

closely to the body part, take 10 to 72 hours to dry, have a smooth exterior, and are inexpensive. The newer synthetic casting material is lightweight, dries in 5 to 20 minutes, permits earlier weight bearing, and is water resistant when applied with a waterproof liner. It is always desirable to give children choices, and synthetic casting materials come in a variety of colors. The disadvantages of synthetic casting are its inability to mold closely to body parts and its rough exterior, which may scratch surfaces. Synthetic casts are also difficult to write on; a waterproof marker or color markers may be used.

Cast Application

The child's developmental age should be considered before the cast is applied. For preschoolers who fear bodily harm and fantasize about the loss of an extremity, it may be helpful to use a plastic doll or stuffed animal to explain the procedure beforehand. Toddlers and preschoolers do not have easily defined body boundaries; if an extremity is wrapped in a bandage, cast, or splint, to the young child the extremity ceases to function or exist. It is also helpful to explain that some synthetic cast material will become warm during application but will not burn. During the application of the cast, various distraction methods can be used, including discussing favorite pets or activities at school, blowing bubbles, and so forth. In this age group, explanations, such as "This will help your arm get better," are futile because the child has no concept of causality.

Before the cast is applied, the extremities are checked for any abrasions, cuts, or other alterations in the skin surface and for the presence of rings or other items that might cause constriction from swelling; such objects are removed. A tube of cloth stockinette or Gore-Tex liner is stretched over the area to be casted, and bony prominences are padded with soft cotton sheeting. Dry rolls of casting material are immersed in a pail of water. The wet rolls are put on in a bandage fashion and molded to the extremity. During application of the cast, the underlying stockinette is pulled over the rough edges of the cast and secured with casting material to form a padded edge to protect the skin.

Nursing Care Management

The complete evaporation of the water from a hip spica cast can