

Neuromuscular electrical stimulation reduces muscle atrophy in COPD

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Neuromuscular electrical stimulation (NMES) may reduce muscle atrophy in patients with severe chronic obstructive pulmonary disease (COPD), according to Canadian researchers.

The results will be reported at the ATS 2010 International Conference in New Orleans.

NMES is the application of electrical stimulation to a group of muscles through electrodes placed on the skin. It is primarily used by physical therapists to help restore function to injured muscles. Isabelle Vivodtzev, Ph.D. and colleagues wanted to test whether NMES had the potential to address [muscle](#) wasting in COPD patients.

Muscle wasting is common in patients with severe COPD, and effective treatment has yet to be developed. The impact of muscle wasting and poor limb muscle endurance on survival and functional status in COPD has been clearly established. General physical reconditioning is currently the best treatment to improve limb muscle function in this disease, but there is a need to develop alternative tools to treat limb muscle dysfunction. Up to a third of patients with COPD undertaking [exercise training](#) do not show the expected gain in functional status or [muscle function](#).

"Because it has little impact on ventilatory requirements and dyspnea, NMES appears as a promising alternative to general physical reconditioning in advanced COPD and its feasibility has been confirmed

in this population," said Dr. Vivodtzev, a postdoctoral student at l'Institut Universitaire de Cardiologie et de Pneumologie du Québec.

To investigate whether NMES could effectively reduce muscle wasting in COPD patients, the researchers recruited 20 patients with severe COPD (FEV1

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