

PRONE POSITIONING FOR THE NON-INTUBATED PATIENT

Guidelines for turning the non-intubated patient with ARDS/Covid-19 ARDS from supine to prone position in an attempt to increase pulmonary capillary perfusion, oxygenation, and potentially decrease the need for intubation (*MercyOne, 2020*).

1. Benefits: potential physiological benefits include:

- a) Improved ventilation /perfusion
- b) Reduced hypoxemia
- c) Reduced shunt
- d) Recruitment of the posterior lung segments due to reversal of atelectasis
- e) Improved clearance of secretions (*NursingCenter, 2020*)

2. Circumstances:

- a) Setting: Any inpatient meeting criteria (as stated below)
- b) Considerations: Prone position considerations for the non-intubated awake patient with ARDS or COVID-19 ARDS:
 - I. Any inpatient with isolated hypoxemic respiratory failure without substantial dyspnea. A reasonable candidate may meet the following criteria:
 - a) Not in multi-organ failure
 - b) Expectation that patient has a fairly reversible lung injury and may avoid intubation
 - c) No hypercapnia or substantial dyspnea
 - d) Normal mental status, able to communicate distress (*MercyOne, 2020*)
 - e) Suspected or confirmed COVID-19 infection
 - f) FiO₂ greater than or equal to 28% or requiring basic respiratory support to achieve SaO₂ 92% to 96% (88% to 92% if risk of hypercapnic respiratory failure)
 - g) Ability to rotate to front and adjust position independently
 - h) Absence of anticipated airway issues (*NursingCenter, 2020*)
 - i) Patients who do not wish to be intubated (DNI) and can tolerate the prone position (*MercyOne, 2020*).

3. Contraindications: Evaluate patient for the following absolute and relative contraindications:

1. Absolute contraindications:
 - a) Respiratory distress
 - b) Immediate need for intubation
 - c) Hemodynamic instability (SBP less than 90 mmHg) or arrhythmia
 - d) Agitation or altered mental status
 - e) Unstable spine/thoracic injury/recent abdominal surgery (*NursingCenter, 2020*)
2. Relative contraindication:
 - a) Facial injury

- b) Neurological issues (e.g. frequent seizures)
 - c) Morbid obesity
 - d) Pregnancy (2nd/3rd trimesters)
 - e) Pressure injuries (*NursingCenter*, 2020)
3. Procedure: Assess mobility, mental status, and evaluate for contraindications to prone position, if no contraindications are present proceed by explaining the procedure (*MercyOne*, 2020).
- a) Ensure oxygen therapy and basic respiratory support; make sure there is adequate length of tubing.
 - b) Use pillows, as needed, to support the chest.
 - c) Reverse Trendelenburg position may aid comfort.
 - d) Monitor oxygen saturation for 15 minutes. Goal is SpO₂ 92% to 96%, 88% to 92% if risk of hypercapnic respiratory failure.
 - e) Continue prone positioning and change position every 1 to 2 hours with the goal of keeping the patient prone as long as possible.
 - i. Use timed position changes; ask the patient to switch positions as follows:
 - 30 minutes to 2 hours lying fully prone (bed flat)
 - 30 minutes to 2 hours lying on right side (bed flat)
 - 30 minutes to 2 hours sitting up (30 to 60 degrees) by adjusting head of bed
 - 30 minutes to 2 hours lying on left side (bed flat)
 - 30 minutes to 2 hours lying prone again
 - Continue to repeat the cycle.
 - f) When not prone, position patient supine, upright 30 to 60 degrees.
4. If oxygen saturations deteriorate:
- a) Ensure oxygen is connected to patient.
 - b) Increase FiO₂ (per facility policy or prescriber's order).
 - c) Change patient position; consider returning to supine position.
 - d) Evaluate the need to escalate to critical care, as appropriate.
5. Discontinue prone positioning if:
- a) No improvement is seen with change of position).
 - b) The patient is unable to tolerate position.
 - c) Respiratory rate increases to 35 breaths/minute or higher; the patient tires, or uses accessory muscles (*NursingCenter*, 2020).

REFERENCES

Prone positioning for the non-intubated patient. (2020, April 9). *MercyOne*

Prone positioning: non-intubated patient with COVID-19 ARDS. (2020, May). *Lippincott NursingCenter*.
<http://www.nursingcenter.com>