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## Relationship of dietary pattern with body composition and symptoms in patients with COPD



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European Respiratory Journal 2022 60: 2103; DOI: 10.1183/13993003.congress-2022.2103

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### Abstract

This study explored the relationship of dietary pattern with body composition and symptoms in patients with COPD.

Data collection included: dietary pattern – n. meals/day; period of day of highest food intake (morning [6AM–12PM], afternoon [12–18PM] and evening [18PM–6AM]); time interval between meals (3-4h, 5-6h, 9-10h), and daily energy and nutrient intake using a semiquantitative food frequency questionnaire (last 12 months); body composition – body mass index (BMI), % fat mass (%FM), % fat-free mass (%FFM), % total muscle mass (%MM), fat-free mass index (FFMI) and visceral fat index (VAT) (SECA mBCA 525); symptoms – dyspnoea (modified Medical Research Council Dyspnea Scale, mMRC), fatigue (Checklist of Individual Strength, CIS20-P total score), impact of COPD (COPD Assessment Test, CAT). Pearson's (r) or Spearman's (ρ) correlations were conducted.

18 patients participated (16 males, 68±7 years old, FEV<sub>1</sub> 43±20% predicted, BMI 25±5kg/m<sup>2</sup>, FFMI 18±3kg/m<sup>2</sup>). Most participants reported having 3-4 meals/day (n=14, 78%) with a 3-4-hour interval (n=15, 83%). Moderate correlations were found between %FM and carbohydrates (ρ=-.501), and between FFMI and monosaturated fat (r=.476) (p<.05). Moderate correlations were also found between: mMRC, CAT and CIS20-P with proteins, saturated fat, zinc and phosphorus (.469≤ρ≤.634, p<.05); CAT and CIS20-P with calories and carbohydrates (.497≤ρ≤.551, p<.05); and CIS20-P and mMRC with sodium and calcium (.517≤ρ≤.551, p<.05). mMRC was also correlated with vitamin B12 (ρ=.506, p<.05). No other significant correlations were observed (p>.05).

Energy and nutrient intake are related to COPD symptoms and body composition. The nature of these relationships should be explored.

COPD - management   Systemic effect   Personalised medicine

## Footnotes

Cite this article as *Eur Respir J* 2022; 60: Suppl. 66, 2103.

This article was presented at the 2022 ERS International Congress, in session “-”.

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### ISSN

Print ISSN: 0903-1936  
Online ISSN: 1399-3003

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