

EFFECT OF IMT PLUS EMT ON MULTIPLE SCLEROSIS



Multiple sclerosis (MS) leads to peripheral and respiratory muscle weakness and fatigue. This includes both inspiratory and expiratory muscles – both begin to weaken and decline. Despite the fact that expiratory muscles deteriorate quicker in MS patients, however, only the benefits of inspiratory muscle training (IMT) in MS patients has so far been studied. This is a distinct oversight that should be addressed in order to best help MS patients retain their independence and health.

In this blog post, we're going to talk about a study that attempts to address the aforementioned lack. The research explores a combination of IMT and

expiratory muscle training (EMT) in order to determine whether or not there is improvement of respiratory muscle strength, fatigue, quality of life (QOL), self efficacy and functional performance in MS patients.

Key Findings

- Multiple sclerosis (MS) leads to peripheral and respiratory muscle weakness and fatigue.
- 5 weeks of respiratory muscle training (RMT) consisting of combined resistance inspiratory and expiratory muscle training improved respiratory muscle strength, fatigue and quality of life in MS patients.

Patient Impact

RMT effectively improves respiratory muscle strength, fatigue and quality of life in MS patients.

Study Methods

Patients with mild to moderate MS underwent combined progressive resistive IMT plus EMT. This includes tests for the following

- Pulmonary function
 - Respiratory muscle strength (P_Imax and P_Emax)
 - Exercise capacity (stair climb, 6MWT)
 - Fatigue
 - QOL
 - Self efficacy
 - Physical disability scale
- The above variables were assessed before and after five weeks of respiratory muscle training (RMT), and the results were subsequently compared to a control group.

Study Results

PI_{max}, PE_{max}, fatigue and QOL all significantly improved due to RMT. Resistive RMT improves respiratory strength in MS patients and reduces fatigue, thus alleviating the disease burden and improving QOL.

References

Ray AD, et al. A combined inspiratory and expiratory muscle training program improves respiratory muscle strength and fatigue in multiple sclerosis. Arch Phys Med Rehabil. 2013 Oct;94(10):1964-70.