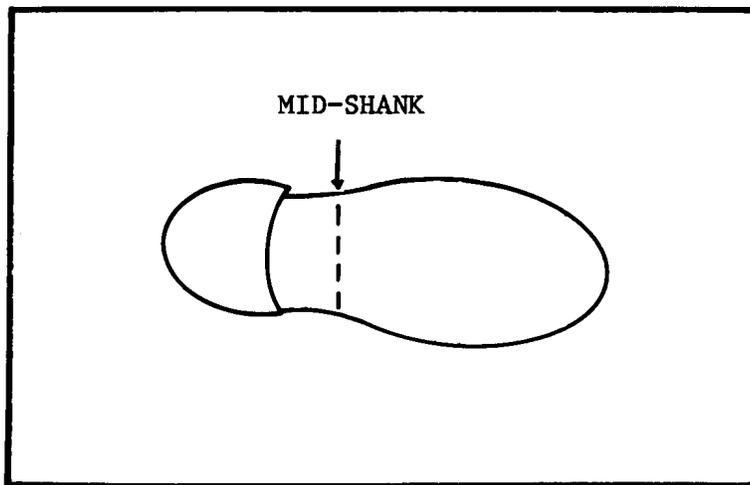


Figure 3-41 Mid-Shank Diagram

- | | | |
|--|---|---|
| 4. Locates the spur exactly. | P | F |
| a. Presses gently on the plantar surface of the heel. | P | F |
| b. Consults the x-ray. | P | F |
| 5. Marks the exact location of the spur on the patient's heel with a grease pencil or colored chalk. | P | F |
| 6. Transfers the location of the spur onto the heel pad. | P | F |

Performance Measures	Results	
a. Inserts the heel pad into the patient's boot or shoe of the affected side with the anterior beveled edge facing forward, bevel sloping downward.	P	F
b. Instructs the patient to place the boot or shoe onto the affected foot.	P	F
c. Has the patient take several steps in the boot or shoe.	P	F
d. Instructs the patient to remove the boot or shoe from the affected foot.	P	F
e. Ensures that the mark is transferred to the heel pad.	P	F
7. Cuts a hole into the felt heel pad where the mark was transferred. Ensures the cut hole has beveled edges to comfortably seat the spur.	P	F
8. Repeats step 3b through 3e for the unaffected foot.	P	F
9. Inserts both heel pads into the patient's boots or shoes with the anterior beveled edge facing forward, bevel sloping downward.	P	F
10. Instructs the patient to put on footgear and walk for a few minutes to ensure the heel pad is comfortable.	P	F

NOTE: Makes any minor adjustments, as needed.

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required

Related

FABRICATE A FELT HEEL LIFT
081-836-0063

Conditions: The patient has medical records and a completed referral. Necessary materials and equipment: treatment table or chair, 1/4 or 1/2 inch felt, bandage scissors, and pen, colored chalk, or grease pencil.

Standards: The heel lift is fabricated without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's referral.	P	F
2. Explains the procedure to the patient. The patient's foot will be measured for a heel lift which should help relieve the discomfort.	P	F
3. Prepares the pattern.	P	F
a. Instructs the patient to remove all footgear.	P	F
b. Traces the boots or shoes on paper, from the posterior aspect of the heel to the mid-shank on each side. (See Figure 3-42.)	P	F
c. Draws a line 1/4 inch inside the tracing of the boots or shoes.	P	F
d. Trims the pattern on the inner line with the proper thickness of felt.	P	F
CAUTION: Heel lifts should be no more than 3/8 inch thick.		
e. Bevels the anterior margin to a feather edge sloping downward.	P	F

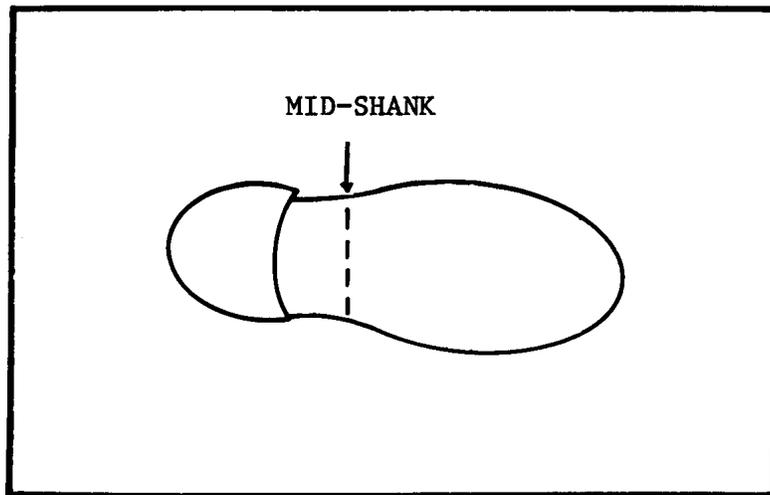


Figure 3-41 Mid-Shank Diagram

4. Inserts the heel lifts into the patient's boots or shoes with the anterior beveled edge facing forward, bevel sloping downward.	P	F
5. Instructs the patient to put on footgear and walk for a few minutes to ensure the heel lifts are comfortable.	P	F

NOTE: Makes any minor adjustments, as needed.

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

TAPE AN ANKLE

081-836-0064

Conditions: The patient has been screened for treatment and has a completed treatment card.
Necessary materials and equipment: nonelastic cloth adhesive tape (1 1/2" width), elastic tape (2" width), underwrap (prewrap), spray adherent (tincture of benzoin), 4 x 4 gauze sponges, nonwater soluble lubricant, bandage scissors, cloth towels, prekit (if available), and treatment table (plinth).

Standards: The patient's ankle is taped IAW information in the treatment instructions without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the treatment site and the specific method to be used.
 - a. Open basket-weave - used for patients with an increased girth to the ankle secondary to edema or effusion.
 - b. Closed basket-weave - used for additional support or when an ankle injury resolves with little to no edema or effusion.
2. Explain the procedure to the patient.
 - a. The ankle taping offers support to the joint and protects the ankle from injury without jeopardizing other joints.
 - b. Tell the patient to keep his or her foot in the neutral position during the taping procedure.
3. Gather the materials.
4. Prepare the patient for the procedure.
 - a. Tell the patient to remove footgear and sock from the ankle to be taped.

NOTE: See task 081-836-0045 if girth measurements are to be taken.

- b. Instruct the patient to sit on the plinth, supporting the upper body on the palms. The ankle to be taped should be positioned in one of the following ways.
 - (1) Extended beyond the plinth with the calf muscle resting on the table edge. Use a folded towel to pad between the calf muscle and the edge of the plinth.
 - (2) Propped up using one of the following.
 - (a) A towel roll approximately 4 to 6 inches in diameter.
 - (b) The patient's helmet/helmet liner or rolled load-bearing equipment, if available.
- c. Drape the helmet/helmet liner or rolled load-bearing equipment with a towel for patient comfort.
- d. Visually inspect the area.

CAUTION: Any open wounds, dermatological condition, or unusual hypersensitivity which is not documented on the patient's treatment card should be reported to the therapist.

- e. Position the ankle for the procedure. Instruct the patient to keep the ankle to be taped in the neutral position.

NOTE: Instruct the patient to use an assistive device (shoelace, belt, etc.) to hold the ankle in the neutral position if he or she cannot actively hold the position.

- f. Shave the entire ankle to a point approximately 6 inches proximal to the lateral malleolus, if a prekit is available.

NOTE: Place 4 x 4 gauze sponges with non-water soluble lubricant against the skin at the achilles tendon posteriorly and the tibialis anterior tendon anteriorly.

- g. Spray the area to be taped with tincture of benzoin.
 - (1) Shake the can several times and remove the cap.
 - (2) Point the nozzle opening toward the area to be taped.
 - (3) Depress the nozzle and cover an area from proximal to the toes to just distal to the calf muscle, using only a light coating of spray.

CAUTION: Warn the patient prior to spraying that the spray will feel cold.

- h. Cover the sprayed area with the prewrap in a figure-of-8 fashion.

Performance Steps

CAUTION: Smooth out all wrinkles because they can produce blisters.

5. Initiate the taping.
 - a. Open basket-weave (for a lateral ankle injury).

NOTE: For a medial ankle injury, the taping will start laterally and finish medially.

- (1) Place one anchor strip 5 to 6 inches superior to the lateral malleolus and one anchor strip proximal to the metatarsal heads. Leave both anchors open anteriorly. (See Figure 3-43a.)
- (2) Start the first stirrup at the superior (leg) anchor on the medial side, passing it posterior to the medial malleolus and finishing at the superior (leg) anchor on the lateral side. (See Figure 3-43b.)
- (3) Start the first horseshoe at the anchor on the medial forefoot, passing around the calcaneus and finishing at the same anchor on the lateral side. (See Figure 3-43c.)
- (4) Anchor each stirrup and each horseshoe after it is applied. (See Figure 3-43c.)

NOTE: Leave all anchors open on the anterior aspect of the leg and foot.

- (5) Repeat steps 5a(2) through 5a(4), in order, overlapping approximately one-half tape width. (See Figure 3-43d.)
- (6) Repeat steps 5a(2) through 5a(4) again. You should have three overlapping stirrups, three overlapping horseshoes, and a total of eight anchors. (See Figure 3-43e.)
- (7) Close the remaining open areas with horseshoes and stirrups, always starting medially and finishing laterally. (See Figure 3-43f.)
- (8) Close loose tape ends on the anterior surface of the leg or foot and anchor all loose ends. (See Figures 3-43g and 3-43h.)

