specimens are needed, mark the containers with the date and time and keep them in a specimen refrigerator. Exercise care in handling the specimen because of the risk of contamination.

Blood Specimens

Whether the specimen is collected by the nurse or by others, the nurse is responsible for making certain that specimens, such as serial examinations and fasting specimens, are collected on time and that the proper equipment is available. Collecting, transporting, and storing specimens can have a major impact on laboratory results.

Venous blood samples can be obtained by venipuncture or by aspiration from a peripheral or central access device. Benefits of sampling blood from an indwelling catheter include decreased anxiety, discomfort, and dissatisfaction associated with venipuncture samples (Infusion Nurses Society, 2011). Withdrawing blood specimens through peripheral lock devices in small peripheral veins has varying degrees of success. Although it avoids an additional venipuncture for the child, attempting to aspirate blood from the peripheral lock may shorten the life of the device. When using an IV infusion site for specimen collection, consider the type of fluid being infused. For example, a specimen collected for glucose determination would be inaccurate if removed from a catheter through which glucose-containing solution was being administered.

Although central lines can also be used to withdraw blood specimens, risks include catheter associated bloodstream infection and occlusion. A common technique is to withdraw and discard 0.5 to 10 ml of blood. The Infusion Nurses Society (2011) recommends withdrawing and discarding 1.5 to 2 times the fill volume of the central vascular access device (CVAD). Limited research supports using the initial volume obtained as a blood culture specimen (see Research Focus box). Some facilities allow reinfusion of the blood initially withdrawn from the CVAD, especially when blood conservation is essential. Another technique that conserves blood is the push-pull method in which blood is withdrawn into a syringe and reinfused three times back into the CVAD. A new sterile syringe is then attached and the specimen is withdrawn; no blood is