that simply wearing the pump will not normalize blood glucose. The pump is merely an insulin delivery device, and frequent, routine blood glucose determinations are necessary to adjust the insulin delivery rate.

The major problems with use of the insulin pump are inflammation from irritation and infection at the insertion site. The site should be cleaned thoroughly before the needle is inserted and then covered with a transparent dressing. The site is changed and rotated every 48 to 72 hours (this may vary) or at the first sign of inflammation. Nurses working where pumps are part of the therapeutic regimen should become familiar with the operation of the specific device being used and the protocol of disease management. Others should be aware of this management technique and be prepared to assist patients using the pump.

### Monitoring

Nurses should also be prepared to teach and supervise blood glucose monitoring. SMBG is associated with few complications, and although it does not necessarily lead to improved metabolic control, it provides a more accurate assessment of blood glucose levels than can be obtained with the historical urine testing. Blood glucose monitoring has the added advantage that it can be performed anywhere (see Atraumatic Care box).

## Atraumatic Care

### Minimizing Pain of Blood Glucose Monitoring

- To enhance blood flow to the finger, hold it under warm water for a few seconds before the puncture.
- When obtaining blood samples, use the ring finger or thumb (blood flows more easily to these areas) and puncture the finger just to the side of the finger pad (more blood vessels and fewer nerve endings).
- To prevent a deep puncture, press the platform of the lancet device lightly against the skin and avoid steadying the finger against a hard surface.