Proning of a Mechanically Ventilated Patient

Quicklinks

- Appendix A: Figures
- Appendix B: Potential Complications of Prone Positioning and Interventions
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Site Applicability

VCH – Critical Care Units

PHC – Critical Care units

Practice Level

Basic Skill

- RN
- RT
- Physiotherapists
- Perfusionists

Policy Statements

- Initiation of proning protocol requires an order from the physician. The need for prone positioning should be reviewed daily during interdisciplinary rounds.
- Proning of a patient on extra-corporeal life support (ECLS) must be done with Perfusion at the bedside as well as the physician. Follow the same directions as outlined below, taking extra care with the ECLS cannulas.

Need to Know

- Proning is a planned intervention that requires adequate preparation to ensure patient and staff safety.
- Prone positioning may be indicated for patients in whom conventional ventilation strategies have not been successful in recruiting alveoli; and/or patients with marginal oxygenation despite maximal ventilation support.
- The use of prone positioning is discontinued when the patient can be adequately supported with mechanical ventilation alone or no longer has improved physiological responses to ventilation and oxygenation in the prone position

- Exclusion criteria for prone positioning are considered in collaboration with the interdisciplinary team.
- Contraindications and considerations for proning include:

Absolute Contradindications to Proning
• Unstable spine, femur or pelvic fractures • Pregnancy in the third trimester • Endobronchial tubes • Increased intracranial pressure • Serious facial trauma or surgery, eye trauma or injury (e.g. ocular globe rupture) during the previous 15 days
Relative Contraindications to Proning
• Unstable sternum or sternotomy within 2 weeks. • Tracheostomy or tracheal surgery within 2 weeks. • Major abdominal surgery within 2 weeks. • Open abdominal wound and/or ostomy • Open chest • Burns or open wounds on the ventral body surface • Extracorporeal Life Support (ECLS)
Considerations for Proning
• Continuous Renal Replacement Therapy (CRRT) • Temporary pacemaker • Grossly distended abdomen • Gross ascites • Difficult intubation

- Patient should remain in prone position at least 12 – 16 continuous hours per day unless otherwise ordered.
- The effect of prone positioning is not immediate and may take several hours to have a measurable positive effect.
- Proning can have an impact on patient's cardiopulmonary status. Carefully monitor respiratory and hemodynamic status during the entire intervention. If patient's status changes, review intervention with physician or delegate.
- Whenever possible, turning from prone to supine or supine to prone should be performed during day hours when staffing or resources are optimal.
- Prone positioning can be associated with complications including:

Potential Complications of Proning
• Compromising airway security (unplanned extubation, main stem bronchus intubation, artificial airway obstruction etc.) • Dislodging vascular catheters, tubes and drains. • Hemodynamic instability • Difficulties monitoring patient • Increasing difficulty ventilating patient • Worsening respiratory function • Increased risk of pressure injury (BD-00-12-40079) • Eye injury due to orbital compression (e.g. conjunctival edema, corneal or sclera abrasion ulceration, retinal ischemia, blindness) • Venous congestion of head and neck • Nerve compression to brachial plexus and ulnar nerve • Death – secondary to hypoxia and/or hypotension.

Equipment and Supplies

- Don PPE as required
- Therapeutic Support bed if available. (One should be ordered for patient if not readily available.)
- Wedge cushion.
- ECG leads.
- Dryflow pads.
- Flat sheet.
- Extra pillows.
- Four to five staff members at a minimum:
  - An RT is responsible for the artificial airway and ventilator tubing during the turn.
  - An RN should be delegated to monitoring patient comfort, physiologic stability, and attachments (e.g. lines or tubes) during turns.
  - The individual holding the head is the team lead and will coordinate the required steps.
  - The remaining individuals will position the limbs and torso.

Procedure:

A. Preparation for Supine or Prone Positioning

Steps	Rationale
1. Perform hand hygiene	
2. Don appropriate Personal Protective Equipment (PPE)	
3. Ensure physicians order.	
4. Check for contraindications and discuss with Intensivist or delegate as appropriate.	
5. Explain procedure and purpose of prone or supine position to patient and family.	
6. If patient is Supine, transfer to therapeutic support bed and weigh patient.	To minimize potential for pressure injury. (BD-00-12-40079) The bed will optimize mattress pressure based on the patient's weight.
7. **If patient is prone** and not on a therapeutic support bed, be sure to transfer when next supine.	
8. Perform assessment (vital signs, ABG, complete patient head to toe etc.).	To assess the patient's response to intervention
9. RT to: • Ensure Artificial airway position is verified with recent chest X-ray • Pre-oxygenate patient on 100% FiO_2 • Secretions are managed via suctioning above and below the cuff. • Artificial airway is insitu and firmly secured. Only use twill ties or low profile securing device to prevent pressure injury to face or cheeks. Replace artificial airway securing device prior to proning procedure. • Ventilator tubing is positioned on side of mouth furthest from ventilator • Emergency airway equipment is at HOB. Consider intubation box at bedside or additional personnel readily available if known difficult airway.	To minimize potential for extubation and artificial airway displacement during positioning

