

The posttransplant course is complex. Although heart function is greatly improved or normal after transplantation, the risk of rejection is serious. The leading cause of death in the first 3 years after heart transplantation is rejection, with the greatest risk in the first 6 months ([Blume, 2003](#)). Rejection of the heart is diagnosed primarily by endomyocardial biopsy in older children. Serial echocardiograms are often used in infants and young children to reduce the need for invasive biopsies. Immunosuppressants must be taken for life and have many systemic side effects. Triple-drug therapy for immunosuppression with a calcineurin inhibitor (cyclosporine or tacrolimus), steroids, and mycophenolate mofetil or azathioprine is most commonly used in pediatric patients. Steroids are weaned in the first year and may be discontinued in some patients; many pediatric centers are avoiding long-term steroids by utilizing induction therapy protocols of high dose steroids and thymoglobulin at the time of transplant ([Thrush and Hoffman, 2014](#)).

Infection is always a risk. Potential long-term problems that may limit survival include chronic rejection, causing coronary artery disease; renal dysfunction and hypertension resulting from cyclosporine administration; lymphoma; and infection. Coronary artery disease is the leading cause of death among late survivors of heart transplantation ([Boucek, Aurora, Edwards, et al, 2007](#)). In the short term, after successful transplantation, children are able to return to full participation in age-appropriate activities and appear to adapt well to their new lifestyle. Transplantation is not a cure because patients must live with the lifetime consequences of chronic immunosuppression.

## Nursing Care Management

Successfully caring for a child after a heart transplant requires the expertise and dedication of many members of the health care team. Nurses play vital roles in assessment, coordination of care, psychosocial support, and patient and family education. The heart transplant recipient must be carefully monitored for signs of rejection, infection, and the side effects of the immunosuppressant medications. The patient's and family's psychosocial well-being also needs to be assessed to identify issues such as increased family