occiput will usually suffice as a tourniquet, although if the vessel is visible, a tourniquet may not be necessary.

Nursing Tip

A tab of tape should be placed on the rubber band to help grasp it when removing it from the infant's head. The rubber band should be cut to avoid accidentally dislodging the catheter when moving the rubber band over the IV insertion site. The tape tab will lift the rubber band and allow it to be cut. Hold the rubber band in two places and cut between these areas to prevent the rubber band from snapping on the head.

For most IV infusions in children, a 20- to 24-gauge catheter may be used if therapy is expected to last less than 5 days. The smallest gauge and shortest length catheter that will accommodate the prescribed therapy should be chosen. The length of the catheter may be directly related to infection or embolus formation—the shorter the catheter, the fewer the complications. The gauge of the catheter should maintain adequate flow of the infusate into the cannulated vein while allowing adequate blood flow around the catheter walls to promote proper hemodilution of the infusate.

Determining the best catheter for the patient early in the therapy provides the best chance of avoiding catheter-related complications. As the length of therapy increases, decisions regarding the type of infusion device (short peripheral, midline, PICC, or central venous catheter) should be explored. Guidelines such as flow charts and algorithms are available to help in these decisions.

Safety Catheters and Needleless Systems

Over-the-needle IV catheters with hollow-bore needles carry a high risk for transmission of bloodborne pathogens from needlestick injuries. Safety catheters prevent accidental needlesticks with the use of over-the-needle IV catheters.

Needleless IV systems are designed to prevent needlestick injuries during administration of IV push medications and IV piggyback medications. Some needleless devices can be used with any tubing, but others require use of the entire IV delivery system for compatibility. Needleless IV systems rely on pre-pierced septa