Role of Specific Nutrients in Low-Birthweight Infants

Jatinder Bhatia

Low birthweight remains a major public health problem with an estimated 20 million infants born worldwide each year. In addition, most of these are born in developing countries, and the additional burden is that these infants are 20 times more likely to die compared to heavier infants. Low birthweight could be due to either premature birth or intrauterine growth restriction. Various maternal factors including intergenerational effects are responsible for this problem. The strategies to feed this heterogeneous group of infants differ because the goals are different. The premature infant born low birthweight does not get the benefit of the transplacental passage of nutrients in the last trimester of pregnancy, making those nutrient deficiencies important to address. These include protein, fatty acids, calcium, phosphorus, magnesium, zinc and iron to name a few. On the other hand, the intrauterine growth-restricted infant born at term is also low birthweight, but will have different nutrient needs. It is difficult to separate the two entirely, and therefore, the WHO did not distinguish nutritional requirements of growth-restricted infants from those of premature infants. In this chapter, the nutrient deficiencies, their requirements and ways to meet them are outlined. Nutrition in premature and low birthweight infants is a continuum from birth through discharge and thereafter, and reducing morbidity and mortality in these infants is of paramount importance.