C-Leg in limited community ambulators

Uneven ground, Obstacles

Major Findings

With C-Leg compared to NMPKs:

- Walking velocity on obstacle course improved by 11%
- Walking velocity on uneven terrain improved by 20%

Improved walking velocity during obstacle course with C-Leg in K2 subjects

Walking velocity was measured on an obstacle course over grass, wood chips, sand, a cement ramp, and cement stairs (Hafner et al. 2009).

Clinical Relevance

Walking on uneven ground is needed in daily living when walking over different surface types, such as carpeted, wooden or tiled flooring or different kinds of stairs, ramps or other obstacles and can pose a potential safety risk. In addition, it is also a prerequisite for community ambulators. It requires different gait biomechanics than walking on level ground. A preferred instrument to investigate the ability to walk on uneven ground is measuring the time needed to navigate through an obstacle course and therefore to determine walking velocity.

Summary

The fastest possible walking speed (FPWS) during 38 meters on uneven terrain increased with C-Leg in K2 subjects by 20% compared to NMPKs (Kahle et al. 2008). These findings were confirmed by results of an obstacle course over grass, wood chips, sand, a cement ramp, and cement stairs. Walking velocity in K2 subjects increased by 11% with C-Leg compared to NMPKs (Hafner et al. 2009).

References of summarized studies

