Posture, balance and dynamic movement as during gait need continuous integration of signals coming from visual, vestibular, and proprioceptive apparatus, which are part of the sensory-motor system. All these informations travels along myelinated long nervous fibers belonging to the central nervous system (CNS). So the mechanism underlines impairments balance strategy during functional movements and gait may be correlate to abnormal integration of sensorimotor stimuli.

Body weight supported treadmill training (BWSTT) is a task-oriented technique for gait restoration. BWSTT has the advantage over conventional therapy as it offers higher intensity, more repetitive and task-oriented practice over the same period of time when compared to conventional therapy.

The SPAD® (Dynamic Antigravity Postural System) is a BWS training that has a pneumatic system with electronic pressure regulators that are able to self-regulate, through an electronic central control unit, the reduction of body weight. This system allows to set the pressure, to follow the center of gravity of the subject in its vertical excursions due to the opening of the compass of the lower limbs, allows to maintain stable, during the therapy, Body

REFERENCES