

these vitamins (A, D, E, and K) are given along with multivitamins and the enzymes. When high-fat foods are eaten, the child is encouraged to add extra enzymes.

Growth failure despite adequate nutritional support may indicate deterioration of pulmonary status. Patients with CF may experience frequent anorexia as a result of the copious amounts of mucus produced and expectorated, persistent cough, effects of medications, fatigue, and sleep disruption. They may be placed on oral nutritional supplements, nighttime supplemental gastrostomy or NG tube feedings, or rarely, parenteral alimentation in an effort to build up nutritional reserves if there has been a history of inability to maintain weight.

Meconium ileus and meconium ileus equivalent, or total or partial intestinal obstruction, can occur at any age. Constipation is often the result of a combination of malabsorption (either from inadequate pancreatic enzyme dosage or a failure to take the enzymes), decreased intestinal motility, and abnormally viscous intestinal secretions. These problems usually do not require surgical interventions and may be treated with MiraLAX or Colyte (osmotic solutions given orally or by NG tubes), other laxatives, stool softeners, or rectal administration of meglumine diatrizoate (Gastrografin).

Rectal prolapse occurs in a small number of infants with CF, due to steatorrhea, malnutrition, and repetitive coughing ([Egan, Green, and Voynow, 2016](#)). The first episode of rectal prolapse is frightening to both the parents and child. Its reduction usually requires immediate guidance and intervention, which is managed by simply guiding the rectum back into place with a gloved, lubricated finger. Further management usually involves attempting to decrease the bulk of daily stools through enzyme replacement.

Children with CF often experience transient or chronic gastroesophageal reflux, which should be treated with the appropriate histamine-receptor antagonist and gastrointestinal motility drug, dietary modifications, and an upright position after feedings and meals ([Hazle, 2010](#)).

Management of Endocrine Problems

The management of CFRD is critical in the therapeutic treatment of the child with CF. CFRD presents a combination of insulin