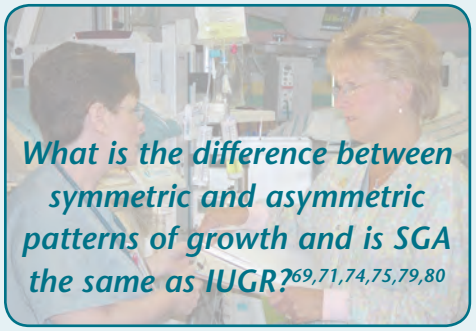
Inadequate Glycogen Stores and Decreased Glucose Production: *High Risk Groups*

(continued)

A chronically stressed fetus may use most, if not all, of the placentally transferred glucose for growth and survival. This limits the ability to make or store glycogen for use after birth. The risk for hypoglycemia in term infants who have intrauterine growth restriction (IUGR) is estimated at 25 percent. Preterm infants with IUGR are at even higher risk.[78]

Clinical Tip



What is the difference between symmetric and asymmetric patterns of growth and is SGA the same as IUGR?[69,71,74,75,79,80]

Symmetric growth restriction (or symmetric SGA) infants have a lower weight, length, and head circumference for their gestational age. When these parameters are plotted on a graph, each will usually be at or below the 10th percentile. Symmetric SGA growth often results from intrauterine viral infection in early gestation, longstanding maternal disease with placental growth restriction present throughout most of pregnancy, or from chromosomal or genetic causes.

Intrauterine growth restriction (IUGR) is a term used to describe infants who have altered fetal growth, especially in the third trimester when lipid accumulation is greatest and growth is rapid. However, IUGR can at times be detected on a second trimester ultrasound.

The term "IUGR" is often used interchangeably with "SGA", however, they are not the same thing. Infants with IUGR have **asymmetric growth restriction**. Their weight will be low for their gestational age, followed by some impact on length, but with relatively less restriction in brain growth and head circumference (often referred to as "head sparing"). IUGR infants may appear "wasted," long and thin. This asymmetric pattern of growth usually results from maternal medical conditions or poor placental function that disrupts oxygen and nutrient delivery to the fetus during the last trimester of pregnancy. While the cause of growth restriction may not be easily apparent, assessment of the above factors (genetics, infection, maternal medical conditions, and placental function) must be considered as they may impact future pregnancies.

It is important to perform an accurate gestational age assessment before plotting the weight, head circumference, and length on the growth chart. If the gestational age assessment is incorrect, then the assessment of the infant's size may be inaccurate. See Appendices 1.2 and 1.3 for female and male growth charts.[81]