

Effectiveness of nutritional interventions in pre-frail or frail older adults: a scoping review

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ADMINISTRATIVE INFORMATION

Support - No funding.

Review Stage at time of this submission - The review has been completed.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 9 December 2025 and was last updated on 9 December 2025.

INTRODUCTION

Review question / Objective To assess the impact of nutritional interventions on frailty and prefrailty among older people.

Background Frailty, characterized by inadequate protein, micronutrients, and unintentional weight loss, worsens functional status, increases hospitalizations, and reduces quality of life. While nutritional interventions (protein, vitamin D, dietary counseling) may mitigate frailty, empirical evidence examining their effectiveness is lacking.

Rationale Although the impact of nutritional interventions on frail individuals has been inspected by a number of studies, the results are difficult to integrate in clinical practice. Additionally, the aforementioned interventions yielded inconsistent results regarding older people with prefrailty. Previous studies have highlighted the potential benefits of targeted interventions in patients with frailty, however no approach is

universally acceptable; This makes it difficult for healthcare professionals and policymakers to utilize such interventions. Therefore, we conducted a scoping review to summarize the most up-to-date studies regarding the impact of nutritional interventions on frailty and pre-frailty syndrome.

METHODS

Strategy of data synthesis We searched MEDLINE and Scopus databases for interventional and observational studies, in English, from January 2015 to present. Four reviewers independently screened records and extracted intervention type, dose, duration, population, and outcomes, through a standardized data extraction sheet.

Eligibility criteria (1) being peer-reviewed articles published in English (2) focusing on frailty in the elderly, (3) investigating its relationship with nutrition, (4) encompassing interventional studies and selected cross-sectional and cohort studies (5) being primary interventional studies or

observational studies themselves, (6) being published in the past ten years.

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Source of evidence screening and selection

The source of evidence was the Medline and Scopus databases by utilizing relevant keywords, such as “frailty”, “nutritional interventions”, etc. We included original articles, including randomized and non-randomized controlled trials, cohort studies, etc.

Data management Four independent reviewers screened the articles in three steps. First, they assessed the titles for inclusion based on the eligibility criteria. Second, they assessed the abstracts for inclusion. Finally, they thoroughly examined the full texts for potential inclusion. It should be noted that a fifth reviewer was employed if the four had any disputes.

Reporting results / Analysis of the evidence As this was a scoping review, we did not conduct any synthesis of the included studies data. However, we descriptively analyzed the results of the included studies in the context of effectiveness of nutritional interventions for the managements of pre-frailty and frailty in older adults.

Presentation of the results Data is presented in table format and with a figure chart depicting the selection process, along with relevant text which elaborates on the tables and figure.

Language restriction Only English written articles were included in the study per the inclusion and exclusion criteria.

Country(ies) involved Greece.

Other relevant information None

Keywords Nutritional Interventions; Frailty; Pre-frailty; Older adults; Scoping Review.

Dissemination plans Publication in a peer reviewed journal.

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