decrease in total milk fat concentration delivery when continuous gavage infusions are administered, which suggests that intermittent or bolus gavage of expressed mother's milk be administered when possible (Rogers, Hicks, Hamzo, et al, 2010).

A size 5-, 6-, or 8-Fr feeding tube is used to instill the feeding, and the usual methods for determining correct placement are used (see Chapter 20 for technique). Although the more relaxed lower esophageal sphincter makes passage of the tube easier, there may be changes in heart rate and BP in response to vagal stimulation. When an indwelling tube is required, consideration should be given to using a product made of Silastic rather than polyvinyl chloride (PVC), because PVC becomes stiff when exposed to body fluids.

The stomach is aspirated, the contents measured, and the aspirate returned as part of the feeding. However, this practice may vary depending on circumstances and individual unit protocol. The amount of aspirate depends on the time since the previous feeding or concurrent illness.

The milk or formula is allowed to flow by gravity, and the length of time varies. This procedure is not used as a timesaving method for the nurse. Complications of indwelling tubes include aspiration, obstructed nares, mucous plugs, purulent rhinitis, epistaxis, infection, and possible stomach perforation. Current practice dictates a radiograph as the only certain way to determine nasogastric tube placement. Methods such as auscultation of an air bubble, and nose-ear-xiphoid (NEX) measurements for insertion depth, and pH measurements are considered imprecise when used as the only method for determination of placement (de Boer, Smit, and Mainous, 2009; Ellett, Cohen, Croffie, et al, 2014; Farrington, Lang, Cullen, et al, 2009; Quandt, Schraner, Ulrich Bucher, et al, 2009; Renner, 2010). One study found that age-related, height-based gastric tube insertion length was more precise than either nose-ear-xiphoid or nose–ear–mid-umbilicus measurements in placing nasogastric tubes in neonates younger than 1 month old; the researchers recommend that nose-ear-xiphoid measurements for insertion depth be abandoned because of their unreliability in accurately placing feeding tubes in neonates (Cirgin Ellett, Cohen, Perkins, et al, 2011). Further research is needed to determine optimal positioning of feeding tubes in high-risk infants on intermittent bolus or continuous gavage feedings.