

Long COVID and myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) are both post-viral conditions that lead to similar symptoms. Both conditions are growing in prevalence due to the COVID-19 pandemic and safe treatment strategies need to be investigated. We examined the efficiency of 8 weeks of inspiratory muscle training (IMT) on fitness, autonomic function, and symptoms in these populations and healthy controls. Each participant was given an IMT device to take home to conduct the tests and were contacted weekly to ensure safety and to see if they were conducting the training. The maximal inspiratory pressure that each person could do was measured and the devices were set at 80% of their individual maximum. The IMT was conducted at the participant's discretion 3 times per week where each sessions was 6 sets of 6 repetitions (i.e. breaths in). The goal was to reduce the time between sets from 60s for the first 2 weeks to 5s in the last week rather than change the effort in an attempt to minimize the risk of post-exertional malaise. All participants experienced increased inspiratory muscle strength, 6-minute walk distance, resting heart rate, heart rate variability, and symptoms related to sleep. In the ME/CFS group, there were further improvements in symptoms related to vascular function, secretomotor function, pain, and total autonomic function. This pilot study suggests that IMT could be of benefit in Long COVID and ME/CFS as long as researchers, clinicians, and patients bear in mind the possibility of developing post-exertional malaise.

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