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STROKE SPECIAL INTEREST GROUP

Academy of Neurologic Physical Therapy

In this newsletter...

Thank you **Daniel Dray**, PT, DPT, Board-Certified Clinical Specialist in Neurologic Physical Therapy

Physical Activity Engagement, Attitudes and Experiences following a Transient Ischemic Attack or Mild Stroke

Article reference: Sammut, Maria MClinEpid, MPH; Haracz, Kirsti PhD; Shakespeare, David BPhysio; English, Coralie PhD; Crowfoot, Gary PhD; Fini, Natalie PhD; Nilsson, Michael PhD; Janssen, Heidi PhD. Physical Activity After Transient Ischemic Attack or Mild Stroke Is Business as Usual. Journal of Neurologic Physical Therapy: July 2022 - Volume 46 - Issue 3 - p 189-197 doi: 10.1097/NPT.0000000000000395

Link to full article if available:
https://journals.lww.com/jnpt/Fulltext/2022/07000/Physical_Activity_After_Transient_Ischemic_Attack.2.aspx

Definition(s):
Transient ischemic attack (TIA) is a short-lived neurological disturbance resulting from cerebral vascular occlusion with no lasting neurologic deficits. A Mild Stroke (the National Institutes of Health Stroke Scale ≤4 and the modified Rankin Scale 0-1) causes residual infarction, but minimal to no residual physical deficits. Evidence shows an elevated long-term risk of recurrent stroke in these populations.

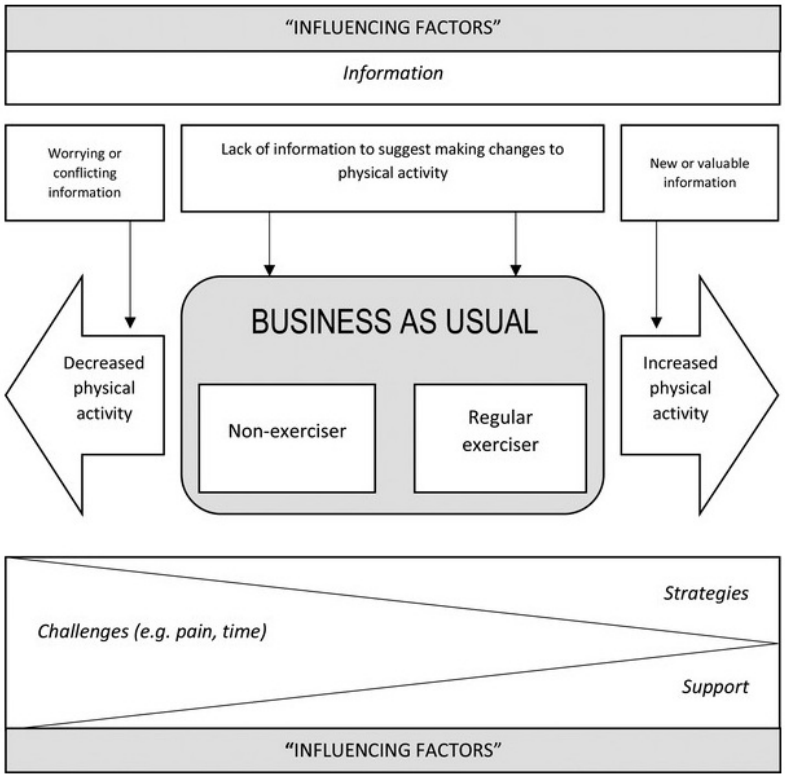
Moderate-to-Vigorous Physical Activity (MVPA) customarily is physical activity at an intensity of 40%-60% of maximum heart rate reserve, or a RPE of 4 to 5 out of 10. Clinical guidelines recommend regular and sustained engagement in MVPA for 150 minutes or more per week as a critical factor for reducing the risk of recurrent stroke.

Purpose of article: Previous research highlights various consequences that affect the individual's perception of health after TIA or mild stroke. This study aimed to explore attitudes toward, and

experience of *engaging in physical activity* by adults following a TIA or mild stroke.

Methods: This study was a qualitative analysis intended to understand the "how and why" of participant experience. Interviews from 33 adults with TIA or mild stroke were collected. All participants engaged in a single semi-structured telephone-based interview for a duration of 30-50 minutes. Interviews were analyzed via Grounded theory methodology, which is widely used in health care research to understand the complex interplay between the individual and their environment.

Results: Participants were primarily overweight, ranged in age from 43 to 80 years, and were a high functioning cohort of people, all of whom were able to walk independently and were able to walk a flight of stairs unaided. While two-thirds of participants self-reported engaging in regular physical activity more than 3 times per week, only one-third self-reported engaging in MVPA. The analyses resulted in two core concepts, business as usual and influencing factors. The following visual model demonstrates the relationship between the 2 concepts.



