Long COVID Rehabilitation: Research on the Value of Physical Therapy

As part of health care teams for people with long COVID, physical therapists and physical therapist assistants play a critical role in screening and treating patients experiencing long COVID symptoms.

Research demonstrates that physical therapy benefits patients seeking to recover from long COVID. The evidence base is evolving for this population, so it's important to consult the literature frequently to stay up to date.

Rehabilitation Programs

Effects of Exercise Rehabilitation in Patients With Long Coronavirus Disease 2019
European Journal of Preventive Cardiology, May 2022

Conclusion: Improvements in both cardiorespiratory function and muscular strength were seen in patients with long COVID with a combined aerobic and resistance exercise program. While no control group was compared to the intervention group, this study highlights the potential gains from exercise interventions for this population.

Physical and Psychological Reconditioning in Long COVID Syndrome: Results of an Out-of-Hospital Exercise and Psychological-Based Rehabilitation Program
IJC Heart & Vasculature, July 2022

Conclusion: This study demonstrated that a multidisciplinary rehabilitation program can lead to improvements in physical and psychological parameters. Study participants demonstrated improved upper and lower body muscular strength, cardiopulmonary fitness, physical and mental domains of quality of life, and self-reported anxiety and depression levels. Interventions in the multidisciplinary program included aerobic and resisted exercise, as well as counseling and cognitive behavioral therapy.

Physical Therapy Management of an Individual With Post-COVID Syndrome: A Case Report
Physical Therapy, June 2021

Conclusion: An individual experienced improved muscle strength, muscle power, and physical function after receiving aerobic and strength training, breathing techniques, and mindfulness training. The individual initially had only mild COVID-19 symptoms but had persistent symptoms after resolution of acute illness and was referred to physical therapy for examination and evaluation, which revealed deficits in endurance, muscle strength and power, and impairments in emotional health and cognitive functioning. No positive effect was noted on emotional and health-related quality of life. This research highlights the importance of ongoing cognitive and physical rehabilitation for those experiencing deficits related to post-COVID syndrome.

Fatigue and Post-Exertional Malaise

A Mixed-Methods Systematic Review of Post-Viral Fatigue Interventions: Are There Lessons for Long COVID?
PloS One, November 2021

Conclusion: A literature review of studies related to post-viral fatigue management, while focusing on a narrow population, indicated that Long COVID fatigue can be managed with physical and psychological support that is delivered in groups and when strengthening, rather than endurance, exercise is used to prevent deconditioning.

Chronic Fatigue and Post-exertional Malaise in People Living With Long COVID: An Observational Study
Physical Therapy, April 2022

Conclusion: The results of this study indicate that considering fatigue and screening for post-exertional malaise in those with long COVID should be a priority for health care professionals More than 70% of the 213 individuals observed reported chronic fatigue, and more than 60% of these participants also described signs of PEM.

Respiratory System

Persistent Exertional Dyspnea and Perceived Exercise Intolerance After Mild COVID-19: A Critical Role for Breathing Dysregulation?
Physical Therapy, July 2022

Conclusion: Breathing dysregulation may help explain COVID-related dyspnea and perceived exercise intolerance after mild infection. The study authors propose that breathing relaxation strategies might be helpful for some individuals, while rebreathing therapy may be required for others.

Effect of pulmonary rehabilitation approaches on dyspnea, exercise capacity, fatigue, lung functions, and quality of life in patients with covid-19: A systematic review and meta-analysis.
Archives of Physical Medicine and Rehabilitation, October 2022

Conclusion: Pulmonary rehabilitation (exercises, training, education and behavioral changes) were found to be significantly effective in improving dyspnea and exercise capacity in patients with acute and chronic COVID-19 with mild to severe symptoms. Fatigue and lung functions were significantly improved in acute COVID-19 patients with mild symptoms.

Outpatient Pulmonary Rehabilitation in Patients with Long COVID Improves Exercise Capacity, Functional Status, Dyspnea, Fatigue, and Quality of Life
Respiration, February 2022

Conclusion: Personalized, interdisciplinary pulmonary rehabilitation can improve exercise capacity, function, dyspnea, fatigue, and quality of life after COVID-19 infection. Patients in the study participated in an outpatient program that included endurance, strength and inspiratory muscle training, individualized patient education, psychosocial counseling, nutritional education, and smoking cessation. Significant gains were noted but further research is needed to establish an optimal protocol, long-term benefits, and cost-effectiveness.

Cardiovascular System/Postural Orthostatic Tachycardia Syndrome

Management of Long COVID Postural Orthostatic Tachycardia Syndrome With Enhanced External Counterpulsation
Cureus, September 2021

Conclusion: In this case study, a patient presenting with postural orthostatic tachycardia syndrome after COVID-19 infection demonstrated improvements in daily function, dyspnea, and fatigue after treatment with enhanced external counterpulsation. This therapy involves the use of blood pressure-like cuffs that deflate and inflate in pattern with the cardiac cycle and has been used in cardiac conditions such as heart failure and angina. Further research is needed to determine if this intervention will benefit the broader long COVID population.

Neurologic System

Case Report: Overlap Between Long COVID and Functional Neurological Disorders
Frontiers in Neurology, January 2022

Conclusion: This case report highlights functional neurological disorder as a consideration for patients diagnosed with long COVID. The patient presented with persistent attention and memory difficulties as well as limb dysesthesia after COVID-19 infection. A neurological examination found no organic disorder, and the patient was treated for functional neurological disorder with psychotherapy and physical therapy. The patient's dysesthesia symptoms resolved, and cognition improved.

Vestibular Physical Therapy for the Treatment of Brain Fog from Long COVID – A Case Report
Journal of Orthopaedic & Sports Physical Therapy, April 2022

Conclusion This case study reported identification and treatment of vestibular dysfunction in an individual who experienced brain fog after COVID-19 infection. With physical therapist treatment, including progressive vestibular-based and balance exercises, the patient demonstrated steady improvements of cognitive symptoms, including concentration time. Further research is required to assess the efficacy of these interventions to address brain fog in larger samples.

Telehealth

Safety, Feasibility and Initial Efficacy of an App-Facilitated Telerehabilitation (AFTER) Programme for COVID-19 Survivors: A Pilot Randomised Study
BMJ Open, July 2022

Conclusion: A telerehabilitation program was found to be safe and feasible, and led to functional improvements, for individuals who required hospitalization after COVID-19 infection. The study did not find statistically significant differences in functional gains between the intervention and control groups, but it demonstrated that individual telerehabilitation may offer limited benefit beyond education on exercise and recovery, monitoring of vital signs and physical activity, and weekly virtual check-ins. The study did find high adherence rates for the intervention group, with researchers suggesting it was due to the biobehavioral emphasis of the intervention.

Last Updated: 10/21/22
Contact: practice@apta.org