



**BRIEF QUESTIONS
AND ANSWERS
ON CURRENT
CLINICAL
CONTROVERSIES**

Q: Should everyone over age 75 take a multivitamin?

CINDY MOORE, MS, RD, LD, FADA

Director, Nutrition Therapy, Cleveland Clinic

A: AGE SHOULD NOT BE the sole criterion used to determine whether someone needs to take a multivitamin. Most healthy, active older adults can get the vitamins and minerals they need by consuming a varied and balanced diet. Others, however, may need to take a multivitamin-mineral supplement, for various reasons (TABLE 1).

■ HOW COMMON IS MALNUTRITION?

Although classic nutritional deficiency diseases caused by inadequate intakes of specific vitamins and minerals are rare in the United States today,¹ many community-residing older adults are at risk for malnutrition. A 1999 study commissioned for the Older Americans Act found that 67% to 88% of the elderly, particularly the frail, homebound elderly, were at moderate to high nutritional risk.²

■ NUTRITIONAL PROBLEMS OF THE ELDERLY

The recommended dietary allowances (RDAs) for vitamins and minerals remain similar for people over 75 years of age compared with younger adults, but the need for calories may decrease by as much as 25%.³ On the other hand, surgery or other injuries may increase the nutrient needs for certain vitamins and minerals.

In practical terms, this means that the elderly must obtain the same amount of vitamins and minerals from a smaller amount of food. Their challenge is compounded by the fact that many elderly have inadequate nutrient intake or impaired absorption.

Inadequate nutrient intake

Nutrient intake may be inadequate owing to poverty, anorexia, social isolation, depression,

dementia, functional disabilities, chewing and swallowing problems, polypharmacy, acute or chronic medical conditions, and inappropriate food selections. Persons who, for any reason, are unwilling or unable to partake of a healthful, varied diet that includes multiple daily servings of fruits, vegetables, whole grains, dairy products, and meats or meat alternatives should take a multivitamin-mineral supplement.

TABLE 1

Risk factors for poor nutrition: What to look for

Inappropriate food intake

Weight loss or gain
Mouth pain, sores, tooth decay, bleeding gums
Inadequate or unbalanced diet, poor appetite, skipping meals
Eating disorder

Poverty

Poor access to health care
Insufficient money spent on food

Social isolation

Alcohol abuse, depressive symptoms
Cognitive impairment, confusion, forgetfulness
Loss of interest in food

Dependence or disability

Inability to buy or prepare food, or consume adequate diet
Inability to swallow or to feed oneself

Acute or chronic diseases or conditions

Poor appetite
Modified diet
Impairment of gastrointestinal tract

Chronic medication use

Dry mouth
Taste or swallowing difficulties
Three or more prescribed or over-the-counter drugs

Advanced age

Weight loss or gain

ADAPTED FROM: INCORPORATING NUTRITION SCREENING & INTERVENTIONS INTO MEDICAL PRACTICE, NUTRITION SCREENING INITIATIVE, 1994; KEEPING OLDER AMERICANS HEALTHY AT HOME, NUTRITION SCREENING INITIATIVE, 1996.



TABLE 2

Nutrients likely to be inadequate in the elderly

NUTRIENT	AMOUNT NEEDED PER DAY	OUTCOMES OF LOW INTAKE
Calcium	1,200 mg*	Osteoporosis, increased risk of high blood pressure
Iron	10 mg†	Anemia
Magnesium	320 mg (women)† 420 mg (men)†	Immunologic abnormalities
Riboflavin	1.1 mg‡	Oral-buccal cavity lesions
Vitamin B ₆	1.5 mg‡	Dermatitis, increased risk of heart disease and cognitive function decline
Vitamin B ₁₂	2.4 µg‡	Anemia, increased risk of cognitive function decline
Vitamin D	10 µg (51–70 years)* 15 µg (> 70 years)*	Osteoporosis, increased risk of high blood pressure
Zinc	12 mg†	Immunologic abnormalities

*Adequate intake, Food and Nutrition Board, Institute of Medicine, 1998

†RDA, Food and Nutrition Board, Institute of Medicine, 1989

‡RDA, Food and Nutrition Board, Institute of Medicine, 1998

The minerals most likely to be consumed below RDA levels are iron, calcium, zinc, and magnesium; the vitamins most likely to be deficient are riboflavin and vitamins D, B₆, and B₁₂ (TABLE 2).¹ Often, deficiencies occur in combination. For example, many older people do not get enough calcium, and diets low in calcium are often also low in vitamins D, A, B₆, and B₁₂, riboflavin, magnesium, potassium, and folate. Riboflavin deficiency in the elderly is actually quite common, occurring in 20% to 27% of older Americans.⁴

Vegetarians who avoid all animal products, including dairy and egg products, may need supplemental calcium, iron, zinc, and vitamins B₁₂ and D.⁵

Impaired absorption

Nutrient absorption can be impaired in some digestive and hepatic disorders. Some older adults have an impaired ability to absorb the naturally occurring form of vitamin B₁₂. Breakfast cereals and multivitamin-mineral

supplements are a good source of this nutrient.

As for vitamin D, even with adequate sunlight exposure elderly persons with a low intake of dairy products may require vitamin D supplementation because of a decreased capacity to synthesize cholecalciferol in the skin and a decreased number of gastrointestinal receptors. Some experts believe that the elderly should take in twice the amount of vitamin D recommended in the 1989 RDA, as this appears to preserve bone mineral density.⁴

Some medications can interfere with nutrient absorption. For example, corticosteroids, thyroid hormone, aluminum-containing antacids, and anticonvulsants can interfere with calcium absorption. Persons taking these drugs, as well as those taking antibiotics, laxatives, or diuretics may benefit from taking a multivitamin-mineral supplement.

NUTRITION AS PREVENTIVE MEDICINE

Clinicians' approach to their patients' nutrient needs is undergoing a paradigm shift. The focus has changed from preventing nutrient deficiency to preventing chronic disease. Supplements of calcium, vitamin D, or both are being recommended to prevent osteoporosis in the elderly. Folic acid, vitamin B₆, and vitamin B₁₂ can lower homocysteine levels, which may reduce the risk of coronary artery disease.¹ Adequate intake of vitamins B₁₂, B₆, and folate help prevent some decline in cognitive function associated with aging. Immune function may be improved by supplementation of protein, vitamin E, zinc, and other micronutrients.

The need for vitamin A, however, decreases with age, which makes toxicity from supplementation more common.

REFERENCES

1. Camire ME, Kantor MA. Dietary supplements: nutritional and legal considerations. *Food Technology* 1999; 53:87–95.
2. Position of The American Dietetic Association: nutrition, aging and the continuum of care. *J Am Diet Assoc* 1996; 96:1048–1052.
3. Nutrition and Health for Older Americans. The American Dietetic Association, 1998.
4. Russell RM. New views on the RDA's for older adults. *J Am Diet Assoc* 1997; 97:515–518.
5. Larson Duyff R. The American Dietetic Association's Complete Food and Nutrition Guide, Chronimed Publishing, 1996.