

severe curve that does not respond to conservative orthotic measures (such as bracing) requires surgical correction. Bracing and exercise have been found to be ineffective in managing curves greater than 45 degrees. Neuromuscular, dysplastic and congenital curves, which eventually progress, are best treated with surgical stabilization. Difficulties with balance or seating, respiratory compromise, or pain are also considered.

There are a number of surgical techniques for severe scoliosis. A spinal fusion consists of realignment and straightening of the spine with internal fixation and instrumentation combined with bony fusion (arthrodesis). Posterior and/or anterior surgical approaches may be implemented. The goals of surgical intervention are to improve the curvatures on the sagittal and coronal planes and to provide a solid, pain-free fusion in a well-balanced torso, with maximum mobility of the remaining spinal segments.

Advances in surgical technology currently being evaluated include thoracoscopic spinal fusion and placement of implants; metallic staples may also be placed into the vertebral bodies to achieve spinal fusion and to correct the deformity ([Mistovich and Spiegel, 2016](#)). The use of minimally invasive surgery techniques has gained acceptance for its small incisions, decreased blood loss, decreased recovery time, earlier mobilization, and decreased pain and need for pain medications ([Sarwahi, Wollowick, Sugarman, et al, 2011](#)).

Nursing Care Management

Treatment for scoliosis extends over a significant portion of the affected child's period of growth. In adolescents, this period is the one in which their identity, both physical and psychological, is formed. The identification of scoliosis as a "deformity," in combination with unattractive braces and a significant surgical procedure, can have a negative effect on the already fragile adolescent body image. The adolescent and family require excellent nursing care to meet not only physical needs but also psychological needs associated with the diagnosis, surgery, postoperative recovery, and eventual rehabilitation.

Although adolescents with scoliosis are encouraged to participate in most peer activities, necessary therapeutic modifications are likely to make them feel different and isolated. Nursing care of the