

December 20, 2021



STROKE SPECIAL INTEREST GROUP

Academy of Neurologic Physical Therapy

In this newsletter...

- **Stroke Corner: Rehab Considerations for Post-Stroke/COVID-19 Infection**
- Resources for Neurologic Telehealth
- Elections information now available: Sign up to run for ANPT or SIG Office!

Stroke Corner Article Review: Exercise-Based Stroke Rehabilitation: Clinical Considerations Following the COVID-19 Pandemic

Thanks to Shaelyn Bouchard, DPT, NCS for reviewing this article

Exercise-Based Stroke Rehabilitation: Clinical Considerations Following the COVID-19 Pandemic

Article reference: Moncion, K. et al (2021). Exercise-based stroke rehabilitation: Clinical considerations following the COVID-19 pandemic. *Neurorehabilitation and Neural Repair*, <https://doi.org/10.1177/15459683211054175>

Purpose of article: Individuals post-stroke are at high risk for infection, disease severity, and mortality after COVID-19 infection. There is currently no exercise rehab guidance in this population. The purpose of this article is to review the multi-system pathophysiology of COVID-19 related to stroke and exercise, to discuss the multi-system benefits of exercise for individuals post-stroke with suspected or confirmed COVID-19 infection, and provide clinical considerations related to COVID-19 for exercise during stroke rehab.

Methods of interest: This paper integrates pre-COVID-19 stroke (n=2) and COVID-19 exercise guidelines for non-stroke populations (n = 9), COVID-19 pathophysiology literature, stroke rehab practices, and exercise physiology principles.

Discussion:

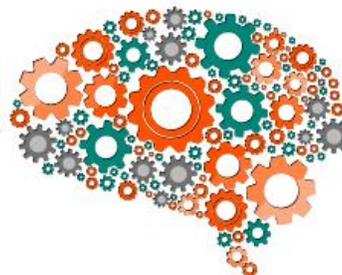
- Emerging data highlight that major multi-system complications may persist 6 months after infection (long haul or post-acute COVID-19 syndrome) – overlaps with similar multi-system effects of stroke
- We know exercise training is at the core of recommended stroke rehab, but there is no guidance currently related to stroke & COVID-19 recovery
- Initiation of relatively short bouts of exercise performed a low to moderate intensity is likely safe and beneficial for improving multiple systems in patients post-stroke who are deemed medically stable and who are ≥ 14 days symptoms free with suspected or confirmed post-COVID-19 infection
 - Additionally, moderate-intensity exercise may provide protective effects against infection by strengthening the immune system for individuals who are not infected
- Of particular concern for those recovering from a stroke are new cerebrovascular

events precipitated by COVID-19-induced immune response, including platelet aggregation, coagulation dysfunction, thromboembolism, and cerebral hypoperfusion

- Recent study showed that individuals with greater cardiorespiratory fitness had a lower risk of hospitalization due to COVID-19 – thus, access to exercise training in stroke rehab settings remains ever-important
- There can also be overlap of neurological symptoms between CVA and COVID-19: olfactory & gustatory disorders, headaches, dizziness, loss of taste/smell, fatigue, difficulty concentrating, memory problems
- Exercise is an effective method to promote brain plasticity mechanisms therefore could be an important aspect of rehab for neurological recovery
- There is good evidence for resistance exercise training after CVA, less evidence at this time in the specific context of COVID-19.
- Considerations for the implementation of exercise stroke rehab during and After a pandemic:
 - Recommended safety considerations: testing as a screen, minimize interaction between patient groups, pre-participation screening online or via phone, adopt high standards of hand hygiene and use of PPE, maintain adequate airflow/ventilation/distancing, use of filters during stress testing, cleaning all equipment, incorporate virtual exercise for appropriate patients
 - For individuals post-CVA and history of COVID-19 infection, close monitoring of symptom redevelopment is recommended
 - For those with persistent post-acute multi-system sequelae, medical clearance is required before participating in exercise rehab
 - Based on current literature and depending on patient volume & available resources, exercise stress testing with ECG and metabolic gas exchange should be conducted for individuals post-CVA with moderate to severe symptoms or post-acute symptoms from COVID-19 infection
 - In mild cases without significant comorbidities and if exercise rehab programs target only low to moderate intensity, other objective stress tests without ECG/gas exchange, such as submax testing, are valid and feasible alternatives
- Exercise prescription: lack of empirical evidence for post-COVID-19 populations
 - Clinicians should encourage a gradual increase of training volume 2 weeks after acute symptom resolution for individuals with moderate to severe COVID-19 infection
 - For mild cases, a gradual increase should be based on objective exercise stress testing, clinical judgment, and symptom severity

The article provides a clinical decision-making flow chart for COVID-19 screening and eligibility for exercise rehab for individuals with stroke (figure 2).

Additional Clinical Resources: Neurologic Telehealth



Looking for resources to help you treat via Telehealth?!

The Academy of Neurologic Rehabilitation has developed national campaigns and task forces to assist in the dissemination and implement the best available evidence in neurologic rehabilitation. The Neurologic Telehealth Task Force is gathering resources for clinicians who are treating patients through telehealth and has posted the first Neuro Telehealth Abstract of the Month. Look for this feature every month, in addition to a monthly podcast over at the Neuro Telehealth Website. While there, check out the list of helpful telehealth websites. Use [this link](#) to access these resources.

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.

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
info@neuropt.org | www.neuropt.org

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