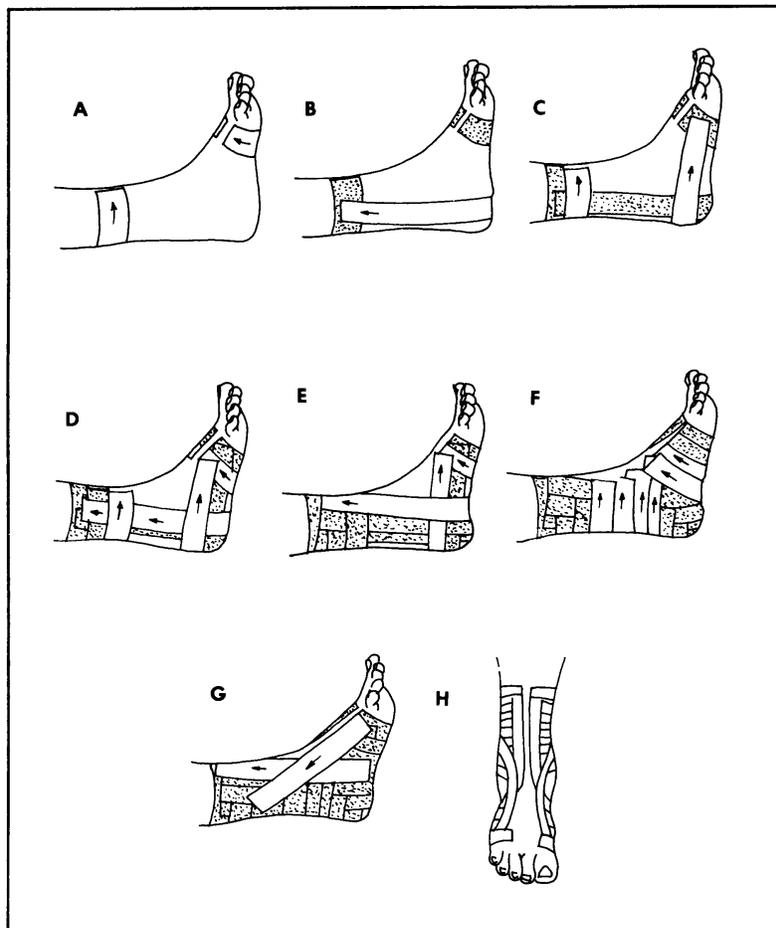


Figure 3-43 Ankle Taping Diagram

Performance Steps

b. Closed basket-weave (for a lateral ankle injury).

NOTE: For a medial ankle injury, the taping will start laterally and finish medially.

(1) Place one anchor strip 5 to 6 inches superior to the lateral malleolus and one anchor strip proximal to the metatarsal heads. Do not leave both anchors open. (See Figure 3-44a.)

CAUTION: Avoid direct circumferential turns when taping to prevent a tourniquet effect.

(2) Start the first stirrup at the superior (leg) anchor on the medial side, passing it posterior to the medial malleolus and finishing at the superior (leg) anchor on the lateral side. (See Figure 3-44b.) Anchor the stirrups superiorly after each application.

(3) Repeat step 5b(2) twice more, overlapping approximately one-half tape width. (See Figure 3-44c.)

NOTE: The stirrups should not extend distal to the base of the fifth metatarsal.

(4) Place a horseshoe starting on the medial side of the foot anchor, passing around the calcaneus, and finishing at the lateral aspect of the foot anchor. Anchor the horseshoe at the foot.

NOTE: This horseshoe should be inferior to the malleoli. (See Figure 3-44d.)

(5) Repeat step 5b(4) twice more. (See Figure 3-44e.)

(6) Close the open areas with anchors starting superiorly and proceeding interiorly. (See Figure 3-44f.)

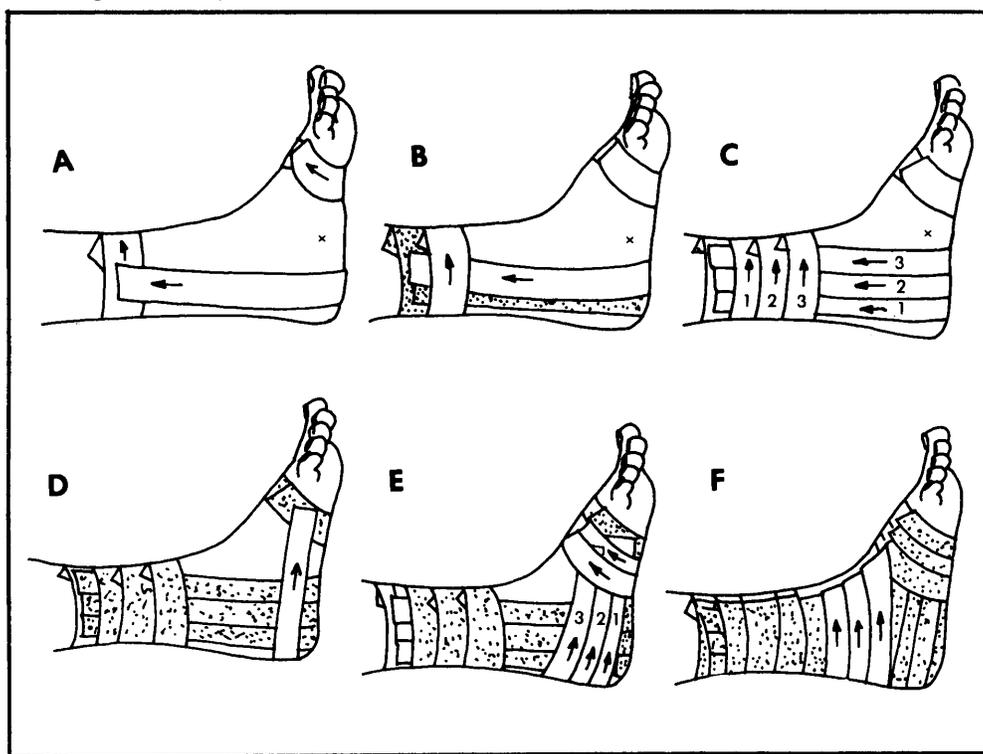


Figure 3-44 Medial Ankle Injury

c. Apply heel-locks. (See Figure 3-45.)

CAUTION: Monitor the exposed area distal to the taping. If the toes become darker in color or the patient complains of tingling, numbness, or pain in the foot or ankle, remove the taping materials and retape the ankle.

Performance Steps

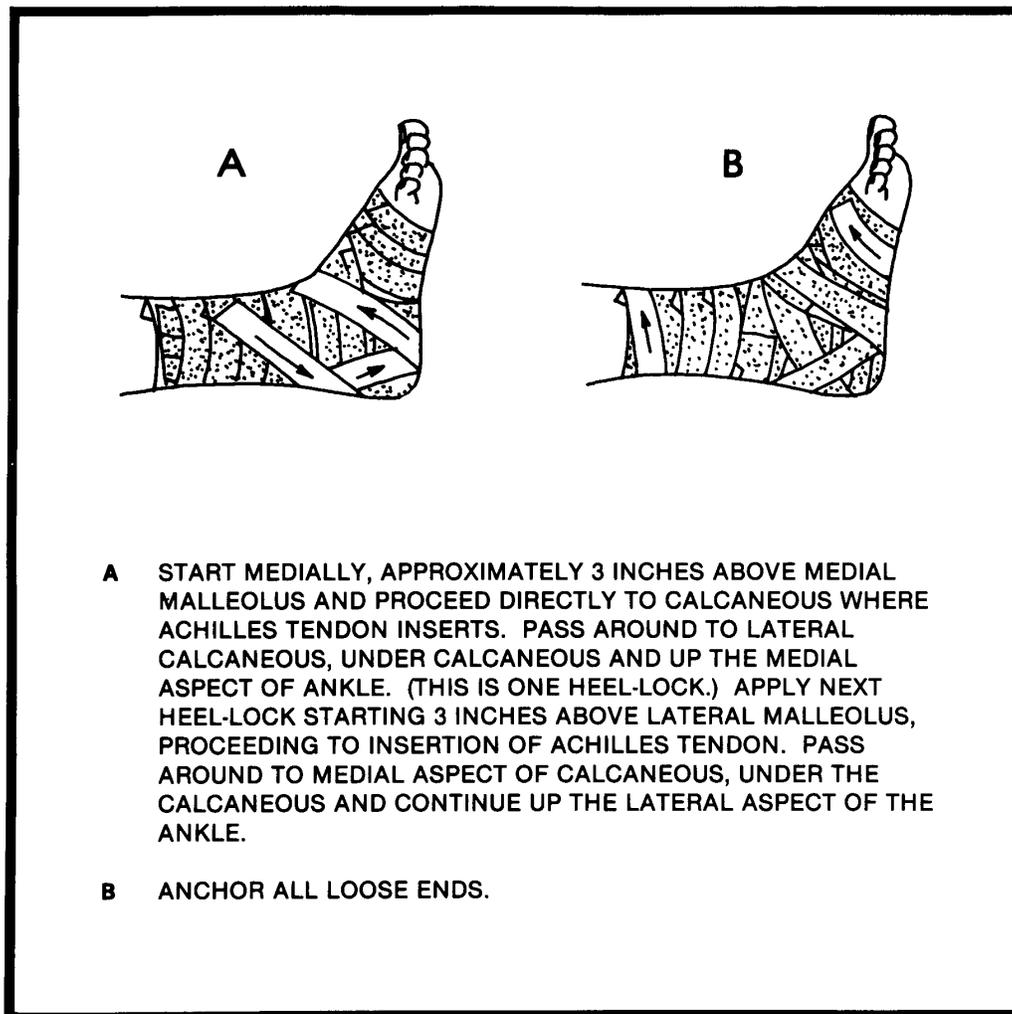


Figure 3-45 Ankle Lock Wrap

6. Inspect the taping by instructing the patient to stand on the floor. If the patient is to bear weight on the taped ankle, tell him or her to do it slowly.

CAUTION: Adjust the taping as needed if the patient complains of tape being too tight at the distal foot anchor.

7. Tell the patient to replace the sock and footgear on the taped ankle, if possible.

CAUTION: If the taped ankle is too bulky to fit into the footgear, instruct the patient to carry the footgear. Do not force the footgear on the ankle.

