

## Intravenous Line Placement

The nurse needs to consider several factors in relation to IV medication. When a drug is administered intravenously, the effect is almost instantaneous and further control is limited. Most drugs for IV administration require a specified minimum dilution, rate of flow, or both, and many drugs are highly irritating or toxic to tissues outside the vascular system. In addition to the precautions and nursing observations commonly related to IV therapy, factors to consider when preparing and administering drugs to infants and children by the IV route include:

- Amount of drug to be administered
- Minimum dilution of drug and whether child is fluid restricted
- Type of solution in which drug can be diluted
- Length of time over which drug can be safely administered
- Rate limitations of child, vascular system, and infusion equipment
- Time that this or another drug is to be administered
- Compatibility of all drugs that child is receiving intravenously
- Compatibility with infusion fluids

Before any IV infusion, check the site of insertion for patency. Never administer medications with blood products. Only one antibiotic should be administered at a time. Extra fluids needed to administer IV medications can be problematic for infants and fluid-restricted children. Syringe pumps are often used to deliver IV medication, because they minimize fluid requirements and more precisely deliver small volumes of medication compared with large-volume infusion pumps. Regardless of the technique, the nurse must know the minimum dilutions for safe administration of IV medications to infants and children.

## Peripheral Intermittent Infusion Device

The **peripheral lock**, also known as an **intermittent infusion device** or **saline** or **heparin lock**, is an alternative to a keep-open infusion when extended access to a vein is required without the need for continuous fluid. It is most frequently used for intermittent infusion of medication into a peripheral venous route. A short, flexible catheter is used as the lock device, and a site is selected where there will be minimal movement, such as the forearm. The catheter is