Steps	Rationale
10. RN to assess **Feeding Tubes:** • Patient should be fed via post pyloric tube when in prone position. • If no post-pyloric feeding tube in place, obtain order from MD and insert prior to proning. • If unable to place, attempt placement when patient resumes supine position. • Connect large bore gastric tube to suction and empty contents. • Leave large bore gastric tube in place.	To minimize potential for aspiration
11. RN to assess **LINES:** • Check all IV or arterial lines, drainage tubes etc. are secure with adequate tubing length • Flush and lock any unused lines as per protocol • Reposition all lines and tubes that are located above the patient's waist straight upward toward the head of the bed. • Reposition all chest tubes as well as lines and tubes that are located below the waist (e.g., bladder catheter, femoral lines, and fecal drainage systems) straight down toward the foot of the bed. • Relocate all drainage bags on opposite side of bed. BE SURE to cross the lines from this drainage bags under the patient and not across their front.	Placing all lines and tubes in an upward and downward line from the patient facilitates turning, prevents the lines and tubes from tangling or getting caught underneath the patient, and reduces the risk of pressure injury. To ensure the drainage bags end up on the same side as the drain site when patient is positioned. Crossing the lines under the patient prior to turn ensures that the lines are not trapped between the bed and patient after reposition.
12. Perfusion to assess ECLS lines: • Ensure the length of the lines are long enough for the entire turning process • Unlock the wheels on the ECLS base	• To prevent accidental decannulation • To prevent kinking of lines and disruptions in blood flow and support

Steps	Rationale
13. RN to provide all **anterior body care** if patient is **SUPINE** and all **posterior body care** if **prone**: • Change any wound dressings, emptying of ileostomy or colostomy bags etc. • Identify areas for potential skin breakdown. • Wash face and apply barrier cream. • Perform eye care. Lubricate eyes and close eyes. • Perform mouth care. • Suction patient prn. • Ensure tongue is inside patient's mouth; if swollen and/or protruding monitor it closely. • Remove patient gown	Reduces the risk of moisture associated skin damage to face from increased moisture due to saliva. To minimize injury to tongue. Position patient's head to minimize pressure to tongue. To minimize pressure injuries from buttons or gown.
14. RN to **reposition electrodes**: (Note: Pressing Update Lead Set on the GE monitor will reduce beeping until V3 Lead can be placed on patient). ***If patient is turning Supine to Prone*** • LA lead to left shoulder • RA lead to right shoulder • LL lead to left lower back • RL lead to right lower back. • Remove V3 lead from its anterior placement and **place it in posterior position once patient is prone** (See Appendix A: Figure 1) ***If patient is turning Prone to Supine*** • Left shoulder lead to LA • Right shoulder lead to RA • Left lower back lead to LL • Right lower back lead to RA • Remove V3 lead from its posterior placement and **place it in anterior position once patient is prone** (See Appendix A: Figure 1)	To minimize pressure points anteriorly when patient is placed prone.
15. Administer sedatives and analgesics as needed and consider need for paralytics	To ensure patient comfort.
16. Remove headboard and footboard of bed if able	To allow for easier turns.
17. Move bed out from wall to provide access to the head of the bed. Apply brakes.	

Steps	Rationale
18. Gather staff members to perform turn.	
19. Staff members to position themselves: • The Leader at HOB is responsible for the patient's head and directing the turn. • The RT at HOB is responsible for artificial airway and ventilator tubing during turn. RT to disconnect EVAC suction tubing, airway suction tubing and ETCO2 monitoring prior to turn • The remaining 2 to 3 individuals will position limbs, torso and equipment throughout turn.	
20. Tuck patient's arms along the side of the body with fingers pointing towards toes. Keep arms as close to body as possible.	These positions protect the arms from injury and make turning easier.
21. Turn patient's head away from ventilator.	To ensure patients face is upward facing throughout turn.
22. **Perform a "Time Out" to review procedural steps with entire team prior to initiation of patient turn**.	
23. Prior to turning, review the expectations for when to turn (for example, "we will turn when I say 3 in a 1, 2, 3 count").	
24. Max inflate mattress, HOB at zero degrees as tolerated, and adjust bed to working height.	

B. Establishing Prone Position using the Burrito method

(Note: Demo of the "burrito" method – https://www.youtube.com/watch?v=bE4mmGdjA5I)

Steps	Rationale
1. Ensure you have completed steps outlined in *Preparation to turning Prone or Supine.*	
2. Always follow directions of the leader.	
3. Ensure patient's head, lines, tubes etc. are monitored and supported throughout turn.	

Steps	Rationale
4. Place linens on top of patient: a. In this order place over the patient: i. Dry flow pad ii. One flat sheet iii. Ceiling lift sling as per unit practice (mesh if on air mattress) **RH:** place pillow on upper chest, 1 on lower abdo or pelvic area, and 1 over shins. b. The flat sheet and sling should cover the head to foot of the patient. c. Fold the section of the sheet and sling that is above the shoulders so that the patient's head is not covered up. d. Press MAX-INFLATE if on therapeutic support bed mattress.	The top linen will become the new bottom linen following proning. This linen will facilitate turning and make the bed in the same step. **RH:** allows abdomen to hang unrestricted and feet to dangle. The head must be uncovered to observe the airway.
5. Tightly roll the sling with sheets on each side of the patient like a burrito to secure patient firmly between the linens.	Securing the patient between the sheets helps maintain alignment and protect limbs during turning. The burrito method help facilitate turning while keeping patient secure.
6. Slide the patient to the side of the bed away from the ventilator.	The patient will be turned to face the ventilator. This provides the most "slack" for the ventilator tubing. Moving the patient away from the ventilator ensures sufficient bed surface for pronation.
7. To turn patient laterally: a. Hold tightly onto burrito at each side to secure patient b. Slowly turn patient laterally to face ventilator. c. When patient turned fully laterally, **pause.** d. Adjust artificial airway and tubing in preparation for final turn e. Ensure there is no undue tension on lines and tubing. Once confirmed continue with final step of procedure.	By taking a moment to review the steps, all members of the team have the same expectation. This ensures both patient and staff safety and makes the process much more efficient.
8. To complete the pronation: a. Hold tightly onto burrito at each side to secure patient b. Gently rotate and prone patient supporting patient's head	Airway positioning must take priority for turning speed. This