8. End the procedure by providing the patient with instructions for additional care.
 - a. Avoid getting the tape wet. Tell the patient to wrap the taped area in a plastic bag when bathing.
 - b. Ambulation. Unless the patient was issued an ambulation aid, he or she should walk with as near normal gait as possible.
 - c. Range of motion (ROM) and/or strengthening exercises.
 - d. Home treatments and/or return visits.
 - e. When to remove the tape.

Performance Steps

- (1) If the patient has pain in the ankle caused by the tape, tell him or her to remove the tape immediately.
 - (2) Otherwise, have the patient remove the tape after 24 hours.
- f. How to remove the tape. (See Figure 3-46.)
- (1) Use bandage scissors only.
 - (2) Cut from the distal plantar surface going posteriorly.
 - (3) Follow medially, just posterior to the deltoid ligament (medial malleolus).
 - (4) Proceed superiorly to the upper leg anchor and remove the tape.

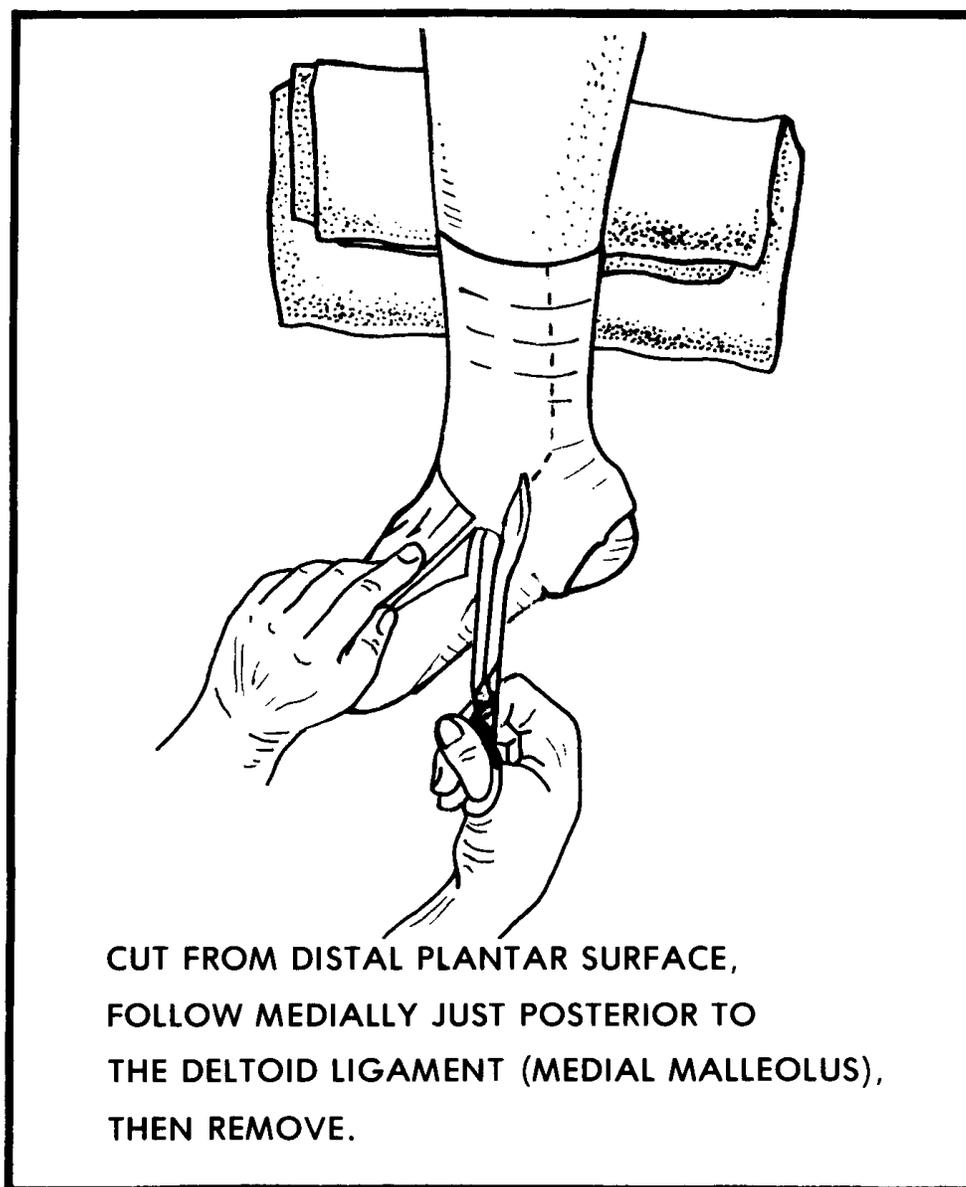


Figure 3-46 Removing Ankle Tape

9. Write appropriate notes in the patient's records.

Performance Measures**Results**

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Gathers the materials.	P	F
4. Prepares the patient for the procedure.	P	F
5. Initiates the taping.	P	F
6. Inspects the taping.	P	F
7. Has the patient replace the sock and footgear, if possible.	P	F
8. Provides the patient with instructions for additional care.	P	F
9. Writes appropriate notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

APPLY A SHORT LEG SPLINT**081-834-0030**

Conditions: You have performed a patient care handwash, identified and briefed the patient, and reported any unusual skin conditions to the physician. Another soldier who has been given the necessary instructions for patient positioning is available. Necessary materials and equipment: plaster splints or rolls, Webril or equivalent, elastic bandages, scissors, a cast knife, tape, and a bucket of tepid water.

Standards: The splint is applied IAW the physician's order so that the ankle is immobilized at 90 degrees and the foot is in neither inversion nor eversion of the extremity. The splint ranges from the tip of the toes to 3" from the popliteal space. This is done without causing further injury to the patient.

Performance Measures	Results	
1. Measuring and fabricating the splint.	P	F
a. Positions the ankle at a 90° (degree) angle and the foot in neither inversion nor eversion of the extremity.	P	F
b. Places a dry 5" by 30" splint on the posterior side of the uninjured leg from the tips of the toes upward to 3" from the popliteal region of the knee with the foot positioned at a 90° (degree) angle.	P	F
c. Cuts 15 to 20 thicknesses of plaster splinting material to the measured length and places the splint on a work surface.	P	F
d. Measures and cuts three layers of Webril by slightly exaggerating the measurements taken in step 2 and places the padding on the work surface.	P	F
2. Preparing and applying the plaster splint.	P	F
a. Dips the measured splint into a bucket of tepid water for 5 seconds and removes it.	P	F
b. Eliminates the excess water from the plaster splint and places it, fully extended, on top of the premeasured cotton wadding.	P	F
c. Rubs and works the plaster with the palm of the hand.	P	F
d. Covers the wet plaster with a single layer of cotton wadding.	P	F
e. Applies the splint (plaster and padding) to the posterior surface of the leg from the tips of the toes to 3" from the popliteal space.	P	F
f. Wraps the splint with an elastic bandage to hold it in place.	P	F
3. Finishing the splint.	P	F
a. Secures the elastic wrap with clips and/or tape.	P	F
b. Maintains a 90 degree angle at the ankle until certain the plaster has set.	P	F
c. Places the splint on a pillow and allows the air to circulate.	P	F
d. Wipes any extra plaster from the patient's skin.	P	F
e. Ensures patient comfort and circulation.	P	F
f. Instructs the patient in cast care procedures and precautions (See Task 081-834-0051).	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

**References
Required**

**Related
TM 8-231**

APPLY A SHORT LEG CAST
081-834-0020

Conditions: You have performed a patient care handwash, identified and briefed the patient, and reported any unusual skin conditions to the physician. Necessary materials and equipment: plaster rolls, plaster splints, Webril or equivalent, stockinet, scissors, a cast knife, and a bucket of tepid water.

Standards: The cast is applied IAW the physician's order so that the ankle is immobilized at 90 degrees and the foot is in neither inversion nor eversion of the extremity. The cast should extend from the web of the toes to 3" distal to the popliteal space. This is done without causing further injury to the patient.

Performance Measures	Results	
1. Positioning and padding the extremity.	P	F
a. Positions the patient's foot in neither eversion nor inversion and flexes the ankle to 90 degrees.	P	F
b. Applies the stockinet from the tip of the toes to the knee.	P	F
c. Applies Webril using the dimensions stated in step 2 overlapping about half the width of each turn.	P	F
NOTE: Allows the cast padding to extend beyond the toes if a toe plate is prescribed. No matter what the cast or splint prescribed, the padding always extends beyond the actual dimensions of the finished product.		
d. Applies additional Webril to the malleoli, superficial nerves, blisters, and other unusual skin conditions.	P	F
2. Applying the plaster rolls and splints	P	F
a. Chooses plaster appropriate for the patient's size and condition and removes the outer wrappers.	P	F
b. Measures and cuts a 5-thickness posterior splint for the lower leg. The splint should extend from the web of the toes posteriorly to 3" distal to the popliteal space.	P	F
c. Applies the first plaster roll beginning at the tip of the toes and ending 3" distal to the popliteal space.	P	F
(1) Dips the first plaster roll into the bucket of tepid water and removes it after 5 seconds.	P	F
(2) Rolls the plaster from the tip of the toes to 3" distal to the popliteal space making tucks as needed.	P	F
(3) Rubs and smooths the plaster as it is applied.	P	F
(4) Ensures that the plaster conforms to natural body contours.	P	F
d. Applies posteriorly a 5" by 30" splint to reinforce the short leg cast.	P	F
(1) Dips the splint into the bucket of tepid water and removes it rapidly.	P	F
(2) Removes the excess water from the splint and draws it back out to length.	P	F
(3) Applies the posterior splint beginning at the web of the toes and ending 3" distal to the popliteal space.	P	F
(4) Rubs and smooths the splint as it is applied.	P	F
e. Applies the second roll of plaster.	P	F
(1) Makes tucks as needed.	P	F
(2) Rubs and smooths the plaster as it is applied.	P	F
(3) Ensures the plaster conforms to natural body contours.	P	F
3. Finishing the cast.	P	F
a. Trims the cast edges so that the cast's final dimensions are from the web of the toes to 3" distal to the popliteal space.	P	F

NOTE: In what sequence the cast is trimmed after the initial layer of plaster has been applied is dependent upon personal technique, the situation, and the number of rolls used to complete the cast.

