CME CREDIT

ONE MINUTE CONSULT

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

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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, B_6, and B_{12} (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, B_6, and B_{12}, 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 B_{12} 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 B_{12}. 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 B_6, and vitamin B_{12} can lower homocysteine levels, which may reduce the risk of coronary artery disease.[1] Adequate intake of vitamins B_{12}, B_6, 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

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