Examination of Exercise Guidance for Hemiplegic Patients Based on an Analysis of Energy Consumption While Walking

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**Purpose:** When exercise by post-stroke hemiplegic patients is guided, there is often a lack of specific guidance regarding how much walking the patient should do. The purpose of this study was to examine exercise guidance for hemiplegic patients based on an analysis of energy consumption while walking. The assumption is that an energy consumption of about 300 kcal through daily exercise (equivalent to walking about 10,000 steps) is effective for health maintenance in an able-bodied person.

**Methods:** Seventy-one hemiplegic patients were included in this study; the number of steps, walking distance, and energy consumption were measured while the subjects walked for 12 minutes. Next, the number of steps, walking distance, and walking time equivalent to the target energy consumption (300 kcal/60 kg) were calculated.

**Results:** The number of steps and walking distance equivalent to the target energy consumption were reduced in subjects whose walking speed was slower.

**Conclusion:** We must consider motor functions, such as walking speed, when prescribing the number of steps and walking distance because energy consumption per step and distance is influenced by motor paralysis in hemiplegic patients.