Business as usual characterizes one's belief and practices around physical activity. After TIA or mild stroke, most participants returned to pre-stroke habits (n=25), as either *regular exerciser* or *non-exerciser.* A small number of participants made changes to levels of physical activity engagement (negative changes [n = 4]; positive changes [n = 4]). *Influencing factors* shaped participants' beliefs and practices of physical activity post-stroke.

The amount and nature of the *information* they received were critical in determining whether participants' physical activity engagement was business as usual or making changes. A lack of *information* that suggested a need to do anything differently was the key driver for the *business-as-usual* approach to physical activity.

- None of the participants recalled receiving oral instruction on the importance of MVPA at the time of hospital discharge for their TIA or mild stroke.
- Participants who decreased physical activity described receiving *conflicting or worrying information* that left them not knowing what to do.
- Most participants who increased levels of physical activity reported receiving *new and valuable information* about the intensity and duration of physical activity and alternative types of activities.

Approximately half of all participants described internal (pain, fatigue, fear/anxiety) or environmental (cost, access to facilities, lack of time) *challenges* to physical activity, with some reporting multiple challenges.

- *Non-exercisers* or those who *decreased physical activity* tended to focus on the challenges as reasons for not engaging in physical activity.
- *Regular Exercisers* and those who *increased physical activity* felt

that *strategies* and *supports* enabled them to participate in physical activity despite the challenges. This group described coping and adaptive strategies that enabled them to engage in physical activity despite challenges.

Discussion: This study is the first to identify the nuances of people's attitude toward and experiences of engaging in physical activity after a TIA or mild stroke. Despite guideline recommendations that people with TIA and mild stroke receive encouragement to attain recommended levels of MVPA to reduce their risk of recurrent stroke, the authors' findings suggest that most do not make these changes and return to physical activity behaviors that reflect a *business-as-usual* attitude. This indicates that most people either do not adequately understand information or receive the appropriate information about the importance of meeting physical activity recommendations to reduce the risk of recurrent stroke.

Study participants who made positive changes or had physical activity levels in line with guideline recommendations used strategies and support to overcome challenges, reflecting the individual's ability to self-direct physical activity engagement, which indicates high self-efficacy.

These findings highlight the value of ensuring consistent, helpful, and pertinent TIA and mild stroke-related information tailored to individual needs and delivered in plain language in the clinical setting. Furthermore, people with TIA or mild stroke would likely benefit from access to support necessary to overcome challenges to facilitate engagement in MVPA (eg, secondary stroke prevention programs that actively target increasing levels of physical activity at guideline recommendations).

Additional references:

American Heart Association Recommendations for Physical Activity in Adults and Kids: https://www.heart.org/en/healthy-living/fitness/fitness-basics/aha-recs-for-physical-activity-in-adults#:~:text=Recommendations%20for%20Adults,preferably%20spread%20throughout%20the%20week.

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Cerebellar Stroke Course

This course will provide a review of the anatomical structures of the cerebellum and its vasculature, information on the pathophysiology and etiology of cerebellar stroke, as well as the prevalence and prognosis. Differential diagnosis of acute manifestations of cerebellar stroke will be included. The speakers will cover distinctive impairments of cerebellar stroke in addition to the development of appropriate treatment strategies.
Learning Objectives:
1. List specific roles and functions of the cerebellum.
2. Compare characteristics of various cerebellar stroke syndromes.
3. Describe typical impairments associated with cerebellum damage.
4. Choose assessments and outcome measures appropriate for cerebellar pathology.
5. Select treatment strategies for cerebellar stroke rehabilitation.
Course Launched June 2022

https://anpteducationcenter.org/products/cerebellar-stroke

Do you have challenging patients post-stroke and want some help? You can ask us

questions on the Student Corner Webpage. Space on the bottom (is anonymous if you want). It is not just for students!

https://www.neuropt.org/special-interest-groups/stroke/student-corner

STROKE SIG PODCAST

Blood Flow Restriction Training

New Podcast on Blood Flow Restriction Training.
Host Dr. Jackie Loeshelle is joined by Dr. Evan Cohen and Dr. Mark Manago to discuss blood flow restriction training for patients with neurologic deficits. During the interview, Drs. Cohen and Manago discuss how blood flow restriction works physiologically and evidence on using this intervention for individuals with a variety of neurologic diagnoses. They discuss how fatigue is often a limiting factor of exercise (for both strengthening and aerobic training) with patient with neurologic conditions, and that the addition of blood flow restriction may allow patients to be able to work at a higher intensity when fatigue is a barrier. Listen to learn more!
https://neuropt.org/education/anpt-podcasts
stroke SIG podcast #17

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