

Effect of individual nutritional therapy during inpatient pulmonary rehabilitation in patients at risk for malnutrition and sarcopenia - a randomized controlled trial

Project : 601

Coio, Marco¹; Zurfluh, Andrea¹; Lehmann, Undine² et al.

¹Inselspital and Berner Reha Zentrum, Bern University Hospital, University of Bern² Bern University of Applied Sciences, Section Nutrition and Dietetics, Department of Health Professions

Background:

Malnutrition and sarcopenia is common in inpatient rehabilitation, however individual nutritional therapy (iNT) often underutilized. This study aimed to assess the effect of iNT on nutrition and muscular health.

Method:

Patients with chronic obstructive pulmonary disease (COPD) or post-pneumonia at risk for malnutrition and sarcopenia undergoing inpatient rehabilitation were enrolled. The control group received usual care including enriched food and educational group sessions on nutrition. The intervention group received additional counselling by a dietician twice a week. Primary outcomes were changes in energy and protein intake, assessed via menu consumption and macronutrient analysis. Secondary outcomes included handgrip strength, muscle mass by bioimpedance analysis, and physical performance measured by the timed-up-and-go test.

Results:

Twenty-six patients per group (median age of 72 years, 60% men, 52% COPD) were included. Energy and protein intake increased significantly more in the intervention group with a 309 kcal and 16 g compared to -53 kcal and -1 g in the control group ($p = 0.001$ for group differences). Handgrip improved more in the intervention group by a median of 1 kg ($p = 0.007$), without group differences in muscle mass or physical performance.

Conclusion: I

NT effectively increased energy and protein intake in patients at risk of malnutrition and sarcopenia undergoing three weeks of pulmonary rehabilitation, with a positive impact on prognostic handgrip strength.