Performance Measures

	Results	
b. Dresses the cast by turning back the stockinet and Webril and uses a plaster splint or a final roll of plaster to tack back and finish the cast edges.	P	F
c. Wipes any extra plaster from the patient's skin.	P	F
d. Instructs the patient in cast care procedures and precautions (See Task 081-834-0051).	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References

Required

Related

TM 8-231

Subject Area 9: Stump Wrapping

BANDAGE THE STUMP OF A PATIENT WITH AN ABOVE THE KNEE (AK) AMPUTATION**081-836-0039**

Conditions: An AK amputee patient has been screened for treatment and has a completed treatment card. A patient care handwash has been performed. Assistance is available. Necessary materials and equipment: treatment table (plinth), gown or swim trunks, elastic bandages (ace wraps, 4 and 6 inch size), and adhesive tape.

Standards: AK stump care instruction is given and bandaging is performed without causing injury or unnecessary discomfort to the patient.

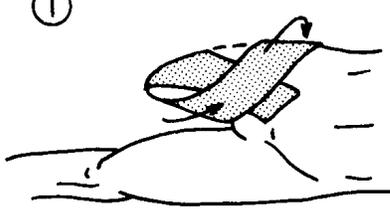
Performance Steps

1. Review the patient's treatment card.
 2. Prepare the patient for treatment.
 - a. Explain the procedure to the patient.
 - (1) Proper wrapping of the stump will prevent edema and maintain proper stump shape (a cone shape).
 - (2) An improperly applied bandage can--
 - (a) Cause edema.
 - (b) Cause skin abrasions.
 - (c) Create undesirable shapes or fleshy rolls which make fitting or using a prosthesis difficult.
 - b. Instruct the patient to remove any clothing which might interfere with bandaging the stump. Provide a gown or swim trunks, as appropriate.
 3. Apply the bandages to the patient's stump IAW Figure 3-47.
CAUTION: Keep pressure up and in from the medial and lateral corners of the stump to eliminate dog ears (fleshy projections at the medial and lateral corners of the stump). Pressure must be exerted distally while avoiding proximal constriction while shaping the stump into a cone. **NOTE:** Secure the bandages with adhesive strips.
 4. Check the bandages to ensure that the wrap--
 - a. Anchors above the patient's waist.
 - b. Is high in the patient's groin to eliminate an adductor roll.
 - c. Is applied by using oblique turns to uniformly cover the entire stump.
 - d. Is shaping the stump into a cone shape.
 5. Ask the patient if the pressure of the wrap is felt more in the distal area. If the patient states that it isn't, remove the bandages and rewrap following the guidelines of steps 3 and 4.
 6. Check to ensure that the stump is in good postural alignment by instructing the patient to relax the leg completely.
- NOTE:** The hip should be extended, abducted, and internally rotated. If not, repeat steps 3 through 5.
7. Assist the patient out of the position of treatment and back into clothing, if applicable.

Performance Steps

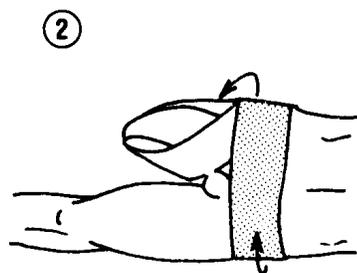
ABOVE-KNEE STUMP BANDAGING

①



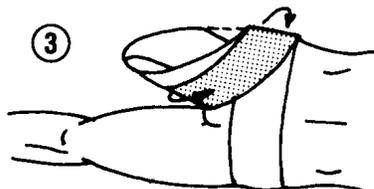
Start the first bandage in the inguinal area and proceed diagonally and laterally over the distal stump. Cover the posterior medial corner, then continue diagonally and anteriorly up to the anterior iliac crest, posteriorly around the pelvis. There will be an exposed area over the distal medial corner of the stump.

②



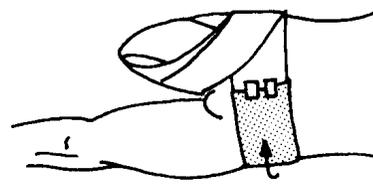
Following the encircling turn around the pelvis, bring the bandage diagonally, laterally, and posteriorly around the proximal stump.

③



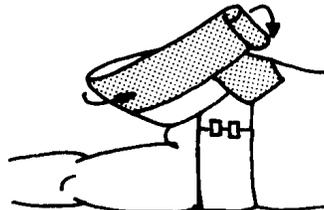
And, up high into the adductor area medially. Continue upward over the anterior iliac crest,...

④



...and posteriorly around the pelvis. Secure bandage with adhesive strips. Smooth out any wrinkles in the bandage at this point.

⑤



Start the second bandage slightly lateral to the first; proceed diagonally and laterally to cover the distal medial corner which was left exposed on previous turns. Continue around distal end to anterior aspect and obliquely upward to the anterior iliac crest.

Figure 3-47 Above-Knee Stump Bandaging

Performance Steps

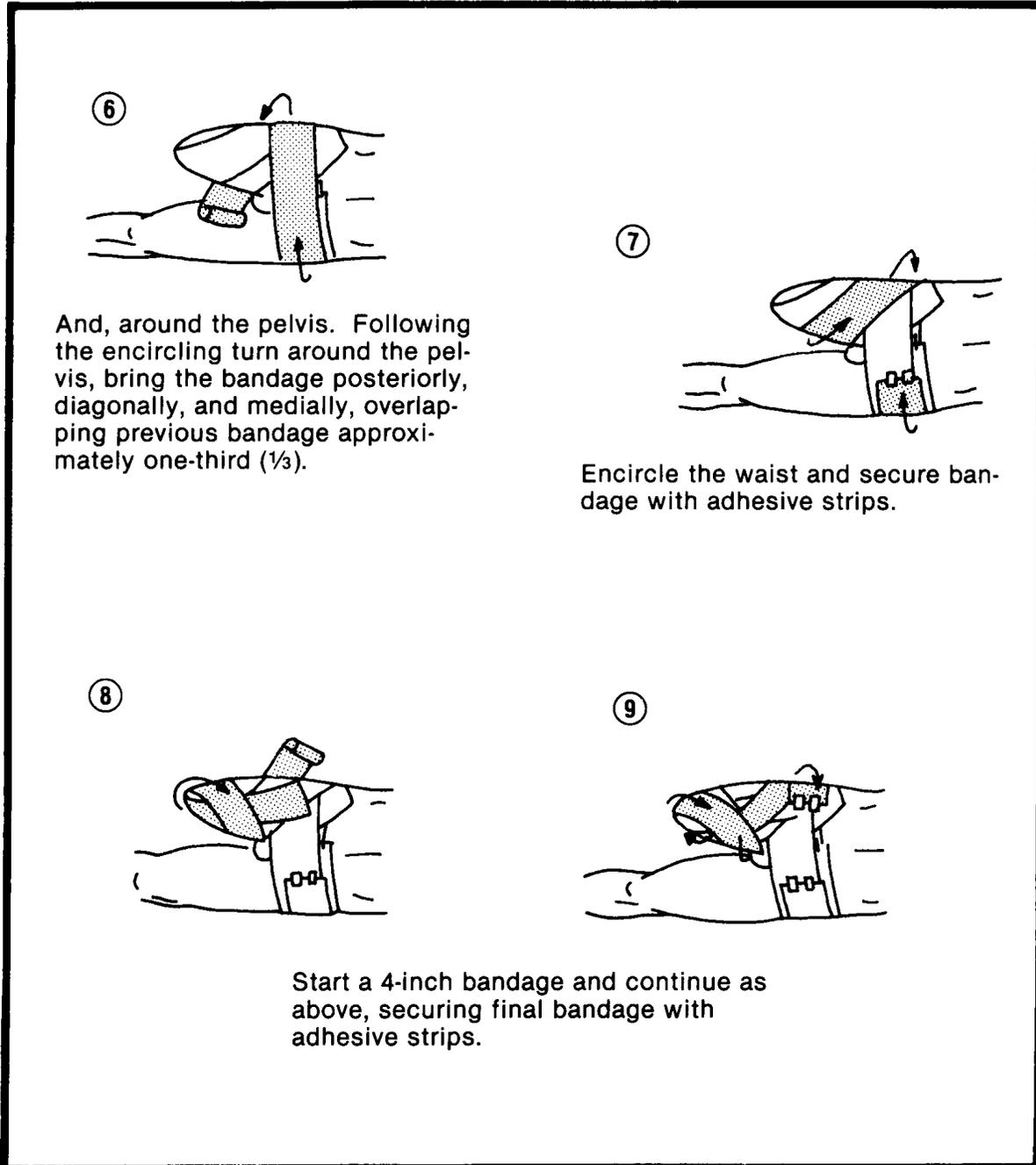


Figure 3-47a Above-Knee Stump Bandaging (Continued)

8. Provide the patient with instructions for additional care.
 - a. Stump hygiene.
 - (1) Bathe the stump daily.
 - (2) Bathe in the evening. Morning showers may cause swelling, making the socket of the prosthesis not fit properly.

Performance Steps

- (3) Not shave the stump. Shaving could cause skin irritation or abrasion, or a rash could develop.
 - b. Apply a fresh bandage every 3 to 4 hours to allow the stump to be exposed to air, keeping it free from excessive perspiration.
 - c. Return visits.
9. Record the patient's visit on the treatment card ensuring that progress notes are up-to-date.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Prepares the patient for treatment.	P	F
3. Applies the bandages to the stump correctly.	P	F
4. Checks the bandages for proper application.	P	F
5. Ensures that the pressure is felt most in the distal area.	P	F
6. Checks for postural alignment.	P	F
7. Assists the patient out of the position of treatment.	P	F
8. Instructs the patient on follow-up care.	P	F
9. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

BANDAGE THE STUMP OF A PATIENT WITH A BELOW THE KNEE (BK) AMPUTATION
081-836-0040

Conditions: A BK amputee patient has been screened for treatment and has a completed treatment card. A patient care handwash has been performed. Assistance is available. Necessary materials and equipment: treatment table (plinth), gown or swim trunks, elastic bandages (ace wraps, 4 and 6 inch size), and adhesive tape.

