environmental stresses, which produces an imbalanced response to such insults (Trehan and Manary, 2015). Kwashiorkor often occurs subsequent to an infectious outbreak of measles and dysentery. There is further evidence that oxidative stress occurs in children with kwashiorkor, resulting in free radical damage, which may precipitate cellular changes, resulting in edema and muscle wasting (Bandsma, Spoelstra, Mari, et al, 2011).

Taken from the Ga language (Ghana), the word *kwashiorkor* means "the sickness the older child gets when the next baby is born" and aptly describes the syndrome that develops in the first child, usually between 1 and 4 years old, when weaned from the breast after the second child is born.

The child with kwashiorkor has thin, wasted extremities and a prominent abdomen from edema (ascites). The edema often masks severe muscular atrophy, making the child appear less debilitated than he or she actually is. The skin is scaly and dry and has areas of depigmentation. Several dermatoses may be evident, partly resulting from the vitamin deficiencies. Permanent blindness often results from the severe lack of vitamin A. Mineral deficiencies are common, especially iron, calcium, and zinc. Acute zinc deficiency is a common complication of severe SAM and results in skin rashes, loss of hair, impaired immune response and susceptibility to infections, digestive problems, night blindness, changes in affective behavior, defective wound healing, and impaired growth. Its depressant effect on appetite further limits food intake. The hair is thin, dry, coarse, and dull. Depigmentation is common, and patchy alopecia may occur.

Diarrhea (persistent diarrhea malnutrition syndrome) commonly occurs from a lowered resistance to infection and further complicates the electrolyte imbalance. Low levels of cytokines (protein cells involved in the primary response to infection) have been reported in children with kwashiorkor, suggesting that such children have a blunted immune response to infection. A large number of deaths in children with kwashiorkor occur in those who develop HIV infection. GI disturbances such as fatty infiltration of the liver and atrophy of the acini cells of the pancreas occur. Anemia is also a common finding in malnourished children. Protein deficiency increases the child's susceptibility to infection, which eventually results in death. Fatal deterioration may be caused by