Monitor Fluids

Intake and output of all fluids must be accurately calculated. Intake is primarily IV fluids; however, a record of fluid used to flush the arterial and CVP lines or to dilute medications is also kept. Output includes hourly recordings of urine (usually a Foley catheter is inserted and attached to a closed collecting device), drainage from chest and nasogastric tubes, and blood drawn for analysis. Renal failure is a potential risk from a transient period of low cardiac output.

Nursing Alert

The signs of renal failure are decreased urinary output (<1 ml/kg/hr) and elevated levels of blood urea nitrogen and serum creatinine.

Fluids are restricted during the immediate postoperative period to prevent hypervolemia, which places additional demands on the myocardium, predisposing the patient to cardiac failure. If the child is to be extubated within the first 24 to 48 hours, fluids are provided primarily intravenously. If the child is to be intubated longer, fluids may be given via a nasogastric or nasojejunal tube to optimize nutrition and gut motility. Approximately 4 hours after extubation, enteral fluids may be reinitiated in the setting of a stable hemodynamic and respiratory status. To monitor fluid retention, the child is weighed daily, and the same scale is used at approximately the same time each day to avoid errors in measurement. Fluid restriction may be imposed even when oral fluids are given. The nurse calculates the distribution over a 24-hour period based on the child's preoperative weight and drinking habits. The distribution should allow for most fluid to be given during the child's most wakeful and active periods.

Provide Rest and Progressive Activity

After heart surgery, rest should be provided to decrease the workload of the heart and promote healing. The simplest way to ensure individualized, efficient, high-quality care is to plan at the beginning of the shift the nursing procedures to be done, with periods of rest identified. The schedule should be shared with