**IMBALANCED NUTRITION: LESS THAN BODY REQUIREMENTS**

Related to inability to absorb nutrients or insufficient intake

**Definition**

*Intake of nutrients insufficient to meet metabolic needs*

**Assessment**

- Age
- Developmental level
- GI status, including usual bowel patterns, change in bowel habits, stool characteristics (color, amount, size, and consistency), pain or discomfort, nausea and vomiting, history of GI disorder or surgery, presence of colic, inspection of abdomen, palpation for masses and tenderness, percussion for tympany and dullness, auscultation of bowel sounds, and sucking and swallowing ability (of infants)
- Medication history, including use of antibiotics
- Nutritional status, including dietary history, change in type of food tolerated, height, weight, physical growth percentile (from pediatric growth grid), meal preparation, sociocultural influences, usual dietary pattern, weight fluctuations in past year, and weight maintenance as height increases
- Change in intrapersonal or interpersonal factors, including desire to eat and rate of food consumption
- Psychosocial status, including body image (perception of observer and self-perception), level of attachment with primary caregiver, and family’s financial resources
- Laboratory studies, including hemoglobin levels and hematocrit
- Health status, including heart rate, respiratory status, integumentary status, and oral mucosa
- Presence and type of tube feedings
- Activity level and mood

**Defining Characteristics**

- Abdominal pain or cramping, with or without disorder
- Aversion to or lack of interest in eating
- Body weight 20% or more under ideal weight
- Capillary fragility
- Diarrhea and steatorrhea
- Excessive loss of hair
- Hyperactive bowel sounds
- Inadequate food intake (less than recommended daily allowances)
- Loss of body weight despite adequate food intake
- Misinformation
- Pale conjunctivae and mucous membranes
- Perceived inability to ingest food
- Poor muscle tone
- Satiety immediately after eating
- Sore, inflamed buccal cavity
Expected Outcomes

• Child will exhibit no further weight loss and, if malnourished, will gain 2.2 lb (1 kg) per week.
• Child will take in ____ calories per day and will retain feedings without emesis.
• Child and family members will express understanding of total parenteral nutrition (TPN), if appropriate, or demonstrate understanding of other feeding techniques essential to daily nutritional requirements.
• Family members will express willingness to continue feeding regimen at home.

Suggested NOC Outcomes

Appetite; Health Beliefs; Nutritional Status; Nutritional Status: Food & Fluid Intake; Nutritional Status: Nutrient Intake; Self-Care: Eating; Weight Control

Interventions and Rationales

• Provide a diet that meets child’s daily caloric requirements. Daily caloric intake depends on age, metabolic status, and activity level. General guidelines include:
  – younger than age 6 months—108 kcal/kg/day
  – ages 6 to 12 months—98 kcal/kg/day
  – ages 1 to 3—1,300 kcal/day
  – ages 4 to 6—1,800 kcal/day
  – ages 7 to 10—2,000 kcal/day
  – ages 11 to 14—2,500 kcal/day
  – ages 15 to 18—3,000 kcal/day.
  A diet meeting the child’s caloric requirements helps meet the child’s maintenance and growth needs.
• Provide small, frequent feedings to reduce fatigue and improve intake.
• For infants older than age 6 months, offer solid foods before formula or breast milk. Place solid foods in the center of the tongue, using a small spoon to press downward slightly to facilitate swallowing. Older infants and young toddlers may resist solid foods, preferring milk or formula.
• Record and describe food intake. Refer family members to a dietitian or nutritional support team for dietary management. A dietitian or nutritional support team can individualize the child’s diet within prescribed restrictions.
• Promote adequate rest to reduce fatigue and improve the child’s ability and desire to eat.
• Obtain and record the child’s weight each morning before the first feeding to accurately monitor the response to therapy.
• Provide parenteral fluids, as ordered, to ensure adequate fluid and electrolyte levels.
• Monitor electrolyte values and report abnormalities. Poor nutritional status may cause electrolyte imbalances.
• Monitor and record the amount, color, consistency, and presence of occult blood in emesis and stools. Characteristics of vomitus and stools provide clues to nutrient absorption.
• If the child is receiving tube feedings:
  – Use a continuous infusion pump, if possible, to help prevent diarrhea, fatigue, and stimulation of vagal response. A continuous infusion pump also helps prevent reduction in the cough or gag reflex and overstimulation of the stomach.
  – Provide an infant with opportunities to suck on a pacifier to satisfy oral needs.
  – Check feeding tube placement before each feeding to verify tube placement in the GI tract rather than in the lung.
Begin the regimen with small amounts and diluted concentrations to decrease diarrhea and improve absorption. Increase volume and concentration, as tolerated.

- Keep the head of the bed elevated during feedings to reduce the risk of aspiration.
- Teach the parents the correct technique for tube feeding to ensure compliance with the feeding regimen at home.

- If the child is receiving TPN:
  - Carefully monitor delivery of TPN to promote effective therapy and prevent circulatory overload.
  - Monitor blood glucose level, urine specific gravity, and urine glucose, protein, and metabolite levels at least in every shift to detect metabolic complications, osmotic diuresis, hypoglycemia, and pulmonary edema.
  - Provide or assist with oral hygiene to enhance the child's comfort and improve appetite.
  - Teach the parents the correct technique for maintaining TPN infusion at home to ensure the parents continue the feeding regimen after discharge.

Suggested NIC Interventions

- Enteral Tube Feeding; Nutrition Management; Referral; Total Parenteral Nutrition (TPN) Administration; Weight Gain Assistance; Weight Management

Evaluations for Expected Outcomes

- Child's weight stabilizes or increases.
- Child takes in enough calories and essential nutrients and retains feedings.
- Child and family members demonstrate understanding of nutritional principles and requirements, feeding techniques, and special needs.
- Family members express willingness to continue feeding regimen at home.

Documentation

- Child's weight (recorded daily)
- Child's sucking and swallowing reflexes
- Intake and output
- Incidence of emesis or diarrhea
- Characteristics of emesis or stools
- Presence of complications
- Statements by child and family members that indicate understanding of feeding protocol
- Evaluations for expected outcomes

REFERENCE