

NICU Feeding Guideline

Purpose: To improve feeding tolerance and growth (weight, length, and head circumference) in low birth weight infants and reduce days of parenteral nutrition.

Goal: To provide a consistent, evidence based approach to feeding the low birth weight infant.

Initiation of feeding:

1. MD/NP will complete the NICU Feeding Orders
2. Human milk is preferred for feedings (Colostrum should be used for early feedings).
3. Do not automatically/routinely freeze colostrum (if not used within 48 hours, then freeze)
4. If infant is NPO, colostrum will be used for mouth care. Place a small amount (0.1- 1 ml q 6hrs) directly onto oral mucosa in buccal cavity for absorption by mucosa.
5. Feedings over 2 ml in volume will be given by infusion pump over 30 minutes unless otherwise ordered.

Trophic feedings:

1. Trophic feedings (also called "minimal" or "priming" enteral feedings), are beneficial for preterm low birth weight infants. Colostrum and human milk have unique properties that have not been duplicated. These include nutrients, enzymes, growth factors, hormones, immunologic, anti-infective and anti-inflammatory properties. Research studies have shown a decrease in NEC and late onset sepsis. Advantages of trophic feedings reported in the scientific literature include:

Decrease In

- Indirect hyperbilirubinemia
- Cholestatic jaundice
- Metabolic bone disease
- Length of time to reach full enteral feedings
- TPN usage

Increase In

- Gastrin & enteric hormones
- Concentration of other enteric hormones
- Feeding tolerance
- Weight gain

2. Trophic feedings will begin within 24-48 hours of birth if infant is stable.
3. Colostrum should be used for first feedings. Colostrum should be used in the order it was produced, even if fresh (more mature) milk is available. Colostrum is more easily absorbed/easily tolerated. Fresh mature milk should be used in combination with colostrum by day 4-5. (may add specific antibody to NICU pathogens).
4. Infants <1000 grams will receive trophic feedings (5ml/kg/day) for 5 days.
5. Infants 1001-1500 grams will receive trophic feedings (10ml/kg/day) for 2 days.
6. Infants 1501-2000 grams will receive trophic feedings (20ml/kg/day) for 1 day.
7. Treatment for PDA is not a contraindication for trophic feedings.

Advancement of feedings:

1. Infants <1000 grams will advance by 10ml/kg/day until volume reaches 60ml/kg/day, then advancement will increase by 20ml/kg/day to max of 150ml/kg/day.
2. Infants 1001-1500 grams will advance by 10ml/kg/day until volume reaches 60ml/kg/day, then advancement will increase by 15ml/kg/day to max of 150ml/kg/day.
3. Infants 1501-2000 grams will advance by 20ml/kg/day until volume reaches max of 150ml/kg/day.

Aspirates:

1. Aspirates are expected while on trophic feedings. Green or yellow aspirates are not a contraindication for trophic feedings.
2. Undigested aspirates will be re-fed. Current feeding volume will be fed in addition to volume of aspirate.
3. Partially digested, mucousy, or bloody aspirates will be discarded.
4. If aspirate is <20% of feeding volume, continue advancement.

Aspirates (continued):

5. If aspirate is 20-40% of feeding volume for 2 consecutive feedings, notify MD/NP. Continue feedings in the absence of clinical symptoms but hold advancement.
6. If aspirate is >40% of feeding volume:
 - Notify MD/NP
 - Hold feedings
 - Obtain KUB (indication: Feeding Intolerance).

When to Notify MD/NP

1. Emesis in any infant <1500 grams
2. An abnormal physical exam consisting of the following:
 - Unstable vital signs
 - Abdominal distention (increase in abdominal circumference >2 cm)
 - Visible bowel loops
 - Bilious emesis
 - Visible blood in stool
3. Dark green residuals or change in color (darkening) of residuals. (Light green residuals with a normal exam may not be a reason to hold feedings.)
4. Aspirates of 20-40% feeding volume for 2 consecutive feedings.

Fortification

1. Colostrum will not be fortified.
2. When feedings reach 90 ml/kg/day, increase to 22 cal/oz
3. When feedings reach 120 ml/kg/day, increase to 24 cal/oz
4. **If infant not tolerating fortification and not gaining adequately, consider creatocrit and hindmilk feedings.**

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