

al, 2012). One study found that children with intestinal failure who were being transitioned from parenteral nutrition to enteral nutrition had at least one vitamin and mineral deficiency; vitamin D was the most common deficiency identified, and zinc and iron were the most common minerals identified as being deficient (Yang, Duro, Zurakowski, et al, 2011).

Vitamin A deficiency has been reported with increased risk of blindness in children with measles. However, a recent Cochrane review of studies assessing the efficacy of vitamin A in children with measles found no information specifically related to ocular morbidities (Bello, Meremikwu, Ejemot-Nwadiaro, et al, 2014). Despite the lack of evidence, vitamin A supplementation has minimal side effects and should be administered to children with measles (Bello, Meremikwu, Ejemot-Nwadiaro, et al, 2014). Complications from diarrhea and infections are often increased in infants and children with vitamin A deficiency. Although scurvy (caused by a deficiency of vitamin C) is rare in developed countries, cases have been reported in infants who have poor intake of vitamin C due to poor oral intake, oral motor dysfunction, or feeding problems (Besbes, Haddad, Meriem, et al, 2010).

An excessive dose of a vitamin is generally defined as 10 or more times the Recommended Dietary Allowance (RDA), although the fat-soluble vitamins, especially vitamins A and D, tend to cause toxic reactions at lower doses. With the addition of vitamins to commercially prepared foods, the potential for **hypervitaminosis** has increased, especially when combined with the excessive use of vitamin supplements. Hypervitaminosis of A and D presents the greatest problems because these fat-soluble vitamins are stored in the body. High intakes of vitamin A initially present with dry, scaly skin that progresses to desquamation and fissures, and include anorexia, vomiting, and bulging fontanelle (Hayman and Dalziel, 2012). Vitamin D is the most likely of all vitamins to cause toxic reactions in relatively small overdoses. The water-soluble vitamins, primarily niacin, B₆, and C, can also cause toxicity. Poor outcomes in infants (e.g., fatal hypermagnesemia) have been associated with megavitamin therapy with high doses of magnesium oxide.

One vitamin supplement that is recommended for all women of childbearing age is a daily dose of 0.4 mg of folic acid, the usual RDA. Folic acid taken before conception and during early