Each subject was scheduled for 1-2 hours of physical therapy per day. Target intensity was defined as:

- Steps were collected with step activity monitors, and intensity was monitored and collected with heart rate monitors and BORG Rate of Perceived Exertion Scale (RPE).

- Postural Assessment Scale for Stroke (PASS)

- Berg Balance Scale (BBS)

- 10-Meter Walk Test (10MWT)

- 6-Minute Walk Test (6MWT)

The goal of this study was to examine feasibility and outcomes of high-intensity, high-dosage stepping practice for individuals after stroke in the inpatient rehabilitation setting.

METHODS

- 21 patients post sub-acute stroke (<6 months)

- Standardized outcomes assessed weekly:
  - 6-Minute Walk Test (6MWT)
  - 10-Meter Walk Test (10MWT)
  - Berg Balance Scale (BBS)
  - Postural Assessment Scale for Stroke (PASS)

- Steps were collected with step activity monitors, and intensity was monitored and collected with heart rate monitors and BORG Rate of Perceived Exertion Scale (RPE).

- Target intensity was defined as:
  - Heart rate values of 70-85% of HR Max and RPE values of 14-20.

- Each subject was scheduled for 1-2 hours of physical therapy per day.

OBJECTIVE

- Previous research indicates that patients post-stroke take an inadequate amount of steps (400-800 steps per session) and work at inadequate intensities (24-35% of HR Max) to promote neuroplastic changes and maximize recovery.

- Research indicates that medically stable individuals can safely begin gait training earlier after a stroke and have better outcomes than individuals that start training later.

- The goal of this study was to examine feasibility and outcomes of high-intensity, high-dosage stepping practice for individuals after stroke in the inpatient rehabilitation setting.

RESULTS AND CONCLUSIONS

- Stepping data indicated that subjects received an average daily stepping dosage of 2000-8000 steps per day, well above previously reported values.

- During the 2-month collection period, subjects demonstrated ability to tolerate a high-intensity, high-dosage stepping gait training program within the intensities defined.

- Individuals within this program took >750% more steps and worked at a higher intensity, as measured by average maximal heart rate, tended to have greater improvements in their 6MWT.

- Individuals within this program showed improvements in 6-Minute Walk Test and Berg Balance Scale results, of approximately 2x more than reported levels of significant clinical change.

- Analysis of collected stepping and intensity data showed a positive correlation of both increased stepping and intensity levels when compared with improvements in 6-Minute Walk Test.

REFERENCES


