

**Table 21-1** Causes of Failure to Thrive

<b>ENVIRONMENTAL (COMMON)</b>
Emotional deprivation
Rumination
Child maltreatment
Maternal depression
Poverty
Poor feeding techniques
Improper formula preparation
Improper mealtime environment
Unusual parental nutritional beliefs
<b>GASTROINTESTINAL</b>
Cystic fibrosis and other causes of pancreatic insufficiency
Celiac disease
Other malabsorption syndromes
Gastrointestinal reflux
<b>CONGENITAL/ANATOMIC</b>
Chromosomal abnormalities, genetic syndromes
Congenital heart disease
Gastrointestinal abnormalities (e.g., pyloric stenosis, malrotation)
Vascular rings
Upper airway obstruction
Dental caries
Congenital immunodeficiency syndromes
<b>INFECTIONS</b>
Human immunodeficiency virus
Tuberculosis
Hepatitis
Urinary tract infection, chronic sinusitis, parasitic infection
<b>METABOLIC</b>
Thyroid disease
Adrenal or pituitary disease
Aminoaciduria, organic aciduria
Galactosemia
<b>NEUROLOGIC</b>
Cerebral palsy
Hypothalamic and other central nervous system tumors
Hypotonia syndromes
Neuromuscular diseases
Degenerative and storage diseases
<b>RENAL</b>
Chronic renal failure
Renal tubular acidosis
Urinary tract infection
<b>HEMATOLOGIC</b>
Sickle cell disease
Iron deficiency anemia

**Table 21-2** Common Causes of Malnutrition in Early Life

<b>NEONATE</b>
Failed breastfeeding
Improper formula preparation
Congenital syndromes
Prenatal infections
Teratogenic exposures
<b>EARLY INFANCY</b>
Maternal depression
Improper formula preparation
Gastroesophageal reflux
Poverty
Congenital heart disease
Cystic fibrosis
Neurologic abnormalities
Child neglect
<b>LATER INFANCY</b>
Celiac disease
Food intolerance
Child neglect
Delayed introduction of age-appropriate foods
Juice consumption
<b>AFTER INFANCY</b>
Acquired diseases
Highly distractible child
Juice consumption
Autonomy struggles
Inappropriate mealtime environment
Inappropriate diet

disease; and dysmorphic features that may suggest a genetic or teratogenic cause for growth failure. A complete neurologic examination may reveal spasticity or hypotonia, which can have untoward effects on feeding and growth. Physical findings related to malnutrition include decreased subcutaneous fat, decreased muscle mass, dermatitis, hepatomegaly, cheilosis, or edema (see Chapter 30). Additionally children with FTT have more otitis media, respiratory, and gastrointestinal infections than age-matched controls; severely malnourished children are at risk for a variety of serious infections.

The history and physical examination findings should guide the laboratory evaluation. Simple screening tests are recommended to identify common illnesses that cause growth failure and to search for medical problems resulting from malnutrition. Initial tests may include a complete blood count; screening for iron deficiency anemia and lead toxicity; urinalysis, urine culture, and serum electrolytes to assess renal infection or dysfunction; thyroid stimulating hormone; liver function tests; and a protein purified derivative test to screen for tuberculosis. Human immunodeficiency virus testing may also be indicated. For children with diarrhea, abdominal pain, or malodorous stools, a stool sample for culture and ova and parasites may be