



Study design

# Neuromuscular Electrical Stimulation (NMES) as an Add-on Therapy for the Improvement of Dyspnea in Patients with Post-Covid Syndrome: a Protocol for a Phase II Randomized, Non-Pharmacological Intervention-Controlled, Double-Blind Study

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## Appendix

**Appendix A.** Estimates of central tendency and dispersion in different Post-Covid patient cohorts from the existing literature in 2021.

Author- Year	Title	N	Time Evaluation	6-MWT (mean-median)	Dispersion
Strumiliene et al. (2021)	Follow-Up Analysis of Pulmonary Function, Exercise Capacity, Radiological Changes, and Quality of Life Two Months after Recovery from SARS-CoV-2 Pneumonia	51	2 Months	553.5	86.96
Salles-Rojas et al. (2021)	Masking the 6-Minute Walking Test in the COVID-19 Era	77	> 1 Month	517.6	90.6
Madrid-Mejía et al. (2021)	Improvement in Walking Distance Lags Raise in Lung Function in Post-COVID Patients	70	6 Months	526	104.5
Huang, Tan, et al. (2020)	Impact of coronavirus disease 2019 on pulmonary function in early convalescence phase	57	> 1 Month	561.97	45.29
Morin et al. (2021)	Four-Month Clinical Status of a Cohort of Patients After Hospitalization for COVID-19	177	> 2 Months	462	380-507
Huang, Huang, et al. (2021)	6-month consequences of COVID-19 in patients discharged from hospital: a cohort study	1733	6 months	495	440-538
Shah et al. (2020)	A prospective study of 12-week respiratory outcomes in COVID-19-related hospitalizations	60	3 months	504	107

**Appendix B.** Literature review in PubMed considering publications released in the last 10 years that used NMES as the intervention.

Out of 18 publications, 6 mentioned that performed 6MWT.

First author	Title	Participants randomized	Participants completed	Drop-out rate
Sillen et al. (2014)	Efficacy of lower-limb muscle training modalities in severely dyspnoeic individuals with COPD and quadriceps muscle weakness: results from the DICES	73	51	30%
Vieira et al. (2014)	Neuromuscular electrical stimulation improves clinical and physiological function in COPD patients	24	20	17%
Abdellaoui et al. (2011)	Skeletal muscle effects of electrostimulation after COPD exacerbation: a pilot study	17	15	12%
Maddocks et al. (2015)	Neuromuscular electrical stimulation to improve exercise capacity in patients with severe COPD: a randomized double-blind, placebo-controlled trial	52	36	30%
Valenza et al. (2018)	Effects of home-based neuromuscular electrical stimulation in severe chronic obstructive pulmonary disease patients: a randomized controlled clinical trial	36	36	0%
Bonnevie et al. (2018)	Home-based Neuromuscular Electrical Stimulation as an Add-on to pulmonary rehabilitation does not provide further benefits in patients with chronic obstructive pulmonary disease: A multicenter Randomized Controlled Trial	73	51	30%

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