in advance and provides an emotional support system. Parent groups are also helpful and often allow nonthreatening social contact. The families of children with permanent disabilities need long-term resources because some of the most difficult problems arise as they try to sustain high-quality care for many years (see Chapter 17).

## **Nursing Care Management**

Physical assessment of the child who is immobilized for any number of reasons (e.g., injury or illness) includes a focus not only on the injured part (e.g., fracture) but also on the functioning of other systems that may be affected secondarily—the circulatory, renal, respiratory, muscular, and gastrointestinal systems. With long-term immobilization, there may also be neurologic impairment and changes in electrolytes (especially calcium), nitrogen balance, and the general metabolic rate. The psychological impact of immobilization should also be assessed.

Children who require prolonged total immobility and are unable to move themselves in bed should be placed on a pressurereduction mattress to prevent skin breakdown. Frequent position changes also help prevent dependent edema and stimulate circulation, respiratory function, gastrointestinal motility, and neurologic sensation. Children at greater risk for skin breakdown include those with prolonged immobilization, mechanical ventilation, casts, and assistive devices including orthotics, prosthetics, and wheelchairs. Additional risk factors include poor nutrition, friction (from bed linen with traction), and moist skin (from urine or perspiration). Nursing care of children at risk includes strategies for preventing skin breakdown when such conditions are present. The Braden Q Scale is a reliable, objective tool that may be used in the assessment for pressure ulcer development in children who are acutely ill or who are at risk for skin breakdown from neurologic conditions and immobilization (Noonan, Quigley, and Curley, 2011).

The use of antiembolism stockings or intermittent compression devices prevents circulatory stasis and dependent edema in the lower extremities and the development of DVT. Anticoagulant therapy may also be implemented with low-molecular-weight heparin, unfractionated heparin, or vitamin K antagonists. The