abnormal secretions or by failure of normal development of the wolffian duct structures (vas deferens, epididymis, and seminal vesicles), resulting in decreased or absent sperm production.

Growth and development are often affected in children with moderate to severe forms of CF. Physical growth may be restricted as a result of decreased absorption of nutrients, including vitamins and fat; increased oxygen demands for pulmonary function; and delayed bone growth. The usual pattern is one of growth failure (failure to thrive) with increased weight loss despite an increased appetite and gradual deterioration of the respiratory system. Clinical manifestations of CF are listed in Box 21-17.

Box 21-17

Clinical Manifestations of Cystic Fibrosis

Meconium Ileus*

Abdominal distention

Vomiting

Failure to pass stools

Rapid development of dehydration

Gastrointestinal Manifestations

Large, bulky, loose, frothy, extremely foul-smelling stools

Voracious appetite (early in disease)

Loss of appetite (later in disease)

Weight loss

Marked tissue wasting

Failure to grow

Distended abdomen