Objectives

- Discuss the factors that contribute to deficits in postnatal growth patterns in extremely low birth weight (ELBW) preterm infants and identify the role of early use of parenteral nutrition to ameliorate suboptimal growth trends.

- Summarize the evolution of total parenteral nutrition solutions including the importance of appropriate selection of amino acids, carbohydrates, lipids, vitamins, minerals and trace elements in relation to desired effects and undesirable complications.

- Contrast the energy, protein, carbohydrate, lipid, electrolyte, vitamin, mineral and trace element requirements between parenterally and enterally-fed preterm infants.

- Describe the optimal and suboptimal aspects of using human milk or commercially available premature formulas to support growth and development of preterm infants.

- Outline general guidelines and approaches to the initiation and advancement of parenteral and/or enteral feedings for preterm infants and explain the role and importance of minimal enteral feedings.

Content Outline

1. Incidence and Impact of Postnatal Growth Failure

2. Parenteral Nutrition Requirements in the Preterm Infant
   2.1 Protein and amino acid requirements
      2.1.1 Evidence supporting early use
   2.2 Carbohydrate requirements
   2.3 Lipid emulsion requirements
   2.4 Energy requirements
   2.5 Electrolytes, vitamins, minerals, and trace element requirements
   2.6 Complications

3. Enteral Nutrition Requirements in the Preterm Infant
   3.1 Protein and amino acid requirements
   3.2 Carbohydrate requirements
   3.3 Lipid requirements
   3.4 Energy requirements
   3.5 Electrolytes, vitamins, minerals, and trace element requirements

4. Comparison of Human Milk and Formulas for Preterm Nutritional Needs
   4.1 Feeding supplementation

5. Initiation, Advancement and Administration Aspects of Enteral Feeding
   5.1 Minimal enteral feeding

Reading Material Resources

This self assessment module is based on the resources listed below.

Access is available at the online testing center once the module is purchased.