

Clinical Nutrition Support Services- Hospital of the University of Pennsylvania

CNSS Tips for Enteral Nutrition (EN) for Proned Patients

Patients with Acute Respiratory Distress Syndrome (ARDS) with persistent hypoxemia may benefit from prone positioning to improve respiratory mechanics and oxygenation. Although the evidence is limited, enteral feeding in the prone position has been shown to be safe and effective. The Medical ICU has established practice guidelines for nursing to optimally manage proned patients. The excerpt below is from the **HUP Nursing Practice Guideline 4C-02-01 Enteral Feeding in the Adult Patient**:

- A. **“Prone Positioning:** *Patients requiring prone positioning can be fed via the enteral route as long as they meet criteria for enteral feeding.*
1. *Post-pyloric access may be preferable as patients fed in the prone position may have delayed gastric emptying.*
 2. *Short-term use of prokinetic agents may improve enteral tolerance.*
 3. *Oral cavity should be assessed for secretions and need for assistance in clearing secretions.*
 4. *Reverse Trendelenburg should be elevated to 25 degrees or greater while feeding in the prone position.*
 5. *When proning, enteral feeding should be held for 1 hour prior to prone positioning.*
 - a. *Enteral access placement should be confirmed after proning to ensure that the enteral access has not been dislodged.*
 - b. *Resume feeds once proned and stabilized.*
 - c. *Abdominal status should be assessed every 4 hours, or more frequently with any change in clinical status. Notify prescriber in the setting of persistently elevated gastric residuals.”*

CNSS Recommendations:

1. Determine frequency and duration of proning. Patients are typically proned for 16-18 hours.
2. Enteral feeds must be held 1 hour before and 1 hour after turning. Enteral feeding rate should be adjusted to account for 20 hours of feeding.
3. Communicate with nurse and provider to confirm safety of enteral feeding while proned.
 - a. Consider early post-pyloric small bore enteral access if evidence of high gastric residuals.
4. Feeding continuously through an NGT or OGT is typically considered safe during proning. **Please note that COVID19 patients often have increased gastric residual volumes and therefore post-pyloric enteral access with gastric decompression may be indicated.**
5. Contraindications to EN while proned:
 - a. Poor enteral tolerance – persistently high residuals (>300 mL every 4 hours), abdominal distension, emesis, etc.
 - b. Inability to maintain reverse Trendelenburg elevation or safe enteral access (or access dislodged during proning).
 - c. The use of supplemental parenteral nutrition (PN) may be indicated if EN intolerance persists.
6. Adjust the “Admin Instructions” of the EN order using the smartphrase “CNSSSENPRONE”.
7. Overall management tips with proning and ARDS:
 - a. ARDS patients are often volume sensitive; be mindful of the overall volume of the feeding regimen and choose the lowest volume option to meet their needs.
 - b. Patients are typically sedated with propofol. Unless the patient is receiving a high calorie load from propofol (e.g., ≥ 500 kcals per day from propofol), the enteral feeding rate does not need to be reduced. Monitor volume of feedings provided to confirm EN adequacy.
8. Confirm adequate bowel regimen to optimize EN tolerance.