

Inspiratory muscle training improves lung function in ankylosing spondylitis

June 12 2015

The results of a study presented today at the European League Against Rheumatism Annual Congress (EULAR 2015) showed that inspiratory muscle training (IMT) significantly improves lung strength and efficiency in patients with ankylosing spondylitis (AS), a condition often associated with breathing difficulties. These findings demonstrate that just eight weeks of IMT provide greater improvements in lung function than conventional treatment options.

AS is a painful and progressive form of arthritis caused by [chronic inflammation](#) of the joints in the spine. AS significantly impairs lung function, reducing pulmonary muscle strength and endurance in up to 40%-80% of patients. Prevalence of AS varies globally, and is estimated at 23.8 per 10,000 in Europe and 31.9 per 10,000 in North America.

Inspiratory muscle training is a course of therapy consisting of a series of breathing exercises to strengthen the bodies' pulmonary muscles.

"We assessed resting pulmonary function and ran cardiopulmonary exercise tests at the start and end of the study and saw significant improvements across all measures of [lung function](#) in the group undergoing IMT," said study investigator Dr. Razvan Dragoi, MD, PhD, Department of Rehabilitation, Physical Medicine and Rheumatology, Victor Babes University of Medicine and Pharmacy, Romania. "When you compare these findings with the conventional exercise group - which saw small, non-significant improvements - it's clear that adding IMT to an exercise programme has clear health benefits for patients with AS."

Fifty four patients with AS were randomised to either conventional rehabilitation exercise training (consisting of 20 exercises including motion and flexibility exercises of the cervical, thoracic, and lumbar spine, and abdominal and diaphragm [breathing exercises](#)) associated with IMT (using a real time computer-assisted device three times a week); or conventional training alone. Each IMT session was individualised by evaluating the maximum inspiratory pressure that can be maintained by the patient (SMIT) and performed at 80%-85% of SMIT. Although the IMT and conventional exercise groups were homogenous at the beginning of the study, by the end of eight weeks the IMT group showed significant improvements in chest expansion, aerobic capacity, resting [pulmonary function](#) and ventilator efficiency.

Provided by European League Against Rheumatism

Citation: Inspiratory muscle training improves lung function in ankylosing spondylitis (2015, June 12) retrieved 23 April 2024 from <https://medicalxpress.com/news/2015-06-inspiratory-muscle-lung-function-ankylosing.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.