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Editorial

Sarcopenic Obesity among the Elderly: Bridging Nutrition Gaps

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E d i t o r i a l

The global demographic shift toward an ageing population has brought sarcopenic obesity, the coexistence of age-related muscle loss and excess adiposity into sharp clinical focus. Affecting approximately 5-10% of older adults, the dual burden subsequently leads to metabolic, functional, and mortality outcomes than either sarcopenia or obesity alone.[1] Yet despite growing recognition, significant nutrition gaps persist in both diagnosis and management. The article tries to explore the nutritional challenges inherent to sarcopenic obesity and suggests a multi-pronged approach to address these gaps.

Defining the Problem

Sarcopenic obesity is characterised by the concurrent occurrence of diminished skeletal muscle mass or functionality alongside elevated fat mass.[1,2] The 2022 joint consensus from the European Society for Clinical Nutrition and Metabolism (ESPEN) and the European Association for the Study of Obesity emphasises a function-first diagnostic algorithm: screening at-risk individuals for both adiposity markers and low muscle status, followed by body composition assessment to confirm the diagnosis.[2] The consensus additionally suggests categorization into Stage I (without complications) and Stage II (with complications), emphasising the prognostic significance of this phenotype.[2]

Nonetheless, diagnostic heterogeneity persists as a challenge. Different studies use different definitions for muscle strength, gait speed, and fat mass thresholds, which makes it hard to get consistent estimates of prevalence and makes targeted interventions harder.[1] This inconsistency underscores the pressing necessity for standardized criteria to facilitate effective surveillance and treatment in elderly populations.

Nutritional Challenges: Protein and Vitamin D

Two critical nutritional deficits drive the pathophysiology of sarcopenic obesity: inadequate protein intake and vitamin D insufficiency.

Protein Insufficiency

Older adults frequently ingest inadequate protein, increasing their vulnerability to muscle loss during caloric restriction.[1,3] The anabolic resistance of aging muscle necessitates increased protein consumption to sustain muscle protein synthesis; however, numerous older adults do

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not fulfill even the fundamental requirements. Inadequate protein during weight loss interventions, which are often needed to treat obesity, makes lean mass loss worse, which makes functional decline and metabolic health worse.[3] Current evidence indicates that protein intake should be between 1.0 and 1.2 grams per kilogram of body weight per day for healthy older adults. This amount should increase to between 1.2 and 1.5 grams per kilogram of body weight per day if the person is sick or has a chronic illness.[4]

Vitamin D Deficiency

Vitamin D deficiency is common in older adults with sarcopenic obesity and is mechanistically associated with diminished muscle function and increased muscle loss[1,5]. Observational and intervention studies underscore the justification for vitamin D supplementation within comprehensive management strategies, although exact dosing targets tailored to sarcopenic obesity are still being explored.[5] Screening for and rectifying vitamin D deficiency ought to be incorporated into standard nutritional evaluations for this demographic.

These nutrient deficiencies do not manifest in isolation. Low levels of physical activity make nutritional deficiencies worse, which makes muscle building and functional capacity even worse.[1]The interaction of being inactive, not getting enough protein, and not getting enough micronutrients leads to a cycle of losing muscle and gaining fat.

Intervention Strategies: Nutrition Meets Exercise

Single-modality interventions are insufficient. The evidence overwhelmingly supports a multimodal approach combining resistance-focused exercise with protein-forward nutrition and vitamin D correction.[1,2,5]

Exercise as the Cornerstone

The best way to build muscle and lose fat is to do progressive resistance training and aerobic conditioning together.[1,2] Resistance exercise boosts muscle protein synthesis and makes the body's response to protein in food stronger, which works well with other nutritional changes.

Protein Strategy

Higher-quality protein intake, distributed evenly across meals, supports muscle protein synthesis and is particularly critical during calorie-restricted weight loss.[1,3] Protein-sparing energy goals should be individualized, balancing the need for fat reduction with the imperative to preserve lean mass.

Vitamin D Correction

Given the high prevalence of deficiency and its potential role in musculoskeletal health, vitamin D supplementation should be incorporated into combined nutritional plans.[1,5]

Evidence of Efficacy

Structured, individualized multimodal interventions in older adults with sarcopenic obesity have demonstrated meaningful clinical benefits: mean gains in lean mass of 0.3 to 1.4 kg, strength improvements of 1.2 to 6.5 kg, and fat loss of 3.7 to 11.0 kg.[5] Importantly, combined nutrition and exercise programs consistently outperform either modality alone for improving body composition, strength, and functional outcomes.[1,2]

Clinical Call to Action

The burden of sarcopenic obesity will only grow as populations age. Clinicians, dietitians, and public health practitioners must act now to bridge the nutrition gaps that perpetuate this condition. We propose the following actionable steps:

- **Implement Function-First Screening:** Adopt the ESPEN/EASO diagnostic algorithm in routine geriatric assessment, prioritizing muscle function alongside body composition.[2]
- **Set Individualized Protein Targets:** Prescribe protein intakes of 1.2–1.5 g/kg/day for older adults with sarcopenic obesity, with attention to protein distribution across meals.[4]
- Screen and Correct Vitamin D Deficiency: Integrate vitamin D assessment into nutritional evaluations and supplement when deficient.[5]
- **Pair Nutrition with Supervised Resistance Exercise:** Establish feasible, community-based programs that combine dietary counseling with progressive resistance training.[1,2]
- **Advocate for Standardized Definitions:** Support research and policy efforts to harmonize diagnostic criteria, enabling better epidemiological tracking and intervention targeting.[1]

The evidence shows clearly that sarcopenic obesity is not an inevitable consequence of aging, nor is it adequately addressed by treating obesity or sarcopenia in isolation. By prioritizing protein adequacy, correcting micronutrient deficiencies, and integrating exercise into nutritional care, we can preserve muscle, reduce fat, and restore function in our aging patients.

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