December 12, 2022

STROKE SPECIAL INTEREST GROUP

Academy of Neurologic Physical Therapy

In this newsletter...

Completed by: Christina Holl, PT, DPT, NCS **THANK YOU for your time!**
Summary topic title: Gains in Daily Stepping Activity in People with Chronic Stroke After High-Intensity Gait Training in Variable Contexts
Article reference: Hornby TG, Plawecki A, Lotter JK, Scofield ME, Lucas E, Henderson CE. Gains in Daily Stepping Activity in People With Chronic Stroke After High-Intensity Gait Training in Variable Contexts. *Physical Therapy*. 2022;102(8):pzac073. doi:10.1093/ptj/pzac073
Link to full article: https://doi.org/10.1093/ptj/pzac073

Definition(s):

- HIT: high-intensity training achieving >70% max HR
- Variable contexts: training involving different tasks and environments

Outcome measures: Learn more about the Core Outcome Measures
Six minute walk test (6MWT)
Activities Balance Confidence Scale (ABC)

Purpose of article: Deficits post stroke can lead to limited participation in physical activity and daily stepping. Studies indicate that despite improvements in gait speed and endurance following traditional/lower-intensity interventions, changes in participation (daily stepping) is often limited. HIT focused on walking training has resulted in significant changes in daily stepping, however, the focus of these studies varied providing either HIT as forward walking *or* HIT in variable contexts. The

purpose of this study was to determine the influence of different walking interventions on daily stepping and contributions of demographic, training, and clinical measures to these changes.

Methods of interest:

· Subjects: chronic stroke (>6 months post unilateral stroke), able to walk 10 m overground without assistance, self-selected speed of <1.0 m/s with AD and below-knee bracing if needed

· Three groups:

○ HIT in variable contexts (n=19)

○ HIT focused on forward walking (n=19)

○ Low-intensity variable training (n=20).

· Primary outcome: daily stepping (steps per day) collected at baseline, post-training, and at 3-month follow up

· Secondary outcomes: gait speed (self-selected and fast), 6 Minute Walk Test (6MWT), Physiological Cost Index (PCI), Functional Gait Assessment (FGA), Activities-Specific Balance Confidence (ABC) scale, lower-extremity Fugl-Meyer

· Additional variables/factors that may influence daily stepping: use of AD or AFO, BMI, Charlson Comorbidity Index, Area Deprivation Index, Walk Score

Results of interest:

· Gains were made in steps per day across all groups

· Both HIT groups showed gains in endurance (6MWT)

· Significant gains in steps per day and increased balance confidence (ABC) only occurred following HIT in variable contexts

· Changes in steps per day primarily associated with changes in 6MWT

○ Baseline 6MWT, lower-extremity Fugl-Meyer, and changes in balance confidence also contributed to changes in steps per day

Discussion: In addition to examining the effects of different locomotor training paradigms on participation (steps per day), this study assesses the impact of demographics and clinical measures of body function and activity limitations on those changes. While ABC scores increased post-training across all groups, sustained changes in ABC were only observed in the HIT-variable group at follow-up. This may explain the lack of continued increasing steps per day in the HIT-forward and low-intensity groups, despite the gains in 6MWT. Further, providing HIT in variable contexts resulted in sustained increases in daily stepping which may be related to increased gait endurance (6MWT) and balance confidence (ABC).

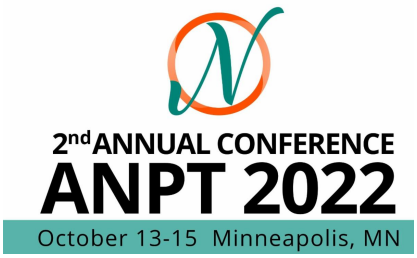
STROKE SIG STUDENT CORNER

Academy of Neurologic Physical Therapy

We had a question posed on the Stroke SIG Student Corner. Thank you!

What are some general guidelines/tips for rhythmic auditory

stimulation use with post-stroke gait training?



Congratulations to the ANPT Annual Conference 2022, Stroke SIG Poster Winner.
"Functional Ambulation Category in Acute Stroke Predicts Disability at 3 Months"

Andrew K, Costello M, DiCarlo J, Gillan E, Greenler E, Lin D, Parlman K, Plummer P, Strom J
Click link to view e-poster

You can find more great content at the ANPT YouTube Channel. Stroke SIG has it's own content under Playlists

Sign up NOW to run for ANPT Office!!

Serving in an ANPT or SIG leadership position is a great way to engage with the neuro community. Your involvement and leadership ensures ANPT will continue to grow and be innovative. Consider serving in one of the open positions and make note of the upcoming deadlines. As a member-driven Academy, we need you to help define our future!

2023 Open Positions and Descriptions

The ANPT and SIG Nominating Committees have created a **web page** to answer your questions about each of the open positions.

- Secretary
- Director of Communications
- Director of Practice
- ANPT Nominating Committee

For Special Interest Group open positions, visit the SIG pages for information on their activities **here.**

Nominations are **due March 27, 2023**. Elections will be held April 10 - May 8, 2023. Three-year terms begin July 1, 2023. If you are interested in getting involved in a leadership position, please contact one of the members of the ANPT Nominating Committee:

- Leslie Wolf
- Kate Enzler
- Lauren Bilski

You can also reach out to each SIG nominating committee as listed on the specific SIG Leadership pages.

VISIT THE STROKE SIG ONLINE!

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info@neuropt.org | www.neuropt.org

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