Steps	Rationale
and neck throughout c. Remove old linen; Straighten out new linens under patient. d. Position patient so their body is in middle of bed and head is resting on mattress in line with top of bed.	step poses the greatest risk for the artificial airway.
9. Perform Post Turning Care	

C. Establishing Supine Position

Steps	Rationale
1. Ensure you have completed steps outlined in *Preparation to turning Prone or Supine.*	
2. Always follow directions of the leader.	
3. Ensure patient's head, lines, tubes etc. are monitored and supported throughout turn	
4. Place linens on patient: a. In this order place Dry flow pad, one flat sheet and ceiling lift sling (mesh if air mattress) over the patient. b. The flat sheet and sling should cover the head to foot of the patient. c. Fold the section of the sheet and sling that is above the shoulders so that the patient's head is not covered. d. Press MAX-INFLATE if on therapeutic support bed mattress.	The top linen will become the new bottom linen following supination. This linen will facilitate turning and make the bed in the same step. The head must be uncovered to observe the airway.
5. Tightly roll the sling or sheets together like a burrito to sandwich patient firmly between the sheets.	Sandwiching the patient between the sheets helps maintain alignment and protect limbs during turning. The burrito helps facilitate turning while keeping patient secure.
6. Slide the patient to the side of the bed away from the ventilator.	The patient will be turned to face the ventilator. This provides the most "slack" for the ventilator tubing.

Steps	Rationale
	Moving the patient away from the ventilator ensures sufficient bed surface for supination.
7. To turn patient laterally: a. Turn head **away** from ventilator. To do this gently lift patients shoulder or upper torso to allow head to rotate freely. b. Hold tightly onto burrito at each side to secure patient c. Slowly turn patient laterally towards the ventilator. d. When patient turned fully laterally, **pause.** e. Position artificial airway and tubing in preparation for final turn f. Ensure there is no undue tension on lines and tubing. Once confirmed continue with final step of procedure.	By taking a moment to review the steps, all members of the team have the same expectation. This ensures both patient and staff safety and makes the process much more efficient. To ensure when patient turned, he or she has space to rotate head towards the ventilator.
8. To complete the supination: a. Hold tightly onto burrito at each side to secure patient b. Gently rotate into supine position supporting head and neck throughout c. Remove old linen; Straighten out new linens under patient. d. Position patient so their body is in middle of bed and head is resting on mattress in line with top of bed.	Airway positioning must take priority for turning speed.
9. Perform post supination care	

D. Post Proning Care

1. Place V3 lead accurately for either prone or supine positioning – refer to Appendix A: Figure 1. Recalibrate monitoring lines and ensure all parameters and alarms are reviewed.
2. Ensure patient lines and tubes are tension free. Ensure stopcocks are moved to prevent the patient from lying on them.
3. Reconnect IV infusions that were temporarily on hold for turning.
4. If patient has a post pyloric feeding tube, initiate or resume enteral feeds as ordered.
5. ECLS lines should be rechecked by Perfusionist from access line to return line to ensure circuit is void of any kinks etc.
6. Place BP cuff high on the arm to prevent neuromuscular compression in the antecubital fossa.
7. Re-connect IV infusions that were temporarily on hold for the proning.
8. Cancel MAX-INFLATE.

9. Auscultate patient's chest to ensure proper placement of artificial airway.
10. RT to resume end-tidal CO_2 monitoring, EVAC suction and airway suction tubings.
11. If patient's status permits, they should be positioned in ¾ prone alternating with fully prone position q2h.
12. If intolerant of ¾ prone or severe respiratory compliance issues – position patient fully proned.
13. **In all positioning of arm, head of humerus should not be overstretching and compressing axillary neurovascular bundle.**
14. DO NOT elevate upper limbs on pillows or beside tables as this will cause hyper-extension of joints causing torsion of nerves, joints and vessels.
15. Nursing or RT to reposition patient's head and arms q 1 – 2 hours. Reconfirm placement of lines and tubes after repositioning of patient's head.
16. Follow instructions below for ¾ and fully proned patients.

