A comprehensive approach to assess walking ability and fall risk using the Interactive Walkway

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Stellingen

behorende bij het proefschrift

A comprehensive approach to assess walking ability and fall risk using the Interactive Walkway

1. The aspect of walking adaptability is largely left unaddressed by standard clinical tests of walking ability *(this thesis).*

2. Walking and walking adaptability can be validly assessed with the Interactive Walkway *(this thesis).*

3. Tailored rehabilitation strategies and falls prevention programs require comprehensive walking ability assessments *(this thesis).*

4. A quick, unobtrusive and comprehensive quantitative assessment of walking ability should incorporate an evaluation of both steady-state and adaptive walking *(this thesis).*

5. Poor adaptive walking is a risk factor for walking-related falls *(this thesis).*

6. Mobility, defined as the ability to move independently from one point to another, is a critical element of maintaining independence and an essential attribute of quality of life *(Patla & Shumway-Cook, J Aging Phys Act. 1999; 7 (1): 7–19)*. A thorough insight into gait and balance impairments of patients is thus needed to provide the best treatment for regaining or maintaining their walking ability.

7. The capability to negotiate obstacles in the environment is crucial for safe ambulation *(Balasubramanian et al., Stroke Res Treat. 2014; 2014: 591013)*. Therefore, obstacle avoidance should be trained in generic falls preventions programs.

8. Understanding fall risk and the emergence of falls behavior in fall cohorts is critical to inform effective treatment strategies *(Lord et al., Mov Disord. 2016; 31 (12): 1829-1836)*. While some people are at risk of falling due to gait or balance impairments, others might overestimate their walking ability leading to hazardous walking behavior.

9. Training programs need to focus primarily on the relearning of functional gait-related skills that are relevant to the individual patient's needs *(Van de Port et al., Am J Phys Med Rehabil. 2007; 86 (11): 935-951)*. The greatest effect of training programs is achieved when using a personalized approach that is challenging but feasible for the patient and targets the right limitations in walking ability.

10. Walking is a man's best medicine *(Hippocrates, 460-377 BC)*. Although walking is primarily seen as a functional task, it also has many benefits for someone's physical and mental health.

11. The greatest accomplishment is not in never falling, but in rising again after you fall *(Vince Lombardi, 1913-1970).* This is true, but does not alter the fact that there is value in preventing falls.

12. Writing a thesis is like hiking a mountain. The way up is sometimes hard, but the view at the top is totally worth it.