

“healthiness.” Although milk is an excellent food, it is deficient in iron, vitamin C, zinc, and fluoride. Sources of each of these nutrients and the role they play in preventing deficiencies need to be discussed with the family, especially the person responsible for feeding the infant. Also stress that overweight is not synonymous with good health.

Diet education of teenagers is difficult, especially because teenage girls are particularly prone to following weight-reduction diets. Emphasizing the effect of anemia on appearance (pallor) and energy level (difficulty maintaining popular activities) may be useful.

## Sickle Cell Anemia

**Sickle cell anemia (SCA)** is one of a group of diseases collectively termed **hemoglobinopathies** in which normal adult Hgb (Hgb A [HbA]) is partly or completely replaced by abnormal sickle Hgb (HbS). **Sickle cell disease (SCD)** refers to a group of hereditary disorders, all of which are related to the presence of HbS. Although the term *SCD* is sometimes used to refer to SCA, this use is incorrect. The correct terms for SCA are homozygous sickle cell disease (HgbSS) and **homozygous SCD**.

The following are the most common forms of SCD in the United States:

- **SCA**, the homozygous form of the disease (HgbSS), in which valine, an amino acid, is substituted for glutamic acid at the sixth position of the  $\beta$  chain
- **Sickle cell–C disease**, a heterozygous variant of SCD (HgbSC) is characterized by the presence of both HgbS and HgbC, in which lysine is substituted for glutamic acid at the sixth position of the  $\beta$  chain
- **Sickle thalassemia disease**, a combination of sickle cell trait and  $\beta$ -thalassemia trait ( $S\beta^{thal}$ ). In the  $\beta^+$  (beta plus) form, some normal HbA can be produced. In the  $\beta^0$  (beta zero) form, there is no ability to produce HbA.

Of the SCDs, SCA is the most common form in African Americans followed by sickle cell–C disease and sickle thalassemia. Numerous other sickle syndromes exist in which HbS is paired