Instructions for 3/4 Prone Positioning	Instructions for Fully Prone Positioning
1. Turn patient's head to face side that wedge will be placed.	1. Ensure the head is in line with the spine; face is not turned into mattress and hips parallel to the spine.
2. Following Leader's directions, use ceiling lift and sling (only use sling loops on wedge side of the patient) to lift patient 45 ° laterally to allow placement of wedge, or manually lift patient laterally to place wedge. 3. Place wedge under patient's torso. 4. Ensure that head is in line with the spine, hips parallel to the spine and the patient is not face down into the mattress. 5. Place patient's arm furthest from wedge at their side (hip level), palm up.	2. Place patient's arms in a swimmer's position. a. Arm that patient is facing AWAY from by their side, palm up, elbow flexed at 30 – 45 degrees. For example, at hip level with palm up. b. Arm that patient is facing TOWARDS at 75 degrees of abduction at shoulder, elbow is flexed at 90 degrees, hand toward head of bed, and fingers extended (if possible). For example, palm down by patient's chin. c. If tolerated, flex hip and knee on the side patient is facing at less than 45° degrees. d. See Appendix A: Figure 2 for positioning
6. Gently position arm elevated on wedge at 75 degrees at shoulder while elbow is flexed at 90 degrees, hand toward head of bed, and fingers extended (if possible). For example, palm down hugging wedge. 7. Flex leg closest to wedge at hip less than 45 ° and knee less than 45 ° 8. See Appendix A: Figure 2 for positioning	

Nursing Care and Monitoring of Patient during Prone Position

1. Anticipate potential complications of prone positioning and provide appropriate interventions – please refer to Appendix B
2. For instructions on how to perform CPR while patient is proned - please refer to Appendix C.

Nursing Interventions	Rationale
• Reverse trendelenburg bed to 20° • Head is in a neutral position (not extremely rotated, flexed or extended). • Peri-orbital area and eyes have no pressure on them • For large breasted women, position breast laterally to reduce pressure on nipples or breast tissues • Male genitalia should hang freely • Foley is positioned between legs	To minimize incidences of aspiration and decrease venous congestion to head and neck To minimize incidences of pressure injury
• Assess patient RASS goal is met and maintained along with routine pain assessment using NRS and BPS scales.	Administering analgesia, sedation, and/or paralytics to ensure patient comfort and physiological needs met.
• Assess patient and hemodynamic parameters to ensure tolerance of Supine or Prone Positioning	
• Place gown, blanket or sheet on patient.	Ensure patient is covered as more surface area is exposed for heat loss.
• Return side rails to original position and adjust height of bed into lowest position.	
• If patient has a post pyloric feeding tube, initiate or resume enteral feeds as ordered. • Check gastric residuals Q4H. Discard all gastric residuals. (DO NOT ATTACH GASTRIC TUBE TO SUCTION). • If GRV greater than 400ml/4h OR contains significant amount of tube feeds, stop feeds and inform physician. (**VGH:** Refer to ICU Guideline: Post-pyloric feeding.) • If patient does not have a post pyloric feeding tube, hold feeds. Insert post-pyloric feeding tube when next placed in supine position.	To minimize risk of aspiration. When administering post pyloric enteral feeds, gastric tube should not be connected to suction as it may contribute to retrograde flow of post pyloric feeds.
• Systematic or Head to Toe Assessments as per unit routine • Skin assessments q2h, in particular to shoulders and knees for indications of pressure injury. • Follow oxygenation and hemodynamic status closely to monitor for deterioration. • Mixed venous gas and ABG as per unit routine • Perform oral care and suctioning of airway as per routine and as needed.	To minimize risk of pressure injury (BD-00-12-40079)

Nursing Interventions	Rationale
• **WHEN SUPINE**: reposition patient q2h. • **WHEN PRONE**: a. Skin condition should be assessed q2h to face or arms. b. Head and limb repositioning should be done every 1 to 2 hours. Please refer to instructions in following table.	

Instructions: Repositioning A Patient's Head When Prone	
• Follow leader's instructions. • Pull bed away from wall and remove headboard.	
Steps	**Rationale**
Ceiling Lift Technique 1. Leader to hold patient's head at all times and secure artificial airway. 2. Attach all sling straps EXCEPT the fours straps (two each side) at patient's head or upper body. 3. Raise patient 2 inches off bed and slide patient in ceiling lift up the bed so head is off the bed 4. Leader to rotate patient's head. 5. Slide patient in ceiling lift back down the bed so head is back on the bed. Lower patient onto bed	To allow enough space to reposition patient towards ventilator. To allow for safe repositioning of patient's head by person at HOB.
Manual Lift Technique 1. Leader to hold patient's head at all times and secure artificial airway. 2. Primary RN and other staff member to boost patient so head is off the bed 3. Leader to rotate patient's head. 4. Primary RN and other staff member to slide patient back down the bed so head is back on the bed.	To allow enough space to reposition patient towards ventilator. To allow for safe repositioning of patient's head by person at HOB.
• Straighten out linens and position patient so their body is in the middle of the bed • Reposition limbs in swimmer's position – refer to Appendix A Figure 2	

Documentation

1. All documentation must include patient's pre and post-intervention assessment
2. Document in the nurses' notes:
    - Patient and Family education
    - Complications during and post procedure
    - Response to proning
    - Total Length of time in the prone position

- Response once returned to supine position
- Unexpected outcomes
- Nursing interventions

3. Document on Critical Care Flow sheet
   - Amount and type of secretions
   - Prone position (fully, left, right)
   - Length of time in each position
   - Turns to head or arms.
   - Eye care and Mouth care
   - ABG results
   - Endotracheal or Tracheostomy tube position
   - Ventilation and oxygenation.
4. Document on Pain Agitation Delirium Record - Medications administered during procedure.
5. Document on the Kardex:
   - Positioning schedule
   - Time proned and expected time to re-supinate

Adapted from similar protocols developed at:

