

January 31st, 2022



STROKE SPECIAL INTEREST GROUP

Academy of Neurologic Physical Therapy

In this newsletter...

- Stroke Corner Article Review: Effects of High Intensity Interval Training on Physical & Cognitive Function
- **Join us at the Stroke SIG Breakfast at CSM**
- Announcing Stroke SIG Trivia winners
- ANPT Annual Meeting & Myelin Melter Invite
- Elections information now available: Sign up to run for ANPT or SIG Office!

STROKE CORNER

Article Review: Virtual Reality & Neural Plasticity after Stroke

Thanks to Arco Paul, PT, PhD, NCS for reviewing this week's article

Effects of High-Intensity Interval Training After Stroke (The HIIT Stroke Study) on Physical and Cognitive Function: A Multicenter Randomized Controlled Trial

Link to full article if available: <https://doi.org/10.1016/j.apmr.2021.05.008>

Definitions:

- **High-Intensity Interval Training (HIIT):** Aerobic training involving repeated bouts of high intensity effort followed by active break times with lower intensity.
- **6-minute Walk Test (6MWT)** - A measure of walking ability which assesses distance walked over 6 minutes as a test of aerobic capacity/endurance.
- **10-meter Walk Test (10MWT):** A measure of walking ability which assesses walking speed
- **Berg Balance Scale (BBS):** A 14-item test for static and dynamic balance, that has a total score of 56.
- **Timed-Up and Go (TUG):** A test of functional mobility that is measured as time required for standing up from a chair, walk 3 meters and return back.
- **Hospital Anxiety and Depression Scale (HADS):** A 14-item questionnaire for assessing anxiety and depressive symptoms.
- **Montreal Cognitive Assessment (MoCA):** A global measure of cognitive function, with a total score of 30, which assesses 9 cognitive domains, such as executive functioning, memory, and attention, etc.
- **Trail Making Test (TMT):** A test for executive function consisting of Parts A (TMT -A) and B (TMT-B), and has been shown to correlate with processing speed and cognitive fluidity
- **Stroke Impact Scale:** A self-report measure that evaluates overall quality of life

using 8 functional domains.

- **Functional Independence Measure (FIM)** : A performance-based outcome measure that assesses assistance required on 18 items comprising cognitive and motor subscales. The score ranges from 18-126, with higher scores indicating higher functional independence.

Background and Purpose of article:

- In a previous study conducted by this group, an 8-week HIIT treadmill intervention, in combination with standard care, was found to be superior to just standard care with respect to peak oxygen consumption (VO₂peak).
- The aim of this study was to investigate the effects of this combined intervention (HIIT + standard care) on other physical, mental and cognitive outcome measures.

Methods of interest:

- This was a multicenter randomized controlled trial with blinded outcome assessments.
- After inclusion, all participants were assessed at baseline as pretest, after 8 weeks of intervention as posttest, and finally at 12 months as follow-up.
- Inclusion criteria were adult stroke survivors aged >18 years, first-time stroke within 3 months and 5 years of onset time, with ability to walk independently with or without a device.
- Exclusion criteria were unstable cardiac conditions, poorly controlled blood pressure (>180/100), other conditions where VO₂peak was contraindicated, subarachnoid hemorrhage.
- The intervention group underwent HIIT on a treadmill that consisted of 4-minute intervals of walking at 85-95% of Heart Rate peak (HRpeak), separated by 3 minutes of active breaks with walking intensity at 50-70% of HRpeak. There were 4 such bouts per session. The intervention was performed 3 times a week for 8 weeks (total 24 sessions). The participants also 3 attended motivational meetings at 1month, 4month and 8month timepoints.
- The control group received standard care, who were just educated about the benefits of high levels of physical activity.

Results of interest:

- The intervention group showed significant improvements in 6MWT, BBS and TMT-B after 8 weeks of HIIT, compared to the control group.
- TMT-B remained significantly improved for the HIIT group at 12month follow-up, when compared to the control group.
- However, FIM scores for the intervention group declined significantly at 12-month follow-up.