Standards: BK stump care instruction is given and bandaging is performed without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card.
 2. Prepare the patient for treatment.
 - a. Explain the procedure to the patient.
 - (1) Proper wrapping of the stump will prevent edema and maintain proper stump shape (a cone shape).
 - (2) An improperly applied bandage can--
 - (a) Cause edema.
 - (b) Cause skin abrasions.
 - (c) Create undesirable shapes or fleshy rolls which make fitting or using a prosthesis difficult.
 - b. Instruct the patient to remove any clothing which might interfere with bandaging the stump. Provide a gown or swim trunks, as appropriate.
 - c. Instruct the patient to assume a supine position on the plinth. This will allow complete access to the stump and avoid dependent edema.
 3. Apply the bandages to the patient's stump IAW Figure 3-48.
 CAUTION: Keep pressure up and in from the medial and lateral corners of the stump to eliminate dog ears (fleshy projections at the medial and lateral corners of the stump). Pressure must be exerted distally while avoiding proximal constriction while shaping the stump into a cone. NOTE: Secure the bandages with adhesive strips.
 4. Check the bandages to ensure that the wrap--
 - a. Exposes the entire patella.
 - b. Is wrapped uniformly on the entire stump.
 - c. Is shaping the stump into a cone shape.
 5. Ask the patient if the pressure of the wrap is felt more in the distal area. If the patient states that it isn't, remove the bandages and rewrap following the guidelines of steps 3 and 4.
 6. Check to ensure that the stump is in good postural alignment by instructing the patient to relax the leg completely.
- NOTE: The knee should be in extension. If not, repeat steps 3 through 5.
7. Assist the patient out of the position of treatment and back into clothing, if applicable.

Performance Steps

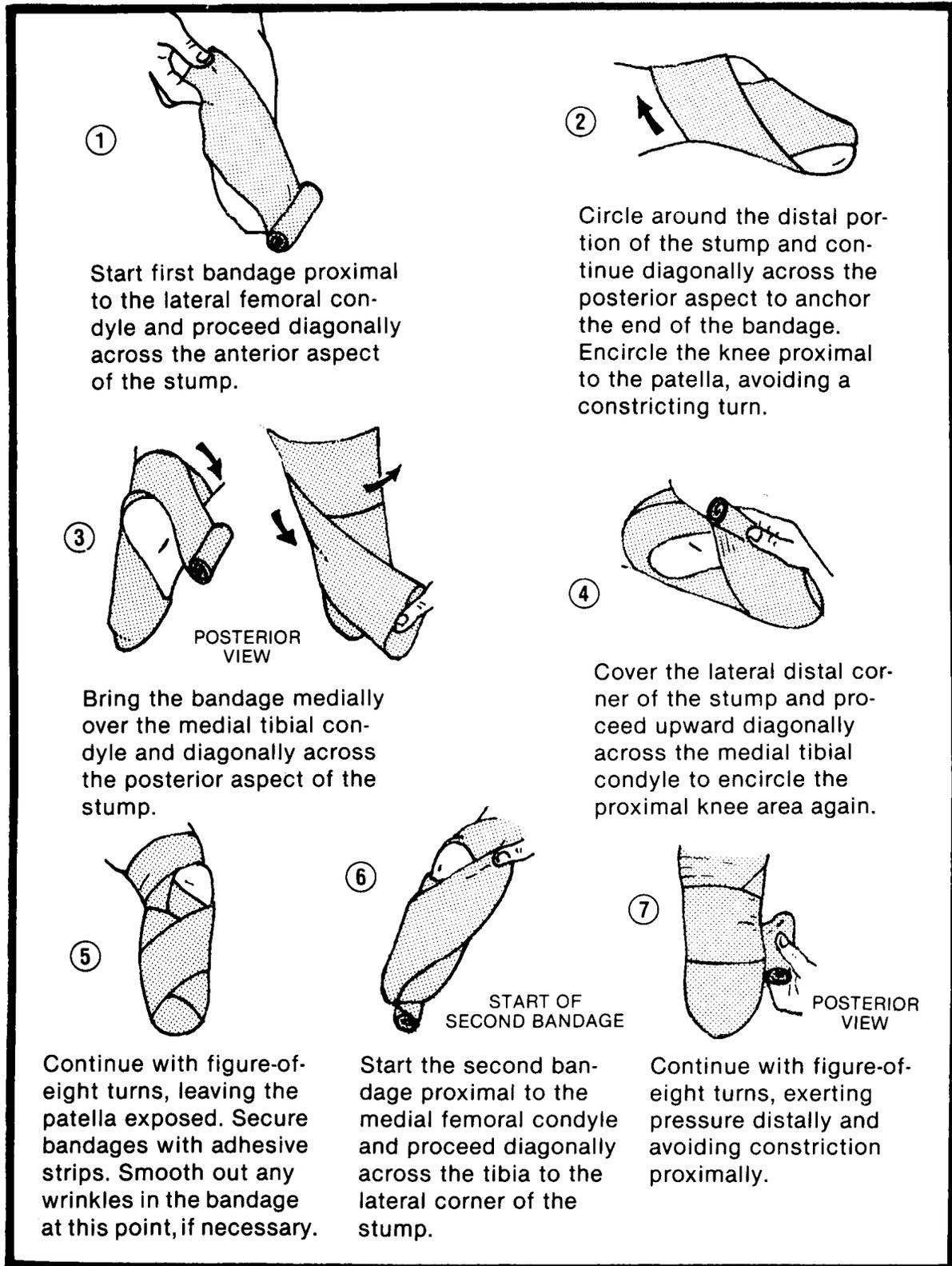


Figure 3-48 Below The Knee Bandaging Diagram

Performance Steps

8. Provide the patient with instructions for additional care.
 - a. Stump hygiene.
 - (1) Bathe the stump daily.
 - (2) Bathe in the evening. Morning showers may cause swelling, making the socket of the prosthesis not fit properly.
 - (3) Not shave the stump. Shaving could cause skin irritation or abrasion, or a rash could develop.
 - b. Apply a fresh bandage every 3 to 4 hours to allow the stump to be exposed to air, keeping it free from excessive perspiration.
 - c. Return visits.
9. Record the patient's visit on the treatment card ensuring that progress notes are up-to-date.

Performance Measures**Results**

- | | | |
|---|---|---|
| 1. Reviews the patient's treatment card. | P | F |
| 2. Prepares the patient for treatment. | P | F |
| 3. Applies the bandages to the stump correctly. | P | F |
| 4. Checks the bandages for proper application. | P | F |
| 5. Ensures that the pressure is felt most in the distal area. | P | F |
| 6. Checks for postural alignment. | P | F |
| 7. Assists the patient out of the position of treatment. | P | F |
| 8. Instructs the patient on follow-up care. | P | F |
| 9. Writes appropriate progress notes. | P | F |

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

Skill Level 2

Subject Area 10: Advanced Physical Therapy Procedures

ADMINISTER A PARAFFIN BATH TREATMENT

081-836-0008

Conditions: The patient has been screened for treatment and has a completed treatment card. A patient care handwash has been performed. Necessary materials and equipment: a paraffin bath, mineral oil, paraffin, thermometer, cloth towels, plastic bags, rubber bands or adhesive tape, treatment timer, bell, treatment table, and chair.

Standards: A paraffin bath is prepared and appropriate treatment administered IAW the information on the patient's treatment card without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the body site and method to be used.
2. Gather the materials.
3. Ready the bath for treatment
 - a. Ensure the unit power cord is plugged into an approved electrical outlet.
 - b. Turn the unit heater timer on.
 - c. Place a mixture of seven parts of paraffin to one part of mineral oil into the bath. The total volume of the mixture should not exceed two-thirds the total capacity of the paraffin unit.
 - d. Regulate the treatment temperature to between 125° F and 130° F, IAW manufacturer's instructions.
4. Explain the procedure to the patient.
 - a. He or she will be dipping the affected body site into the paraffin mixture which will--
 - (1) Increase circulation.
 - (2) Help the skin become moist, soft, and pliable.
 - (3) Stimulate local sweating.
 - b. The patient may feel a hot, tingling, or drawing sensation in the area being treated. These are normal responses to the treatment and the patient should not be alarmed if they occur. The paraffin will not burn the part to be treated.
 - c. The patient must avoid touching the insides of the unit.
5. Inspect the area to be treated.

CAUTION: Check that the patient does not have any contraindications in the area to be treated. - [1] Diminished or absent sensation. [2] Open wounds. [3] Recent thin scars. [4] Infections or contagious diseases. [5] Rashes. - If any of the above contraindications are noted, do not administer treatment. Inform the physical therapist.

6. Prepare the patient for treatment.
 - a. Ensure all jewelry has been removed from the body site and that the clothing does not restrict circulation.

CAUTION: If the patient is wearing a wedding band that cannot be removed, do not administer treatment. Notify the physical therapist.

- b. Instruct the patient to wash the body site with soap and cool water, and then dry thoroughly with a towel.

7. Initiate the procedure.
 - a. Position the part to be treated.
 - (1) The patient's finger's (toes) should be relaxed.
 - (2) If treating the hand, have the patient keep the wrist at 0° (anatomical position).

Performance Steps

- b. Check the bath temperature prior to the first dip to ensure the paraffin is between 125ø F and 130ø F.

NOTE: If the temperature is out of this range, postpone the treatment until corrected.

- c. Instruct the patient to dip the part into the bath so it fully covers the area to be treated. Wait several seconds, and then remove the part.
- d. Hold the part over the bath allowing the excess paraffin to drip off.

NOTE: If the immersion method is to be used, have the first dip as deep as possible without touching the sides of the bath.

- e. When the paraffin has solidified and lost its shiny appearance, the part should be dipped again.