1. London Health Sciences Center, Procedure for turning a ventilated patient prone in CCTC (August 2, 2013). Accessed April 30th, 2016 http://www.lhsc.on.ca/Health_Professionals/CCTC/procedures/proning.htm
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	Endorsed By: PHC Professional Practice	**Endorsed By:** (Regional SharePoint 2nd Reading) Health Authority Profession Specific Advisory Council Chairs (HAPSAC) Health Authority and Area Specific Interprofessional Advisory Council Chairs (HAIAC) Operations Directors Professional Practice Directors **Final Sign Off:** Vice President, Professional Practice and Chief Clinical Information Officer, VCH
Owners: *(optional)*	**PHC**	**VCH**
		DST Developer Leads: • RN, VGH ICU CNE • RN SPH ICU • Clinical Perfusionist, Perfusion Services and Perfusion Clinical Education, VCH **Other Members:** • Medical Director VGH ICU • VGH ICU CNE • VGH ICU and HAU CNS • VGH ICU Dietician • Respiratory Practice Lead • Physiotherapist • Physiotherapist • Professional Practice Lead for Wound and Ostomy

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Appendix A: Figures

1. Posterior Placement of ECG Monitoring Leads

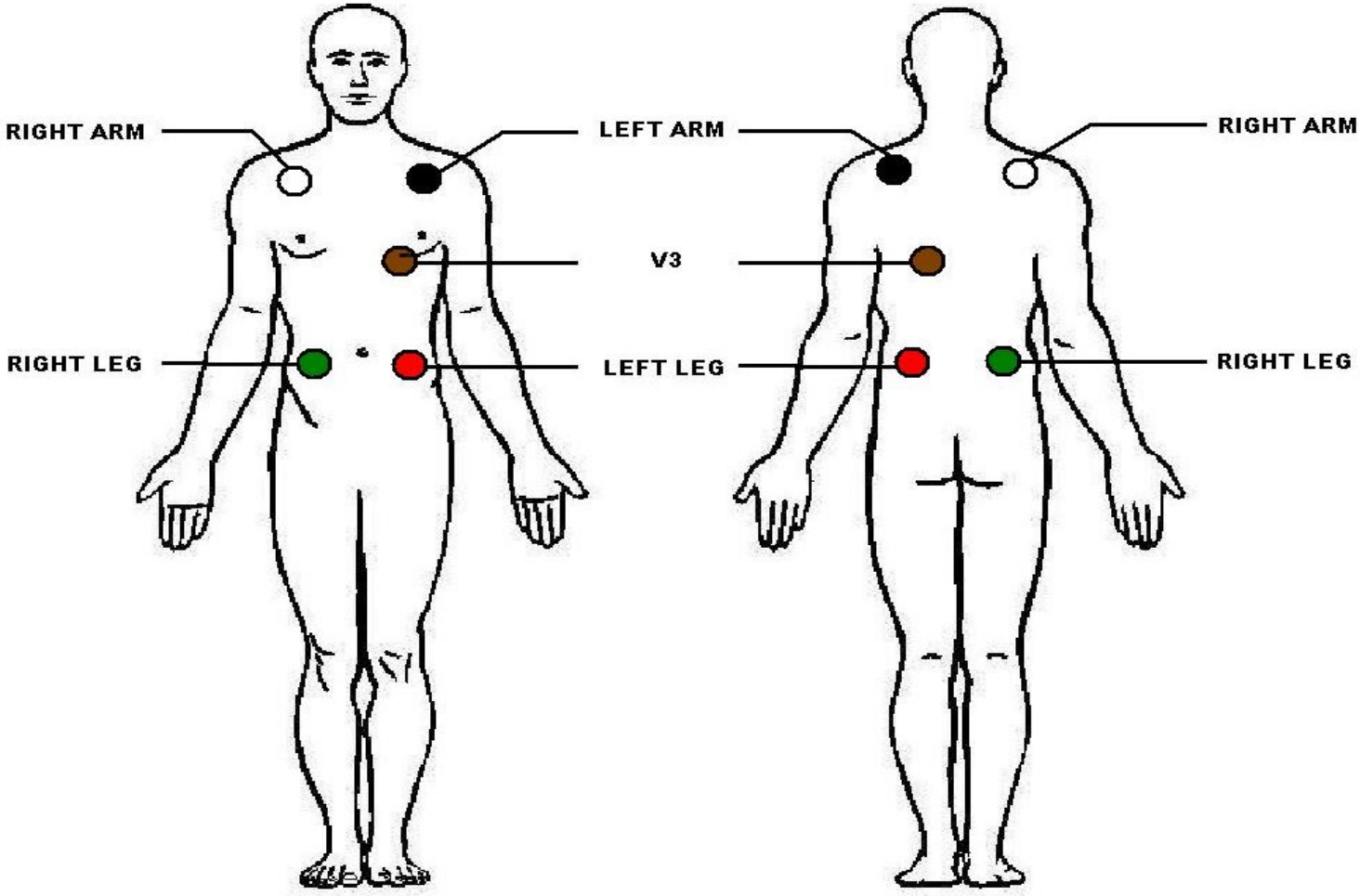
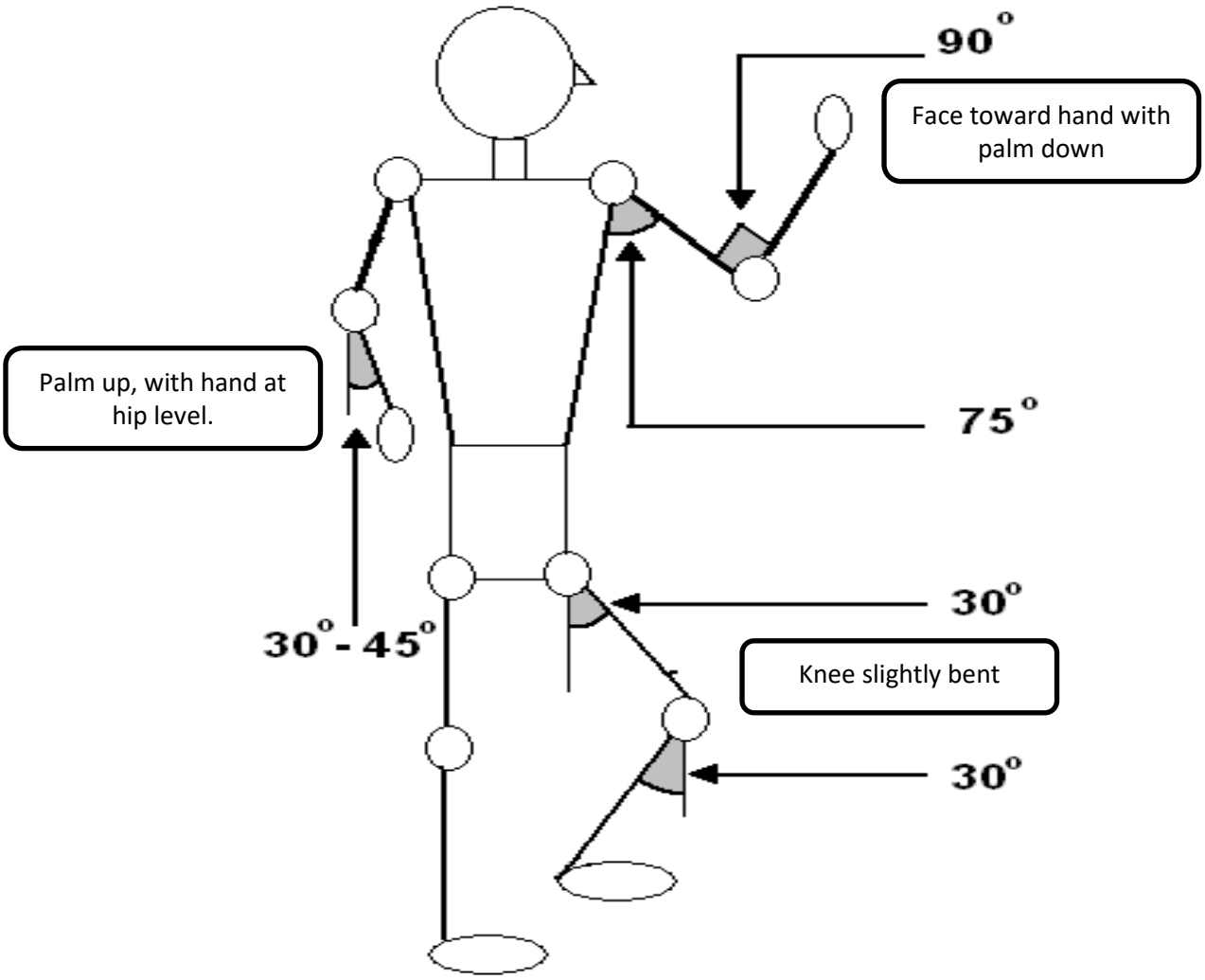