Discussion and clinical implications:

- HIIT treadmill interventions combined with standard care is superior to standard care for improving walking distance, balance and executive function in adult stroke survivors.
- HIIT treadmill training was also found to be safe, with absence of any adverse effects in the participants.
- The training requirements and time commitment for the participants were also modest, leading to very good compliance to the protocol.

Rise & Shine at CSM
Meet the Stroke SIG Board at the SIG Breakfast



Join us bright and early at CSM for the ANPT Special Interest Group Breakfast
Grab some refreshments and meet the ANPT Special Interest Group Board members!

Learn about SIG initiatives and sign up to volunteer, recognize CSM award winners,
and learn more about running for national SIG office.

*Saturday, February 5th
6:30-7:30 AM
Grand Hyatt - Lone Star Salon DEF Corridor*

Congratulations to Stroke SIG Trivia Winners!

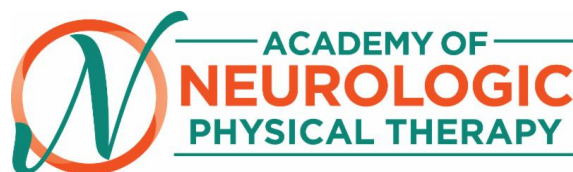


Thank you to everyone who joined us on the 25th for virtual Stroke SIG Trivia night!
Congratulations to the following winners:

- 1st place: Cathy Harro- winner of the portable heart rate monitor
- 2nd place: Joni Barry- winner of the brain model
- 3rd place: Meredith Smith- winner of the peddler
- 4th place: Julie Schwertfeger, winner of the pulse oximeter

Keep your eye on the newsletter and Stroke SIG social media for further opportunities
to connect with the Stroke SIG!

Academy of Neurologic Physical Therapy Annual Business Meeting, Awards Ceremony, and Myelin Melter



Join the Academy of Neurologic Physical Therapy for its Annual Business Meeting for all members. Additionally, the Academy will host the 2022 Awards Ceremony recognizing the successes of the Academy over the past year.

**Friday, February 4, 2022
at CSM in San Antonio, Texas!**

**Grand Hyatt
Lone Star Salon DE**

**6:30-6:45 pm Business Meeting
6:45-7:15 pm Awards Ceremony
7:15-9:00 pm Myelin Melter Social**

As a member of the ANPT, you are encouraged to vote at the upcoming meeting.

[Click here](#) to view the business meeting packet that includes the items below:

*Meeting Agenda
Prior Year Minutes
ANPT Updates
Membership Updates
Call for Nominations
ANPT Awards*

ANPT will be following the APTA Covid-19 guidelines for this event.

Run for Office! ANPT and Special Interest Group Elections

NOMINATE NOW!

Plan ahead and consider running for a position on the Stroke SIG board!

The following Stroke Special Interest Group are open:

- Chair Elect
- Vice Chair
- Nominating Committee

Nominations are due March 21, 2022 and you are encouraged to self-nominate. The nomination link is now live on the [ANPT Elections Webpage](#).

Elections will be held April 4 - May 4, 2022. Three year terms begin July 1, 2022.

All Stroke SIG board positions involve attendance at monthly meetings and leadership

of one of our Stroke SIG initiatives, such as our podcast, Student Corner, Social media, or weekly newsletter. Nominees must be Academy of Neurologic PT Members in good standing.

For more information on Stroke SIG initiatives, visit our page [here](#).

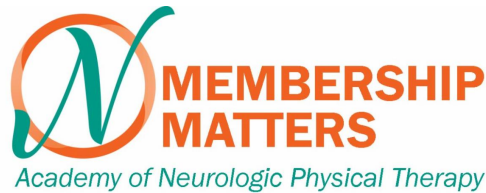
Don't hesitate to reach out to our Nominating Committee for more information at strokesig@gmail.com

Nominating Committee Members:

- Rachel Prusynski (Chair)
- Ginny Little
- Mackenzie Wilson

ELECTIONS WEBSITE

VISIT THE STROKE SIG ONLINE!



Academy of Neurologic Physical Therapy
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ANPT Social Media

