

immobilization are:

- Significant decrease in muscle size, strength, and endurance
- Bone demineralization leading to osteoporosis
- Contractures and decreased joint mobility

Circulatory stasis combined with hypercoagulability of the blood, which results from factors such as damage to the endothelium of blood vessels (Virchow triad), can lead to thrombus and embolus formation. **Deep vein thrombosis (DVT)** involves the formation of a thrombus in a deep vein, such as the iliac and femoral veins, and can cause significant morbidity if it remains undetected and untreated. The larger the portion of the body immobilized and the longer the immobilization, the greater the risks of immobility.

## **Psychological Effects of Immobilization**

For children, one of the most difficult aspects of illness is immobilization. Throughout childhood, physical activity is an integral part of daily life and is essential for physical growth and development. It also serves children as an instrument for communication and expression and as a means for learning about and understanding their world. Activity helps them deal with a variety of feelings and impulses and provides a mechanism by which they can exert control over inner tensions. Children respond to anxiety with increased activity. Removal of this power deprives them of necessary input and a natural outlet for their feelings and fantasies. Through movement, children also gain sensory input, which provides an essential element for developing and maintaining body image.

When children are immobilized by disease or as part of a treatment regimen, they experience diminished environmental stimuli with a loss of tactile input and an altered perception of themselves and their environment. Sudden or gradual immobilization narrows the amount and variety of environmental stimuli children receive by means of all their senses: touch, sight, hearing, taste, smell, and proprioception (a feeling of where they are in their environment). This sensory deprivation frequently leads to feelings of isolation and boredom and of being forgotten, especially by peers.

The quest for mastery at every stage of development is related to