Figure 2: Limb Positioning for Three Quarter (3/4) and Fully Proned Patients

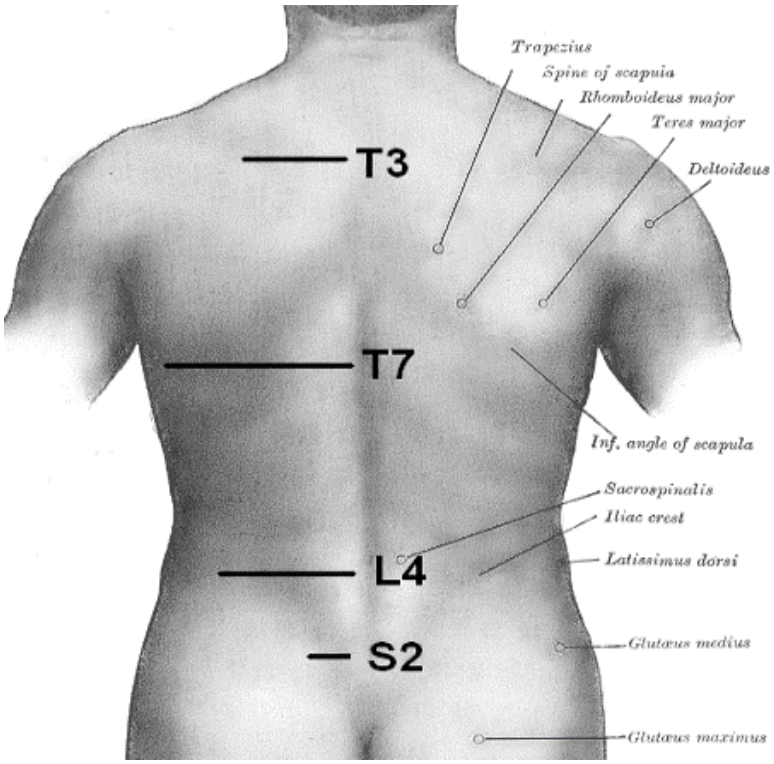


Appendix B: Potential Complications of Prone Positioning and Interventions

Complication	Prevention and Intervention
Skin Breakdown or Pressure injury: Due to prolonged time between position changes.	1. Inspect skin for any new or additional damage each time patient is repositioned. 2. Reposition patient head q 1 to 2 hours, turning head side to side and alternating positions of arms accordingly. 3. When repositioning head ensure a) NG or OG are not anchored to patient's cheeks and instead just to nose; b) Pressure is not placed on Anchor Fast 4. If patient is tolerant reposition from full prone to ¾ prone (see procedure outlined above) q 2 hours. 5. If patient intolerant of ¾ prone, make small incremental changes in patient's position q 1 – 2 hours. 6. Ensure no hard pieces of plastic are under body and smooth wrinkles from bedding. 7. Ensure wet or soiled linens (e.g. due to oral secretions, wound drainage etc.) is changed in a timely fashion to minimize skin breakdown. 8. Wash face and apply barrier cream to protect against moisture associated skin damage (MASD) by saliva. 9. (BD-00-12-40079)
Eye damage Due to orbital compression when prone resulting in conjunctival edema, corneal scratch, sclera abrasion or ulceration, retinal ischemia and blindness.	1. Ensure eye is supported free of bed surface 2. Rotate head laterally when positioned 3. Eye care q 2 hours. Lubricate and close eyes to prevent corneal drying, abrasion or infection.
Venous congestion of head and neck: Due to face positioning below level of heart.	1. Placing bed in a reverse trendelenberg at 25 – 30° 2. Ensure no pillow under head 3. Turning head every 2 hour to ensure adequate arterial perfusion and venous drainage 4. Avoid over extension of neck with positioning.
Nerve compression to limbs: Due to improper positioning of limbs.	1. Follow recommended limb positioning techniques 2. Avoid over extension of joints with positioning
Contractures: Due to improper positioning of limbs.	1. Ensure use of therapeutic bed 2. Follow recommended limb positioning techniques

Appendix C: CPR on a Prone Patient

1. Follow ACLS Protocol
2. **Do NOT** place patient in a supine position
3. Emergency deflate bed
4. Perform Prone CPR
    a. Place board under patient at sternum
    b. Compressions by rescuer will be performed over thoracic bodies 7 – 10. To landmark, find inferior border of scapulae and slide your hands medially to T7.



    c. Place both hands on the patient's spine over T7 and commence compressions using two hand on spine
5. Defibrillation or Pacing: Place Zoll defibrillator pads anterior or posterior as required
6. Turn patient supine only if:-
    a. Unable to achieve adequate compressions with CPR
    b. There are enough adequate experience personnel to perform safely

    Moving a patient from a prone position frantically without proper personnel and preparation may result in unplanned extubation and loss of IV access.
7. https://www.youtube.com/watch?v=AL-ZKsCN_o0

Appendix D: Richmond Hospital and Lions Gate Hospital Proning Checklist

Proning Checklist (3 pages in total)

Duration of proning varies from 6 to 20 hours (if tolerated). Duration should be specifically ordered by physician.

In preparation for proning

- ☐ Consider holding feeds for an hour prior to turn and/or insertion of a post-pyloric feeding tube
- ☐ Perform any necessary dressing changes
- ☐ Empty all drains
- ☐ Perform and document complete patient assessment and vital signs
- ☐ If applicable, change ETT securement device to one without pressure points (e.g. stable-tube or twill tape)
- ☐ Physician in house (in hospital) during proning

Immediately prior

- ☐ Ensure adequate analgesia and sedation
- ☐ Remove patient gown
- ☐ Reposition ECG leads to arms or side
- ☐ Perform oral and eye care (tape eyes shut if they remain open). Ensure tongue is not protruding.
- ☐ Check securement and measurement of the ET tube. Double secure if necessary.
- ☐ Apply skin protectant to face to protect from oral drainage
- ☐ Assess for potential pressure areas (bony prominences) and apply padding as necessary
- ☐ Disconnect all non-essential tubes, lines or monitoring devices for turn (e.g. enteral feeds, SCCDs)
- ☐ Preoxygenate

Turning prone

Turning procedure requires at least 5 team members. One for head and airway and two for reach side. Person at head directs team.

