



# STROKE SPECIAL INTEREST GROUP

Academy of Neurologic Physical Therapy

## In this newsletter...

- \*\*\*NEW\*\*\* Telerehabilitation in Stroke
- AFO/FES New FACT SHEET - Awesome
- Do you know someone who does great work in Stroke!! Let us know



## STROKE SIG ARTICLE REVIEW

Academy of Neurologic Physical Therapy



### Completed by:

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THANK YOU!!

### Summary topic title:

Telerehabilitation Initiated Early in Post-Stroke Recovery: A Feasibility Study

### Article reference:

Edwards D, Kumar S, Brinkman L, et al. Telerehabilitation Initiated Early in Post-Stroke Recovery: A Feasibility Study. *Neurorehabilitation and Neural Repair*. 2023;37(2-3):131-141.  
doi:10.1177/15459683231159660

### Link to full article:

<https://journals.sagepub.com/doi/full/10.1177/15459683231159660>

### Definition(s):

· Telerehabilitation (TR): therapy delivered via telehealth platform; included TR console with buttons, various inputs, computer monitor, and videoconference

### Purpose of article:

TR has potential to provide an alternative or adjunct to traditional therapy with its ability to support high doses of exercise and greater accessibility. Previous work showed benefits of TR in the chronic phase of stroke recovery, however whether this applies to TR started early after stroke is unknown. The purpose of this study was to examine the feasibility, safety, and potential efficacy of an established telerehabilitation program early after stroke initiated during admission to an inpatient rehabilitation facility and completed in the patient's home.

### Methods of interest:

This was a dual-site study including California Rehabilitation Institute and MossRehab. Participants early post-stroke with arm weakness were enrolled during their inpatient admission. The program consisted of 6-weeks of TR, comprising 36 sessions, half of which were supervised by a therapist remotely. Treatment therapists personalized each treatment session to the patient and modified the level of challenge based on subject performance. Subjects were introduced to the program while in the IRF and continued in the home for the remaining sessions.

### Results of interest:

Of the 19 eligible participants, 16 completed the intervention, and 15 participants additionally completed

the post-intervention visit. Those able to complete the intervention had overall low global impairment (NIHSS score 4, median) mild-to-no aphasia, and moderate-severe hemiparesis. The number of TR sessions completed within the IRF was  $4.4 \pm 4.4$ , compliance with the 36 TR sessions was 100%, and median satisfaction was 93.3%. The total dose of rehabilitation therapy more than doubled (from  $33.9 \pm 20.3$  hours to  $73.6 \pm 21.8$  hours) when the amount of TR was added.

**Discussion:**

This study demonstrated the feasibility of providing intensive TR-based arm therapy in addition to usual care, starting during IRF admission and continuing in the home. Additionally, no serious adverse events related to study participation were reported. Several clinical measures were tested before and after the intervention including the Fugl-Meyer Assessment for Upper Extremity, Box and Blocks Test, Nine Hold Peg Test, Stroke Impact Scale, and Modified Rankin Scale, however, the contribution of TR cannot be assessed here given the lack of control group. Lastly, this study helped provide insight for which patients might be suitable for TR intervention: those with moderate-severe arm motor deficits, mild cognitive deficits (MoCA >21) and mild-moderate forms of depression and aphasia could participate.

Have you used Telerehabilitation this way?

Yes

No

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**STEP ON IT**



## **NEW!! Patient Education Document**

### **How an Ankle Foot Orthosis (AFO) or Functional Electrical Stimulation (FES) Can Help to Improve Function after a Stroke**

The AFO and FES Knowledge Translation Task Force is pleased to announce the release of a new patient fact sheet. The **fact sheet** helps people understand how an AFO or FES can help them, why they may want to consider an AFO or FES, and how to obtain them. The fact sheet also describes the importance of working with a physical therapist to get an AFO or FES.

## How an Ankle Foot Orthosis (AFO) or Functional Electrical Stimulation (FES) Can Help to Improve Function after a Stroke

### WHAT IS AN AFO AND HOW CAN IT HELP ME?

- An Ankle Foot Orthosis (AFO) is a brace that covers the foot, ankle, and lower leg.
- An AFO can help your foot stay lifted while you walk. It may also help with controlling your knee.
- AFOs come in different designs and materials and can be customized to your needs.



### WHAT IS FES AND HOW CAN IT HELP ME?

- Functional Electrical Stimulation (FES) uses an electrical signal to activate the muscles that lift your foot up while walking.
- FES uses a cuff worn just below your knee.
- The FES turns on when you swing your leg forward while walking.



### WHY WOULD I WANT TO USE AN AFO OR FES?

- An AFO or Functional FES may improve your walking, your balance during functional activities, and your quality of life.
- If you have weakness in your leg after a stroke, an AFO or FES may help you by assisting or better positioning your foot and ankle while walking.

### IS THERE EVIDENCE THAT AN AFO OR FES CAN HELP AFTER A STROKE?

- There is strong evidence that an AFO or FES can help to improve how fast you walk, how far you can walk, your balance, your performance of daily activities, and your quality of life.
- An AFO or FES may also improve how you walk and can still allow your own muscles to do some of the work while walking.



Recognize Greatness! Let us know!

Do you have a colleague who deserves to be recognized by their peers for their great work in stroke research? Now is the time to submit a nomination for the ANPT 2024 Awards!

<https://www.neuropt.org/about-us/awards/nomination2024>

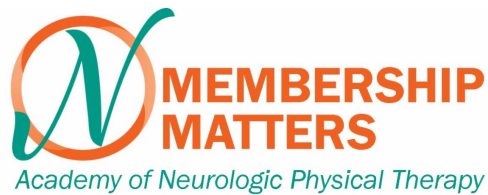
STROKE Research Award

Award nominations are due by August 1<sup>st</sup> and winners will be recognized at the CSM 2024 in Boston!

contact us at [strokesig@gmail.com](mailto:strokesig@gmail.com)



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