Nutrition and Older Adults

By ACSH Staff — January 1, 1998

Every day more than 5,500 Americans turn 65 and officially become senior citizens. For many of these people, the years ahead will bring significant changes: changes in their social roles, in their family lives, in their health concerns, and though they may not realize it in their nutritional needs and priorities. Many seniors are, of course, healthy, relatively independent, and well nourished. Some older adults, however, are beset with accumulating medical, performance, and social problems that can make adequate nourishment difficult.

More than 70 percent of senior citizens rate their health as "good" or "excellent," and only 4 percent live in nursing homes. Twenty-three percent of seniors report difficulties with such self-care actions as bathing and dressing; 28 percent report difficulties with more complicated activities, such as housekeeping. In a 1997 national survey conducted by the American Dietetic Association, 55 percent of those respondents who were at least 55 years old reported trying in earnest to eat healthfully; only 28 percent of respondents aged 25 to 34 reported the same. People in their 60s and older do about as well as younger people in terms of fulfilling recognized guidelines concerning intake of fat, saturated fat, and cholesterol. And the proportion of seniors whose intakes of various nutrients are at Recommended Dietary Allowance (RDA) levels is only slightly lower than the proportion of younger adults with such intakes.

Nevertheless, some senior citizens do develop significant nutritional problems.

Causes of Nutritional Problems

Many things contribute to the risk of malnutrition in older adults. For example, chronic diseases may lead to physical limitations, as from arthritis, or to cognitive limitations, as from Alzheimer's disease. Such conditions can make shopping for, preparing, and consuming food difficult without assistance. Dental problems may incline some seniors to avoid eating foods that must be chewed well vegetable salad and certain meats, for example. Depression is relatively common among older people, and it can lead to severe weight loss. Changes in the senses of smell and taste which can result from aging itself or from drug therapy can cause decreases in food consumption or disinterest in, even aversion to, formerly preferred foods.
Taking medicine can affect nutritional status in other ways. The gastrointestinal side effects of some medications can interfere with the desire to eat. Anti-inflammatory drugs used in the treatment of arthritis, for instance, can cause stomach upset. Some medicines also affect the absorption or metabolism of nutrients: laxatives that contain mineral oil can decrease the absorption of certain vitamins, for example. Senior citizens are the most frequent users of both prescription and over-the-counter medicines, and many of them take at least several medicines daily. Medication-related nutritional problems are thus likelier among senior citizens than among younger persons.

People often become less active as they age, and their appetites can decrease in consequence. Increasing physical activity, as by following an exercise regimen, may stimulate seniors’ appetites. It may also help older adults to maintain physical abilities necessary for routine actions, to slow the development of osteoporosis, and to improve their cardiovascular fitness and immune-system functioning. Exercise can significantly benefit even people above the age of 80: In a study of nursing-home residents whose average age was 87, ten weeks of progressive resistance exercise led to significant increases in muscular strength, walking speed, and stair-climbing ability.

Isolation is a major risk factor for poor nutrition among seniors, and especially among those seniors who have recently lost a spouse. Someone who is suddenly alone after many years of living with another person may lose interest in eating or, if the housemate was the sole food preparer, may not be accustomed to or even marginally skilled at designing healthful meals and preparing food.

Researchers at Georgia State University compared the eating habits of recently widowed older adults with those of married people of similar ages. Significantly fewer widowed than married persons reported enjoying meals and/or having a good appetite. Moreover, the researchers found that the essential-nutrient intakes of the widows and widowers had been lower than those of the married persons, and that changes (usually decreases) in body weight occurred more often among the widowed.

**The Frail Elderly**

Generally, nutrition-related problems become increasingly likely as senior citizens get older. Those aged at least 85 have the highest risk of malnutrition. But there are great differences in health and physical fitness among senior citizens of the same age. And such differences are much greater among 85-year-olds than among, say, 5-year-olds or even 55-year-olds.

Malnutrition is likelier for a homebound, chronically ill 70-year-old than for a hale 85-year-old. The term “frail elderly” refers to older adults who need assistance with some common daily activities. The nutritional needs and priorities of the frail elderly differ considerably from those of their active peers. Healthy older adults may benefit from following recognized dietary recommendations applicable to most younger adults in the U.S., such as limiting fat intake; but the frail elderly may need to disregard some of those recommendations: For example, to prevent weight loss they may need to ingest fat at levels above those generally recommended.

Much research data suggests that elderly nursing-home residents are considerably at risk of nutritional deficiency. The intake of at least one essential nutrient is inadequate for as many as
one third to one half of nursing-home residents; and, in many cases, underconsuming food is alone responsible for the deficiency. Poor health is probably more to blame for the nutritional problems of nursing-home residents than is their living situation. But frail elders who are cared for by relatives have similar problems; indeed, their risk of malnutrition may be higher.