- ☐ Place sheet under patient extending from feet to shoulders
- ☐ Place tubes, lines or monitoring devices up or down as appropriate (e.g. IVs to head, chest tubes or foley to feet)
- ☐ Tuck arms under torso
- ☐ If required, place soaker pad face down over pelvic area
- ☐ Place pillows over chest, pelvis and shins
- ☐ Place gel donuts to protect face from pressure points
- ☐ Place a draw sheet over patient, soaker pad, and pillows
- ☐ Roll top and bottom sheet tightly together against patient's side
- ☐ Max-inflate bed

- ☐ Move patient as far as possible to edge of bed away from ventilator
- ☐ With RT at head of bed managing airway, roll on side facing ventilator and reposition tubes, lines or leads further as necessary
- ☐ Complete roll to prone position. Readjust position.
- ☐ Rotate arms parallel to body then flex so lying adjacent to head. Alternately swimmers position can be used.
- ☐ Turn off max-inflate
- ☐ Check pillows and gel donuts placed appropriately. Should support shoulders and pelvis allowing abdomen to hang unrestricted. Legs should be supported under shins allowing feet to dangle.
- ☐ Reconnect tubes, lines or monitoring devices that were disconnected for turn(e.g. enteral feeds, SCCDs)
- ☐ Reposition leads to back (mirror anterior placement)
- ☐ If required, re-level transducers to 4th intercostal space, mi anterior-posterior chest
- ☐ Place bed in revers Trendelenberg to greatest degree tolerated

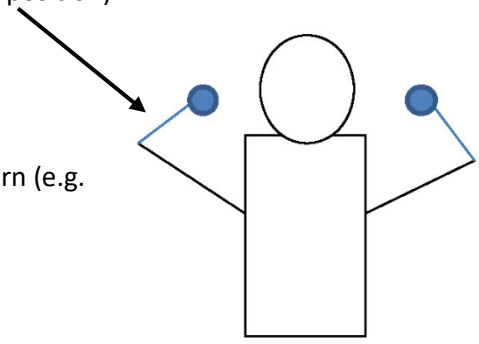
Assessment of tolerance

HR, BP and RR may increase; SpO^2 and SvO^2 may decrease initially.

- ☐ Report if parameters to not improve or return to baseline within 5 to 10 minutes.

Nursing care while in prone position

- ☐ Expect a certain amount of facial edema. Reverse Trendelenberg positioning should help minimize this.
- ☐ Pay special attention to skin care and assessment while proned, especially ears, face and bony prominences.
- ☐ Reposition the head every 1 to 2 hours. One team member should support the head hwile the rest of the team slide patient up until head clear of mattress. Head and airway can then be rotated to other side.
- ☐ Tilt patient side to side every 2 hours using extra pillows while in prone position or a rotation module can be used to rotate between supine (prone) and the side the head is facing.
- ☐ Reposition arms every 1 to 2 hours (side lying, above head, or flexed position).
- ☐ Ensure elbow is anterior to head and arm is not overstretched to prevent nerve compression. Consult physiotherapist if available.



Turning back to supine position

- ☐ Disconnect all non-essential tubes, lines or monitoring devices for turn (e.g. enteral feeds, SCCDs)
- ☐ Reposition ECG leads to arms or side
- ☐ Bring arms down to sides of body. Remove shin pillow.
- ☐ Move patient as far as possible to side of bed closest to ventilator.
- ☐ Cross leg closest to edge of bed over the opposite leg
- ☐ Roll top and bottom sheets tightly together against patient's side
- ☐ Turn away from ventilator onto side and reposition tubes, lines or leads further as necessary

- ☐ Complete roll to supine position
- ☐ Reposition leads to standard anterior placement
- ☐ If required, re-level transducers to 4th intercostal space, mid anterior-posterior chest
- ☐ Reconnect tubes, lines or monitoring devices that were disconnected for turn(e.g. enteral feeds, SCCDs)
- ☐ Assess and document skin condition post prone positioning

Cardiac Arrest Management

- An uncontrolled flip can potentially result in dislodgement of ET tube and/or loss of IV access.
- Defibrillation can be attempted in prone position (anterior-posterior).
- Flip back to supine only if initial efforts unsuccessful. Consider disconnecting briefly from ventilator for flip.

Appendix E: Proning of an Awake Non-Intubated Patient

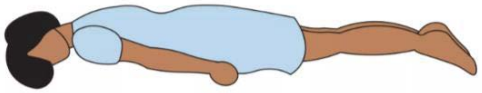
Note the following prior to this procedure:

- Connect with Respiratory Therapist prior to proning to assess and assist as needed.
- Proning of awake patients with no artificial airway assists with lung recruitment and improves oxygenation.
- Proning of awake non-intubated patients can potentially prevent the need for intubation and mechanical ventilation.
- At any time if patient status decompensates (i.e. LOC changes, worsening respiratory status, hemodynamic compromise), position patient supine with HOB at a comfortable level, and notify the health care team immediately to discuss the plan of care needed for potential intubation
- Ensure continuous monitoring and assessment of respiratory and hemodynamic status before, during and following position change.
- Following all position changes, assess pain and comfort. Use pillows to offload the lumbar spine to assist with patient comfort as needed.
- Follow principles of good body mechanics while assisting turning, repositioning or any position changes as needed– please review **MSIP Patient Handling (Online)** available on Learning Hub.
- Position in semi or high fowlers for at least 30 min following all PO intake.
- Refer to above procedure section for step by step guidance if needed.

Recommendations:

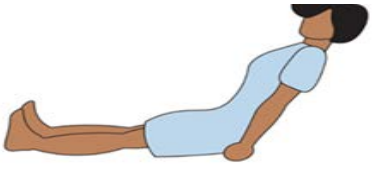
1. Avoid having the patient lying flat on their back. Laying on their stomach and in different positions will help their body get air into all areas of the lung.
2. Recommend changing positions every 30 minutes to 2 hours, with sitting up in high or semi fowlers.
3. Recommend position changes such as:

i. Lying on the abdomen or belly with face turned to the side.



ii. Right side lying

iii. Supine in high or semi fowlers



iv. Left side lying