

Insights for Improving Older Adult Nutrition with Multivitamin/Mineral Supplements

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Introduction

Adequate nutrition is fundamental for optimizing wellness and preventing disease throughout the life cycle.¹

Beyond preventing nutritional deficiencies and excesses—and their associated disorders—dietary prevention strategies may mitigate risk of age-associated diseases such as cardiovascular diseases, diabetes, cancer, osteoporosis, and neurodegenerative disorders, among others.

Adults of all ages in the United States typically eat a broadly unhealthy diet relative to national recommendations, which results in suboptimal intakes of multiple micronutrients from the diet.² For example, vitamins A, C, D, E, and K, calcium, dietary fiber, magnesium, potassium, and choline are underconsumed across the population; additionally, protein and vitamin B₁₂ are underconsumed by older adults.³

Nutrition is suboptimal for many adults, and issues that are common in older adults can worsen nutrition for this population.

To explore issues that impact nutrition for older adults and strategies to address these issues, the Gerontological Society of America (GSA) convened a multidisciplinary expert roundtable discussion on June 18, 2024, in Washington, DC.

Discussion topics included factors that lead to nutritional deficiencies and inadequacies, existing interventions to improve older adult nutrition, strategies for assessing nutritional status, strategies to include nutrition in practice models for clinicians who care for older adults, clinician education and training, potential roles for multivitamin and mineral (MVM) supplementation in addressing nutritional needs for older adults, and how to educate older adults and their caregivers about dietary requirements and appropriate use of supplements.

Unique Challenges in Nutritional Status with Aging

- The risk for nutritional deficiencies and inadequacies increases in older adults, especially among those residing in long-term care facilities.^{4,5}
- Older adults generally have lower caloric needs than younger adults, but their nutrient requirements are similar or increased.
- A substantial proportion of older adults fail to consume adequate protein, which is needed to prevent muscle wasting and bone loss.^{6,7}
- Chronic health conditions, use of multiple medications, and changes in both metabolism and body composition can affect nutritional needs.
- Malnutrition, frailty, and sarcopenia are interrelated conditions associated with suboptimal nutrition; these conditions are common in older adults and can exacerbate poor nutrition due to the functional disability they cause.
- Over one-third of adults 60 years of age and older in the United States have barriers to obtaining nutritious food.

Related GSA Resources



Key Points Emerging From the Roundtable

Aging changes physiology and nutrient requirements.

1

Older adults in particular face many challenges to meeting nutritional requirements.

2

Suboptimal nutrition in older adults is an unrecognized problem by many in the medical community.

3

Multivitamin and mineral (MVM) use may help older adults meet nutritional requirements.

4

The development of clinical practice guidelines to inform MVM use would be helpful for clinicians and could improve patient care.

5

Further research regarding nutritional needs for aging populations could help fill knowledge gaps and build strategies to best meet those needs.

6

References

1. Melzer TM, Manosso LM, Yau SY, et al. In pursuit of healthy aging: effects of nutrition on brain function. *Int J Mol Sci.* 2021;22(9):5026. doi:10.3390/ijms22095026
2. Wallace TC, Frankenfeld CL, Frei B, et al. Multivitamin/multimineral supplement use is associated with increased micronutrient intakes and biomarkers and decreased prevalence of inadequacies and deficiencies in middle-aged and older adults in the United States. *J Nutr Gerontol Geriatr.* 2019;38(4):307–328. doi:10.1080/21551197.2019.1656135
3. Dietary Guidelines Advisory Committee. *Scientific Report of the 2020 Dietary Guidelines Advisory Committee: Advisory Report to the Secretary of Agriculture and the Secretary of Health and Human Services.* July 2020. U.S. Department of Agriculture; U.S. Department of Health and Human Services.
4. Marra MV, Bailey RL. Position of the Academy of Nutrition and Dietetics: micronutrient supplementation. *J Acad Nutr Diet.* 2018;118(11):2162–2173. doi:10.1016/j.jand.2018.07.022
5. van den Berg GH, Huisman-de Waal GGJ, Vermeulen H, et al. Effects of nursing nutrition interventions on outcomes in malnourished hospital inpatients and nursing home residents: a systematic review. *Int J Nurs Stud.* 2021;117:103888. doi:10.1016/j.ijnurstu.2021.103888
6. Roberts SB, Silver RE, Das SK, et al. Healthy aging—nutrition matters: start early and screen often. *Adv Nutr.* 2021;12(4):1438–1448. doi:10.1093/advances/nmab032
7. Wallace TC, Frankenfeld CL. Dietary protein intake above the current RDA and bone health: a systematic review and meta-analysis. *J Am Coll Nutr.* 2017;36(6):481–496. doi:10.1080/07315724.2017.1322924

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