NOTE: If cracks are noticed in the glove between dips, apply small amounts of paraffin with a finger to the affected spots.

- f. Repeat the dipping 10 to 12 additional times. Have the patient dip the part to below the level of the first dip.
- g. Use the prescribed method.
 - (1) Dip and wrap method.

(a) Place the gloved area in plastic and then toweling. (See Figure 3-49a-e.)

NOTE: If plastic bags are unavailable for wrapping, paper bags of the same size should be substituted.

(b) Secure with adhesive tape or rubber bands. (See Figure 3-49f.)

NOTE: Allow the patient to sit or lie down for the treatment session if using the dip and wrap method. The patient should be made comfortable to prevent movement in the area being treated.

- (2) Immersion method. After the last dip, instruct the patient to immerse and keep the area being treated in the paraffin bath until treatment time is completed.

(a) If the area being treated is an upper extremity (UE), seat the patient in a chair, padding the axilla with a folded towel.

(b) If the area being treated is a lower extremity (LE), seat the patient on the edge of a treatment table or tall hydrotherapy chair. If a tall chair is used, secure the patient to the chair with a safety belt or litter strap.

Performance Steps

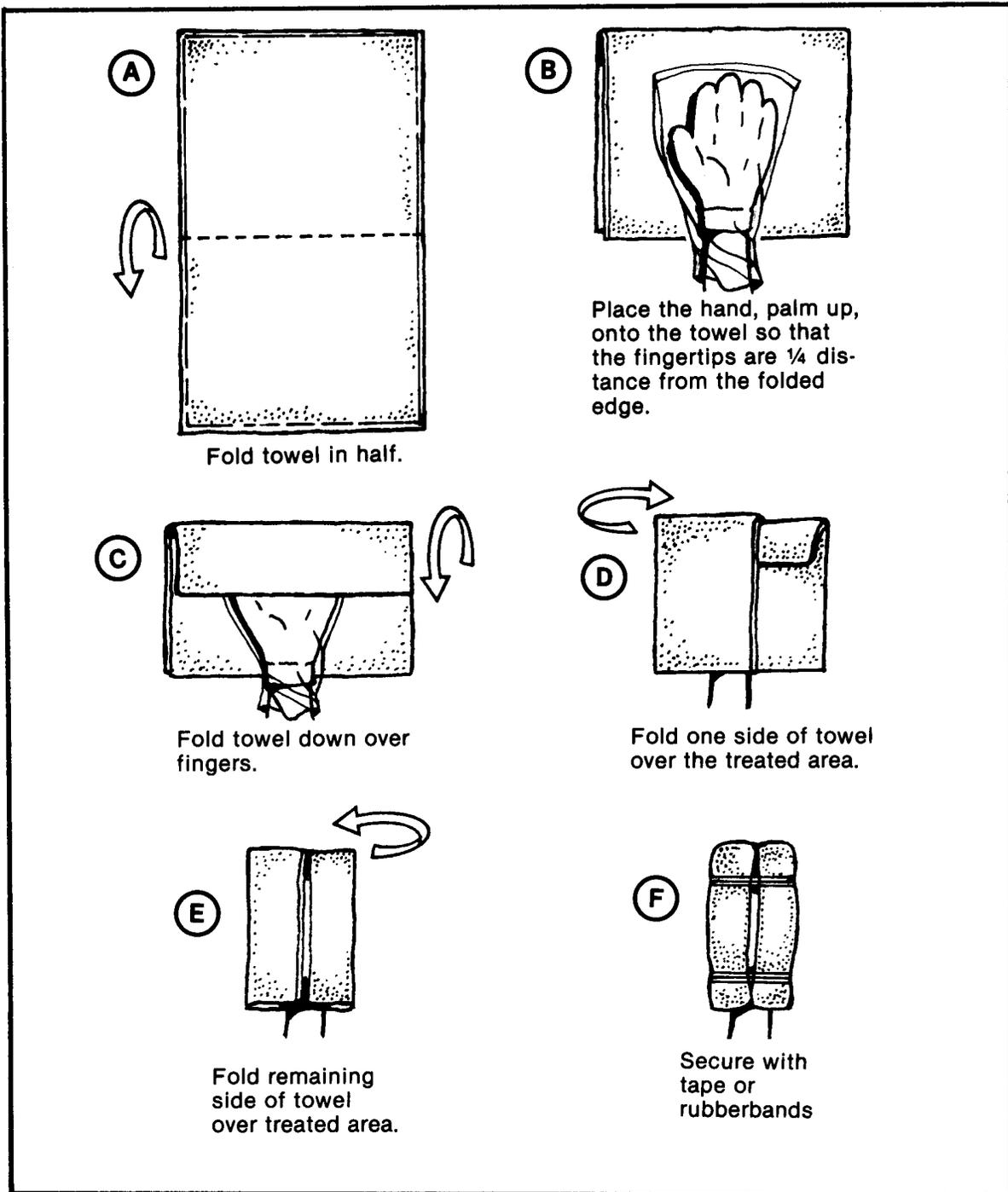


Figure 3-49 Towel Wrap Hand Diagram

8. Set a timer for the prescribed treatment time according to the instructions on the patient's treatment card.

NOTE: Treatment time is 20 minutes unless otherwise prescribed in the patient's instructions or by the physical therapist.

Performance Steps

9. Provide the patient with a treatment bell to ring if any adverse reaction should occur during the treatment. If both hands are being treated or a bell is not available, instruct the patient to call out to you.

CAUTION: Instruct the patient to inform you immediately if he or she experiences-- [1] Difficulty breathing. [2] Dizziness. [3] A burning sensation. [4] Feelings of nausea. [5] Throbbing. [6] Any increase in pain to the part being treated. - The treatment must be stopped by removing the wraps and the paraffin. Visually inspect the area, and then report your findings to the physical therapist.

10. Monitor the patient's responses periodically throughout the treatment by--
 - a. Checking the patient's facial expressions.
 - b. Observing the respirations.
 - c. Asking how the treatment is being tolerated.
 11. Discontinue the procedure when the timer alarm sounds.
 - a. If the dip and wrap method is used--
 - (1) Assist the patient out of the position of treatment.
 - (2) Remove wrapping materials from the treated part.
 - b. If the immersion method is used, instruct the patient to slowly remove the treated part from the bath.
 12. Peel off the paraffin from the treated body area. Place the used paraffin carefully back into the bath or dispose of it IAW local SOP.
- NOTE: Place the lid on the bath when this step is completed.
13. Dry the treated area thoroughly with a cloth towel.
 14. Visually inspect the treated area. A light to moderate erythema (reddening or flushing of the skin) should be observed where the paraffin was in contact with the patient.

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

INSTRUCT ADVANCED SITTING TRANSFERS TO A PATIENT

081-836-0019

Conditions: The patient has mastered the task of transferring from wheelchair to bed and is ready to be taught advanced sitting transfers. The patient has a completed treatment card. Assistance of another soldier is available, if needed. Necessary equipment and materials: safety belt, sliding board, toilet, bathtub containing a large rubber mat and a stool or chair with suction crutch tips on the legs, shower with a shower bench, stethoscope, and blood pressure cuff.

Standards: The patient is instructed in advanced sitting transfers IAW the treatment card information without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the patient's disability and identify the specific transfer to be instructed.
2. Explain the procedure to the patient. The transfer is performed with the patient moving toward the stronger side.
 - a. Tell the patient that the transfer activities to be taught will aid the patient's ability to function as independently as possible within the limits of the disability. The patient will be instructed in the specific transfers prescribed.
 - b. The transfer activities will be taught proceeding from the simplest transfer to the most complex.
3. Prepare the patient for the transfer.
 - a. Place a safety belt securely around the patient's waist to use as an aid to the patient during the transfer. The safety belt must be tight enough to prevent it from slipping up on the patient's ribs, but it should not cause the patient discomfort.
 - b. Check the wheelchair brakes to ensure that they function properly.

CAUTION: If the wheelchair does not have brakes, have an assistant stabilize the wheelchair by holding the back of the chair and placing one or both feet behind the rear wheels.

- c. Take the patient to the appropriate area where the transfer is to be performed. Choose a setting that will most closely represent the patient's home situation.

NOTE: If space will be limited in the patient's home, the transfers should not be taught in a spacious area.

4. Instruct the patient in the performance of the transfers. Stand in front of and face the patient with both hands on the safety belt. If necessary, additional personnel should be standing by ready to provide assistance. Assistance is to be given only as needed.

NOTE: Encourage the patient to do as much as possible.

- a. Wheelchair to toilet.
 - (1) If space is limited.
 - (a) Position the wheelchair facing the toilet as close to it as possible with the wheelchair footrests removed or put up.
 - (b) Secure the wheelchair to prevent movement.
 - (c) Instruct the patient to slide forward straddling the toilet, and then to adjust the clothing.
 - (d) Instruct the patient to use extreme care in transferring back into the wheelchair. The patient must reach backward for the wheelchair seat or armrests and slide back onto the wheelchair seat.
 - (2) If space allows.
 - (a) Position the wheelchair parallel with or at a slight angle to the toilet. The wheelchair is positioned so that the patient will be moving toward his or her strong side.
 - (b) Lock the wheelchair brakes. Put up or remove the footrests.

NOTE: If the wheelchair has removable armrests, the armrest near the toilet should be removed.

- (c) Instruct the patient to place the hand near the toilet on the toilet seat next to the wheelchair. The other hand is placed on the wheelchair seat near the hip.

Performance Steps

- (d) Have the patient push straight down on both arms, lift both hips off the wheelchair seat, and shift or slide the hips toward the toilet. Have him or her reposition the hands, and repeat this step until the transfer has been completed. The safety belt should be used to help guide the patient's hips, if necessary.
 - (e) Have the patient position the legs comfortably. Ensure that the patient is properly seated and balanced.
 - (f) Reposition the wheelchair, if possible, and reverse the procedure to transfer back into the wheelchair.
- b. Wheelchair to bathtub. For the teaching of this transfer, the bathtub will not contain water. This makes it even more important to emphasize slow, steady movements to prevent possible injury when the transfer is performed under real conditions. Prior to declaring the patient independent in the performance of this transfer, the transfer should be performed with water in the bathtub at least once. Provide the patient with a swim suit or trunks, as appropriate.

