

diarrhea and infection or by circulatory failure.

## **Marasmus**

**Marasmus** results from general malnutrition of both calories and protein. It is common in underdeveloped countries during times of drought, especially in cultures where adults eat first; the remaining food is often insufficient in quality and quantity for the children.

Marasmus is usually a syndrome of physical and emotional deprivation and is not confined to geographic areas where food supplies are inadequate. It may be seen in children with growth failure in whom the cause is not solely nutritional but primarily emotional. Marasmus may be seen in infants as young as 3 months old if breastfeeding is not successful and there are no suitable alternatives. **Marasmic kwashiorkor** is a form of SAM in which clinical findings of both kwashiorkor and marasmus are evident; the child has edema, severe wasting, and stunted growth. In marasmic kwashiorkor, the child has inadequate nutrient intake and superimposed infection. Fluid and electrolyte disturbances, hypothermia, and hypoglycemia are associated with a poor prognosis.

Marasmus is characterized by gradual wasting and atrophy of body tissues, especially of subcutaneous fat. The child appears to be very old, with loose and wrinkled skin, unlike the child with kwashiorkor, who appears more rounded from the edema. Fat metabolism is less impaired than in kwashiorkor; thus, deficiency of fat-soluble vitamins is usually minimal or absent. In general, the clinical manifestations of marasmus are similar to those seen in kwashiorkor, except with marasmus, there is no edema from hypoalbuminemia or sodium retention, which contributes to a severely emaciated appearance; no dermatoses caused by vitamin deficiencies; little or no depigmentation of hair or skin; moderately normal fat metabolism and lipid absorption; and a smaller head size and slower recovery after treatment.

The child is fretful, apathetic, withdrawn, and so lethargic that prostration frequently occurs. Intercurrent infection with debilitating diseases such as tuberculosis, parasitosis, HIV, and dysentery is common.

## **Therapeutic Management**