

infiltration (e.g., erythema, edema, color change of tissue, blanching at site) and for signs of overhydration (weight gain of >30 g [1 oz] in 24 hours, periorbital edema, tachypnea, and crackles on lung auscultation).

A common problem observed in infants who have an umbilical artery catheter in place is vasoconstriction of peripheral vessels, which can seriously impair circulation. The response is triggered by arterial vasospasm caused by the presence of the catheter, the infusion of fluids, or injection of medication. Blanching of the buttocks, genitalia, or legs or feet is an indication of vasospasm. The problem is recognized promptly and reported to the practitioner. The nurse must also observe for signs of thrombi in infants with umbilical venous or arterial lines. The precipitation of microthrombi in the vascular bed with the use of such catheters is commonly manifested by a sudden bluish discoloration seen in the toes, called **catheter toes**. The problem is promptly reported to the practitioner because failure to alleviate the existing pathologic condition may result in the loss of toes or even a foot or leg.

Infants with umbilical venous or arterial catheters should also be observed closely for catheter dislodging and subsequent bleeding or hemorrhage; urinary output, renal function, and gastrointestinal function are also evaluated in these infants. Although the intent of such catheters is to effectively deliver IV fluids (and sometimes medications) and to obtain arterial blood gas samples, they are not without inherent complications.

Nutrition

Optimum nutrition is critical in the management of LBW and preterm infants, but there are difficulties in meeting for their nutritional needs. The various mechanisms for ingestion and digestion of foods are not fully developed; the more immature the infant, the greater the problem. In addition, the nutritional requirements for this group of infants are not known with certainty. It is known that all preterm infants are at risk because of poor nutritional stores and several physical and developmental characteristics.

An infant's nutritional needs for rapid growth and daily maintenance must be met in the presence of several anatomic and