


# Can creatine help in pulmonary rehabilitation after COVID-19?

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*Ther Adv Respir Dis*

2020, Vol. 14: 1–2

DOI: 10.1177/  
1753466620971144

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**Keywords:** creatine, COVID-19, rehabilitation, bioenergetics, ESPEN

Dear Editor:

COVID-19 pneumonia patients who responded successfully to intensive care treatments and were able to be discharged from hospital appear to experience a prolonged recovery, demanding resolute inpatient and outpatient rehabilitation services. Those include predominantly physiotherapy, occupational therapy, and speech-language retraining, with respect to recovery of the respiratory system as well as mobility and function. The recent European Society for Clinical Nutrition and Metabolism (ESPEN) concise guidance on clinical nutrition in COVID-19 patients properly addressed nutritional intervention and therapy as an integral part of the approach to patients victim to SARS-CoV-2 infection in the ICU setting, in an internal medicine ward setting as well as in general healthcare but omitted to consider nutritional guidance for COVID-19 survivors.<sup>1</sup> Besides other early and short-term rehabilitative interventions, the International Task Force of the European Respiratory Society recently itemized adequate nutrition among rehabilitation needs for COVID-19 survivors upon release from hospital.<sup>2</sup> Among other candidates, dietary creatine might emerge as one of the key elements of nutritional support following COVID-19 respiratory distress due to its beneficial effects demonstrated during rehabilitation in various lung conditions. For instance, creatine supplementation augments functional recovery during pulmonary rehabilitation in patients with chronic obstructive pulmonary disease,<sup>3</sup> but also ameliorates cystic fibrosis, stroke, and respiratory failure,<sup>4–6</sup> acting as an anti-inflammatory and energy-boosting agent. Although no disease-specific guidelines exist at present, a conventional creatine dosage of 5 g per day administered over 4 weeks or more might be risk-free and sufficient to back up pulmonary rehabilitation in COVID-19. Creatine is inexpensive,

widely available, and has a favorable safety profile, therefore being a suitable promising compound that could meet a growing need for nutritional help during pulmonary rehabilitation in post-COVID-19 world.

## Author contributions

SMO solely contributed to this article.

## Conflict of interest statement

The author declares that there is no conflict of interest.

## Funding

The author received no financial support for the research, authorship, and/or publication of this article.

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