

require placement of a postpyloric feeding tube. A trained practitioner inserts the nasoduodenal or nasojejunal tube because of the risk of misplacement and potential for perforation in tubes requiring a stylet. Accurate placement is verified by radiography. Small-bore tubes may easily clog. Flush the tube when feeding is interrupted, before and after medication administration, and routinely every 4 hours or as directed by institutional policy. Tube replacement should be considered monthly to ensure optimal tube patency. Continuous feedings are delivered by a mechanical pump to regulate their volume and rate. Bolus feeds are contraindicated. Tube displacement is suspected in children showing signs of feeding intolerance, such as vomiting. In these cases, stop the feedings and notify the practitioner.

Total Parenteral Nutrition

TPN provides for the total nutritional needs of infants and children whose lives are threatened because feeding by way of the gastrointestinal tract is impossible, inadequate, or hazardous.

TPN therapy involves IV infusion of highly concentrated solutions of protein, glucose, and other nutrients. The solution is infused through conventional tubing with a special filter attached to remove particulate matter or microorganisms that may have contaminated the solution. The highly concentrated solutions require infusion into a vessel with sufficient volume and turbulence to allow for rapid dilution. The wide-diameter vessels selected are the superior vena cava and innominate or intrathoracic subclavian veins approached by way of the external or internal jugular veins. The highly irritating nature of concentrated glucose precludes the use of the small peripheral veins in most instances. However, dilute glucose–protein hydrolysates that are appropriate for infusing into peripheral veins are being used with increasing frequency. When peripheral veins are used, soybean oil (Intralipid) becomes the major calorie source. For long-term alimentation, central venous catheters are usually used.

The major nursing responsibilities are the same as for any IV therapy and include control of sepsis, monitoring of the infusion rate, and assessment of the patient. The TPN solution must be prepared under rigid aseptic conditions, which is best