**Vitamin D**

There has been very little research concerning frail elders who do not live in nursing homes or similar facilities. Locating such people is difficult, and many are reluctant to let strangers into their homes. F. Michael Gloth III, M.D., and his colleagues at Johns Hopkins University have been conducting studies comparing the nutrition of homebound older adults with that of comparable nursing-home residents. The Johns Hopkins research has shown that intakes of essential nutrients are even lower among homebound frail elders than among those who live in nursing homes. The likelihood of low blood levels of vitamin D is higher among homebound seniors than among elderly nursing-home residents. One finding from Dr. Gloth's research was that the blood vitamin D levels of 54 percent of a group of 52 homebound elderly people suggested vitamin D deficiency; only 38 percent of a group of 64 nursing home residents had such low levels.

Ultraviolet light, a constituent of sunlight, initiates the production of vitamin D in human skin by activating steroids therein. But most frail elders rarely go outdoors, and the skin's ability to synthesize vitamin D decreases as one gets older. Thus, the National Research Council has increased the recommended daily intake of vitamin D for persons more than 70 years old from 5 micrograms (200 IU) to 15 micrograms (600 IU). (See sidebar.)

**Studies**

In older adults poor health and poor nutrition often interact in a vicious circle: Inadequate food intake promotes illness, and illness diminishes food intake. A number of scientific studies have made clear that improving nutrition can contribute to improvements in both health and functioning in older adults:

* In one of the studies conducted by Dr. Gloth and his associates, correction of vitamin D deficiency in frail elders led to improvements on a standard test of their ability to function independently. The improvements may have been due to the relief of symptoms such as muscle weakness and bone pain that often occur in people deficient in vitamin D.
* In a study conducted in the Netherlands, administration of B-complex and vitamin-C supplements to poorly nourished, elderly nursing-home residents led to desirable increases in body weight. Although vitamins are not weight-gain agents, in this case an improvement in vitamin nutrition may have beneficially affected the elders' appetite and disposition and this may have led to increases in food intake. The improvement in vitamin nutrition may also have increased the seniors' ability to use the nutrients they consumed.
At least two studies have shown that the administration of liquid supplements of protein and other nutrients can improve clinical outcomes in elderly patients whose hips have fractured. In these two studies the patients who received the supplements spent fewer days in a hospital and had fewer fatal complications from their fractures than those patients who did not.

In a study conducted in Ireland, correction of marginal thiamin deficiencies in senior citizens led to increases in appetite and subjective well-being and to a decrease in fatigue.

In two double-blind studies, modest vitamin and mineral supplementation improved immune-system functioning in older adults. In one of these studies the subjects who received the supplements had fewer "sick days" from infection than those who instead received a placebo (23 versus 48 days).

Attempts to improve nutrition in senior citizens can be very rewarding. Poor nutrition can contribute to health problems in persons of any age, but in older adults correcting poor nutrition is often crucial: It can improve their health substantially and can delay dependency.

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Too Much Vitamin D

A high vitamin D intake can be as harmful as a low intake. Taking an overdose of vitamin D can cause serious problems, including bone loss the very condition that most users of vitamin D supplements want to prevent. Physicians in Los Angeles reported in 1997 on four people who had unintentionally worsened their osteoporosis by taking too much supplemental vitamin D. Supplement users should avoid taking more than one product that contains vitamin D. If one takes both a multivitamin that contains vitamin D and a calcium supplement that contains it, one’s vitamin D intake might be excessive.

Do Seniors Need Supplements?

Two kinds of dietary supplements vitamin-mineral pills and supplementary beverages (e.g., Ensure) are heavily marketed to senior citizens. Both kinds of supplements can contribute to adequate nourishment in some seniors, but they are far from nutritional panaceas.

Supplementary beverages were introduced for consumption not by healthy, active people, but by persons with medical conditions that interfere with eating. Such supplements may be appropriate for patients recovering from serious illnesses, for frail elders who need to put on weight, and for persons with medical or dental problems that make chewing or swallowing difficult. Healthy people do not need such products; they would benefit far more from eating a balanced, nutritionally adequate diet that includes diverse foods. Vitamin-mineral pills can be beneficial in some situations to decrease the risk of vitamin deficiency in frail elders, for example but such supplements cannot offset an unhealthy diet and should not be used instead of strategies to
relieve problems depression, poor dentition, and medication side effects, for example that interfere with food consumption.

Healthy, active older adults who consume ample food from all the major food groups (grains, vegetables, fruits, dairy products, and meat/meat alternatives) may not need vitamin or mineral supplements at all. Older adults with low calorie intakes, however, may benefit from taking a multivitamin with minerals, because maintaining an adequate intake of such nutrients becomes increasingly difficult as the caloric value of one’s diet decreases. Also, it is advisable for older adults who do not drink milk the main source of calcium and vitamin D in the U.S. diet to take supplements that provide the Daily Value of those nutrients, especially if the non-milk-drinking seniors are seldom exposed to sunlight.

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