CAUTION: [1] When the transfer is to be performed under real conditions, extreme care must be used to prevent burns. The bathtub should be filled with water and the temperature of the water should always be checked before transferring, especially if the patient has diminished sensation. - [2] Instruct all patients to inspect the skin for evidence of injury, especially over the ischial tuberosities. An increased redness is the first noticeable sign.

- (1) Position the wheelchair parallel with or at a slight angle to the bathtub near the stool or chair.
- (2) Secure the wheelchair to prevent movement. Put up or remove the footrests. If the wheelchair has removable armrests, the armrest nearest the bathtub will be removed.
- (3) Instruct the patient to place both legs into the bathtub allowing them to rest against the bathtub rim. The patient may need assistance to lift or guide the legs into the bathtub.
- (4) Have the patient place the hand nearest the bathtub on the bathtub rim, stool, or chair seat. The other hand is placed on the wheelchair seat near the hips.
- (5) Have the patient push straight down on both arms, lift the hips, and shift or slide the body onto the bathtub rim. Have him or her reposition the hands accordingly, and then transfer the body onto the stool or chair. Use the safety belt to help guide the patient's hips, if necessary.
- (6) Ensure that the patient is properly seated and balanced. Have the patient place both hands, if applicable, on the bathtub rims and slowly lower the body into the bathtub.

CAUTION: If the patient is a hemiplegic, a chair with a straight back will be used instead of the stool. The hemiplegic patient will sit in the chair to bathe, instead of lowering the body into the bathtub.

- (7) Provide the patient with a towel to dry the hands.

NOTE: Dry hands prevent slipping while pushing against the bathtub rims when getting out of the bathtub.

- (8) Reverse the procedure to transfer back into the wheelchair.

- c. Wheelchair to shower. Most patients lacking balance control will find it much easier to bathe in the shower than in the bathtub. It takes less energy to transfer from the wheelchair onto a shower bench and the shower wall will give additional back support.

NOTE: The patient will require a sliding board to bridge the gap between the wheelchair and the shower bench. **CAUTION:** Ensure that the shower bench is stabilized to prevent movement.

- (1) Position the wheelchair as close as possible to the shower, angled slightly toward the shower bench.
- (2) Lock the wheelchair to prevent movement. Put up or remove the footrests.

NOTE: If the wheelchair has removable armrests, remove the armrest nearest the shower.

- (3) Instruct the patient to place one end of the sliding board under the hip near the shower and the other end of the board securely on the shower bench.
- (4) Have him or her place both legs in the shower stall.
- (5) Have the patient place the hand near the shower on the sliding board. The other hand is placed on the wheelchair seat near the hip.
- (6) Have the patient push straight down on both arms, lift the hips, and shift or slide the body onto the sliding board. Have him or her reposition the hands accordingly, and then transfer the body onto the shower bench.
- (7) Instruct the patient to remove the sliding board and place it in the wheelchair seat.

Performance Steps

- (8) Have the patient position the legs comfortably on the shower bench. The patient should be properly seated and balanced.
 - (9) Reverse the procedure to transfer back into the wheelchair.
5. Monitor the patient's responses continuously throughout each transfer.
 6. Check the patient's treatment card to determine whether other treatments are required to complete the visit.
 7. Record the patient's visit on the treatment card ensuring that progress notes are up-to-date and reflect the patient's current condition.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares the patient for the appropriate transfer.	P	F
4. Instructs the appropriate transfer technique.	P	F
5. Monitors the patient's responses.	P	F
6. Checks the patient's treatment card for other procedures.	P	F
7. Writes appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

INSTRUCT ADVANCED STANDING TRANSFERS TO A PATIENT
081-836-0021

Conditions: You have been assigned a patient who has mastered the task of transferring from wheelchair to bed. The patient has a completed treatment card. Assistance of another soldier is available, if needed. Necessary materials and equipment: safety belt, toilet, bathtub containing a large rubber mat, a stool or chair with suction crutch tips on the legs, chair placed parallel with the bathtub, shower with a shower bench, stethoscope, and blood pressure cuff.

Standards: The patient is instructed in performing advanced standing transfers IAW the information on the treatment card and without causing injury or unnecessary discomfort to the patient.

Performance Steps

1. Review the patient's treatment card to determine the patient's disability and identify the type and specific transfer to be instructed.
2. Explain the procedure to the patient.
 - a. Ensure that the patient understands the amount of weight that may or may not be placed on the involved extremity.
 - b. Tell the patient that the transfer activities to be taught will aid the patient's ability to function as independently as possible within the limits of the disability. The patient will be instructed in the specific transfers prescribed.
 - c. The transfer activities will be taught in short sequences proceeding from the simplest transfer to the most complex.
3. Prepare the patient for the transfer.
 - a. Place a safety belt securely around the patient's waist to use as an aid during the transfer. The safety belt must be tight enough to prevent it from slipping up on the patient's ribs, but should not cause the patient discomfort.
 - b. Check the wheelchair brakes to ensure that they function properly.

CAUTION: If the wheelchair does not have brakes, have an assistant stabilize the wheelchair by holding the back of the chair and placing one or both feet behind the rear wheels.

- c. Take the patient to an area that will most closely resemble the patient's home situation.

NOTE: If space will be limited in the patient's home, the transfers should not be taught in a spacious area.

4. Instruct the patient in the performance of the transfer. Stand in front of and face or to the side of the patient with one or both hands on the safety belt. If necessary, additional personnel should be standing by ready to provide assistance. Assistance is to be given only as needed.

NOTE: Encourage the patient to do as much as possible. **CAUTION:** The patient's responses must be monitored continuously. At a minimum, the patient's facial coloration must be observed. If the patient is generally debilitated, extremely weak, or apprehensive, it may be necessary to monitor the patient's pulse, respirations, and blood pressure before and after performing each transfer.

- a. Wheelchair to toilet.

(1) If space is limited.

- (a) Position the wheelchair facing the toilet with enough space between the chair and toilet to allow the patient to turn around after standing.
- (b) Lock the wheelchair brakes. Put up or remove the footrests.
- (c) Assist the patient to stand.

NOTE: The patient must be properly balanced before proceeding.

- (d) Instruct the patient to turn away from the toilet until facing the wheelchair.
- (e) Have the patient step backward toward the toilet until the toilet seat is felt against the back of the legs, and then slowly sit down. The patient may keep both hands on the wheelchair armrests.

Performance Steps

NOTE: NOTE 1: The patient should make clothing adjustments at this time. NOTE 2: If the patient is wearing a leg cast, you must be ready to assist the patient with lifting and/or guiding the leg with the cast away from the wheelchair.

(f) Reverse the procedure to transfer the patient back into the wheelchair.

(2) If space allows.

(a) Position the wheelchair parallel with or at a slight angle to the toilet. If possible, the wheelchair is positioned so that the patient will be moving toward his or her strong side.

(b) Lock the wheelchair brakes. Put up or remove the footrests.

NOTE: If the wheelchair has removable armrests, the armrest near the toilet should be removed.

(c) Assist the patient to stand. It may be necessary for you to apply additional pressure on the safety belt to assist the patient with achieving balance once standing.

NOTE: The patient must be properly balanced before proceeding.

(d) Instruct the patient to sidestep to the stronger side and pivot toward the toilet until the toilet seat is felt against the back of the legs. The patient must use the wheelchair armrests for support while moving toward the toilet. If the patient's disability allows, the hand farther from the toilet must be transferred to the armrest near the toilet during the movements.

(e) Have the patient keep the hand on the wheelchair armrest, push straight down on it while reaching toward the toilet seat with the other hand, and slowly sit down.

NOTE: If the patient is wearing a leg cast, you must be ready to assist with lifting and/or guiding the leg with the cast away from the toilet.

(f) Reposition the wheelchair if needed, and reverse the steps to transfer the patient back into the wheelchair.

- b. Wheelchair to bathtub. For the teaching of this transfer, the bathtub will not contain water. However, prior to declaring the patient independent in the performance of this transfer, the transfer should be performed with water in the bathtub. Emphasize that slow, steady movements are important to prevent possible when the transfer is performed under real conditions. Provide the patient with a swim suit or trunks, as appropriate.

CAUTION: [1] A chair must be placed parallel next to the bathtub, as far as possible from the faucets. If the patient is a hemiplegic, a chair of equal height with suction crutch tips on the legs must be placed in the bathtub parallel with the other chair. The hemiplegic patient will sit in this chair to bathe, instead of lowering the body into the bathtub. - [2] When the transfer is to be performed under real conditions, the bathtub should be filled with water and the temperature of the water should always be checked before transferring, especially if the patient has diminished sensation. Extreme care must be used to prevent burns. - [3] Patients wearing casts must be cautioned against getting the cast wet. They should be instructed to take a sponge bath instead of attempting to bathe in the bathtub or shower.

(1) Position the wheelchair at a 90° angle to the front of the chair outside the bathtub.

(2) Lock the wheelchair brakes. Put up or remove the footrests.

(3) Assist the patient to stand. It may be necessary for you to apply additional pressure on the safety belt to assist the patient with achieving balance once standing.

NOTE: The patient must be properly balanced before proceeding.

(4) Instruct the patient to sidestep to the stronger side and pivot toward the chair until the seat is felt against the back of the legs. The patient must use the wheelchair armrests for support while moving toward the chair. If the patient's disability allows, the hand farther from the chair must be transferred to the armrest near the chair during the movements.

NOTE: Ensure that the patient is standing centered in front of the chair before proceeding.

(5) Have the patient keep the hand on the wheelchair armrest, push straight down while reaching back toward the chair seat with the other hand, and slowly sit down. Once the patient is properly seated and balanced on the chair, instruct the patient to place both legs into the bathtub allowing them to rest against the bathtub rim.

