



# SmartStep™

## Maximizes the Rehabilitation Process of Neurological Disorders

### Overview

L.K. is 37-year-old woman who has undergone a bilateral fronto-parietal craniotomy and tumor removal. While hospitalized, her functional abilities were poor and she required full assistance in all activities. Independent movement for L.K. was extremely limited. She was only able to open and close the fingers of her right hand, and she exhibited minimal neck flexibility.

After two months of rehabilitation, L.K. regained the ability to walk with the help of support. Over the following two months, limited advances in terms of distance and support while walking were noted, however L.K. continued to walk mainly on her forefoot, demonstrating a total incapacity to bear weight on her hindfoot. The initial posture of both of L.K's ankles was 30 degrees plantarflexion. In the course of her treatment, an elevation platform was glued to the sole of L.K's shoe, raising the hindfoot height by 5cm and the forefoot height by 2cm.

*“ My rehabilitation was so long that I had begun to lose hope, until I started using the SmartStep”. With SmartStep” I made tremendous progress and regained a normal gait pattern.”*

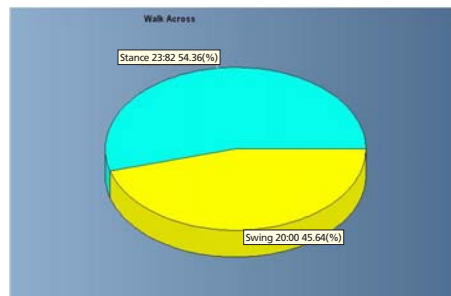
**Patient - L.K.**

### SmartStep™ Fast-Tracks the Patient’s Weight Bearing Ability

Four months after her hospitalization, SmartStep™ was introduced into L.K.'s rehabilitation program and revolutionized her treatment. The initial SmartStep™ evaluation provided an objective measurement of her overall weight-bearing status, showing that weight bearing on the hindfoot was almost nonexistent.



Initial measurement with SmartStep™ reveals poor performance: only 3% of body weight borne on the hindfoot.



The graph indicates inappropriate relations between stanceswing phase





After working with the SmartStep™ for seven days, the posture of L.K.'s right and left ankles was improved to 10 and 7 degrees plantarflexion, respectively. Furthermore, under supervision, L.K. was able to walk without the aid of crutches for a distance of 10 meters.

After two weeks of treatment with SmartStep™, all mobility functionalities were greatly improved. L.K. was now capable of walking 200 meters when supervised. Around the same time L.K.'s shoe elevations were removed and she began to bear weight on her heels.

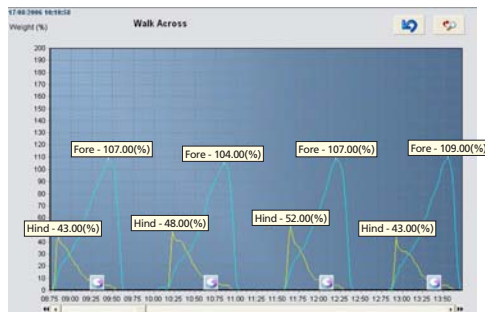
Three weeks after beginning treatment with SmartStep™, the posture of L.K.'s right ankle was improved to 7 degrees plantarflexion while the left ankle's posture was at 0 degrees plantarflexion. At the end of her hospitalization (two months after using the SmartStep™ system), L.K. was able to bear 45% of her body weight on her hindfoot.

## Conclusion

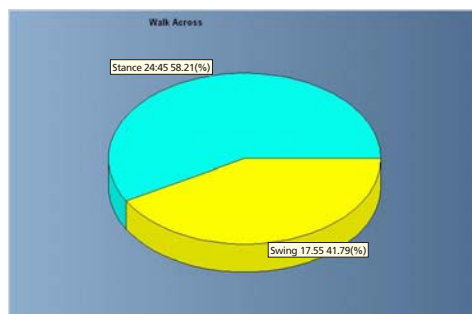
Before using SmartStep™, the variety of treatment methods L.K. tried did not produce any tangible results. Intervention with SmartStep™ was the key to her successful rehabilitation, as it led to a dramatic and rapid improvement in her condition and overall comfort.

L.K. benefited from increased motivation, the natural outcome of a fast, effective, and personalized rehabilitation program.

## SmartStep™ is Essential for Effective Therapy



SmartStep™ measurement two months after treatment reveals dramatically increased weight bearing on the hindfoot - from 3% to 45%



The graph indicates a normal relation between stance/swing phase