NOTE: Assist the patient to lift or guide the legs into the bathtub, as needed.

(6) Instruct the patient to slide onto the bathtub rim, and then using both bathtub rims for support, slowly lower the body into the bathtub. Use the safety belt to help guide the patient's hips, if necessary.

Performance Steps

CAUTION: Instruct all patients to inspect the skin especially over the ischial tuberosities for evidence of injury. An increased redness is the first noticeable sign.

(7) Provide the patient with a towel to dry the hands.

NOTE: Dry hands prevent slipping while pushing against the bathtub rims when getting out of the bathtub.

(8) Reverse the procedure to transfer back into the wheelchair.

c. Wheelchair to shower. Most patients lacking balance control will find it much easier to bathe in the shower than the bathtub. It takes less energy to transfer from the wheelchair onto a shower bench, and the shower wall will give additional back support.

CAUTION: Ensure that the shower bench is stabilized to prevent movement.

(1) Position the wheelchair as close as possible to the shower, angled slightly toward the shower bench.

(2) Lock the wheelchair brakes. Put up or remove the footrests.

NOTE: If the wheelchair has removable armrests, remove the armrest nearest the shower.

(3) Assist the patient to stand.

(4) Instruct the patient to sidestep to the stronger side and pivot toward the shower bench until the bench is felt against the back of the legs. The patient must use the wheelchair armrests for support while moving toward the shower. If the patient's disability allows, the hand farther from the shower must be transferred to the armrest near the shower during the movements. The other hand may be placed on the shower wall and slid along the wall.

NOTE: Ensure that the patient is standing centered in front of the shower bench before proceeding.

(5) Have the patient keep one hand on the shower wall for support and slowly sit down on the shower bench while reaching for the bench with the other hand.

(6) Reverse the procedures to transfer back into the wheelchair.

CAUTION: [1] Instruct all patients to inspect the skin especially over the ischial tuberosities for evidence of injury. An increased redness is the first noticeable sign. - [2] All patients must be made aware of the importance of monitoring the water temperature especially if diminished sensation is present. Extreme care must be used to prevent burns. - [3] Ensure that the water faucets, soap, toweling, etc., are readily accessible to the patient to minimize movements within the shower.

5. Monitor the patient's responses continuously throughout the transfer. At a minimum, you should observe the patient's facial coloration and tolerance.
6. Check the patient's treatment card to determine whether other treatments are required to complete the visit.
7. Record the patient's visit on the treatment card, ensuring that progress notes are up-to-date and reflect the patient's current condition.

Performance Measures

Results

1. Reviews the patient's treatment card.	P	F
2. Explains the procedure to the patient.	P	F
3. Prepares for the appropriate transfer.	P	F
4. Instructs the appropriate transfer technique.	P	F
5. Monitors the patient's responses.	P	F
6. Checks the patient's treatment card for other procedures.	P	F
7. Write appropriate progress notes.	P	F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

INSTRUCT DYNAMIC EXERCISES TO A LOWER EXTREMITY AMPUTEE**081-836-0065**

Conditions: An LE amputee patient has been screened for preprosthetic exercises and has a completed treatment card. Necessary materials: cloth towels, treatment table (plinth) or mat table, and a foot stool.

Standards: The exercises are instructed IAW instructions on the patient's treatment card without causing injury or unnecessary discomfort to the patient.

Performance Measures	Results	
1. Reviews the patient's treatment instructions.	P	F
2. Gathers the materials.	P	F
3. Explains the procedures to the patient. The exercises will ensure that the patient will have the optimum physical capacity to -	P	F
a. Operate a prosthesis.	P	F
b. Walk safely and efficiently on crutches.	P	F
c. Hop independently on the unaffected leg.	P	F
4. Instructs the exercises to the patient.	P	F
a. Stump extension with pelvic thrust. (See Figure 3-50a.)	P	F
(1) Positions the patient supine with the stump up on a stool. For BK patients, the stool should be placed proximal to the knee. The other leg is extended on the plinth or mat next to the stool and the arms are relaxed at the patient's sides.	P	F
(2) Has the patient push down with his or her thigh on the stool elevating the hips from the plinth or mat while simultaneously lifting the other leg in a straight leg raise.	P	F
b. Adduction with lateral pelvic thrust. (See Figure 3-50b.)	P	F
(1) Positions the patient sidelying with the stump side up and resting on a stool. The other extremity is in slight flexion at the hip in front of the stool.	P	F
(2) Instructs the patient to push down with the stump on the stool lifting the pelvis off the plinth or mat while simultaneously lifting the other leg into adduction crossing in front of the stool.	P	F
c. Extension, adduction, and internal rotation.	P	F
(1) Positions the patient supine on the edge of the plinth or mat with the stump toward the edge. Stands right next to the plinth or mat and positions the patient's stump in flexion, abduction, and external rotation.	P	F
(2) Instructs the patient to stabilize himself or herself with both arms and push the stump down into extension, adduction, and internal rotation. Stabilizes the patient's opposite leg with the body and arms to resist the stump motion.	P	F
d. Stump abduction with pelvic elevation. (See Figure 3-50c.)	P	F
(1) Positions the patient sidelying with the stump side down and resting on a stool. The opposite leg rests on the stump and the arms are in front for balance.	P	F
(2) Instructs the patient to push down with the stump on the stool lifting the pelvis off the plinth or mat. The opposite leg is elevated during exercise but should not be actively pushing down.	P	F

Performance Measures

Results

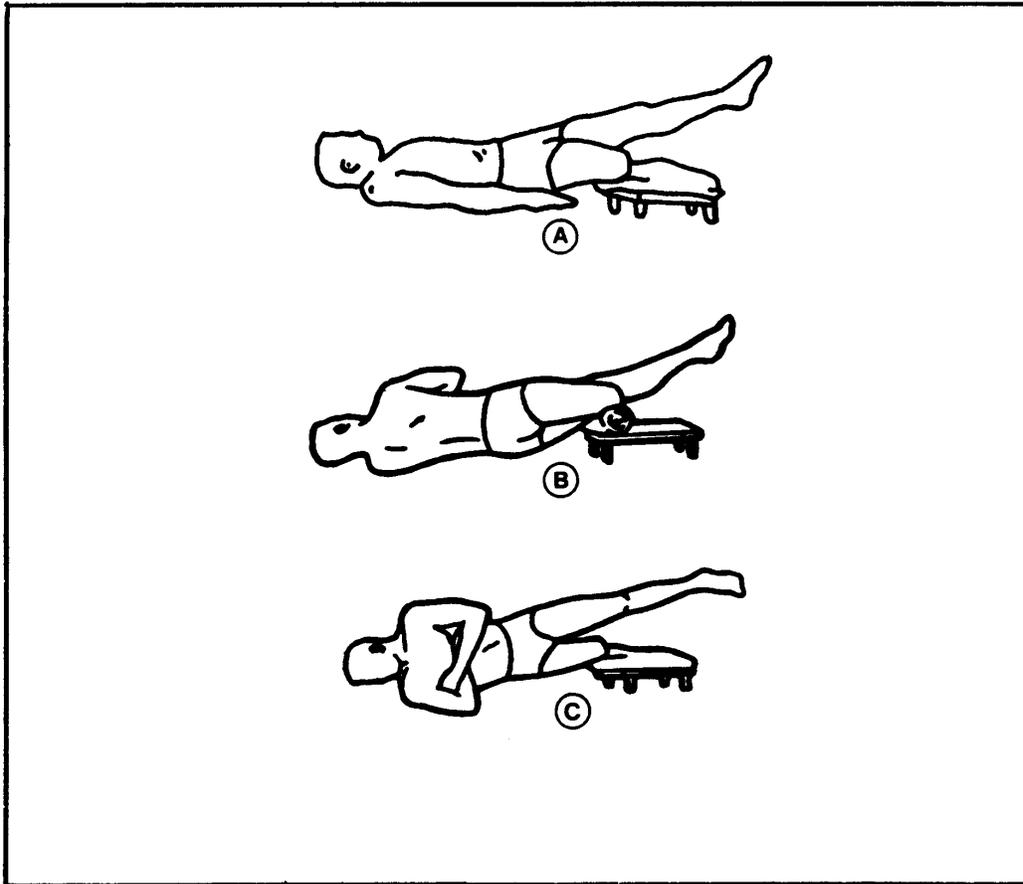


Figure 3-50 Stump Extension With Pelvic Thrust

- | | | |
|--|---|---|
| e. Abduction, extension, and internal rotation. | P | F |
| (1) Positions the patient sidelying with the stump up. Stands behind the patient and positions the stump into flexion, adduction, and external rotation. | P | F |
| (2) Instructs the patient to push the stump into extension, abduction, and internal rotation against the manual resistance provided. | P | F |
| f. Stump extension with anterior pelvic thrust. | P | F |
| (1) Positions the patient sitting on the edge of the mat with the uninvolved extremity off the mat (bilateral amputees will have to be in the center of the mat for safety). The patient's stump is flexed up onto a 6 inch towel roll, and the arms are extended in front of the body. | P | F |
| (2) Instructs the patient to push down against the roll extending the hip and lifting the buttocks off the table. At the same time, he or she brings both arms forcibly to the side and backwards. | P | F |
| g. Adduction and internal rotation of the stump with oblique trunk flexion. | P | F |
| (1) Positions the patient sidelying with the stump down. The upper trunk is rotated so that the uppermost shoulder is back and the trunk forms an angle of approximately 45° with the plinth or mat. The patient's arms are crossed over his or her chest. Stands behind the patient (on a stool if necessary for leverage) and holds the stump down on the plinth or mat. | P | F |
| (2) From the oblique starting position, the patient flexes the trunk obliquely from the table while contracting the adductors strongly against your resistance. | P | F |

Performance Measures

Results

5. Documents appropriate observations in the SOAP notes.

P F

Evaluation Guidance: Score the soldier GO if all steps are passed (P). Score the soldier NO-GO if any step is failed (F). If the soldier fails any step, show what was done wrong and how to do it correctly.

References