



# A Focus on Nutrition for the Elderly: It's Time to Take a Closer Look

INSIGHT 14

A Publication of the USDA Center for Nutrition Policy and Promotion

July 1999

Longevity trends, combined with the swelling wave of aging “baby boomers,” are contributing to an explosive growth in the U.S. elderly population, aged 65 and over, which has grown 11-fold during the 20<sup>th</sup> century (1). By 2050 about 19 million Americans (24 percent of elderly Americans) will be aged 85 and over (1). Older people may not know that their nutrient requirements can change from their younger years. The process of aging can introduce other factors—chronic disease, physical disabilities, poor economic status, social isolation, prescription medications, and altered mental status—that may cause poor eating habits that do not meet an older person’s current nutrient needs. The elderly face the challenge of choosing a nutrient dense diet, one that provides an adequate intake of nutrients at a time when their activity levels and energy needs decline. Assessing the diet quality of the elderly is critical to addressing issues relevant to their health and nutritional status.

This *Nutrition Insight* summarizes the overall diet quality of three age groups of independent, free-living elderly Americans—the young-old, 65-74 years; the old, 75-84 years; and the oldest-old, 85+ years—using the Healthy Eating Index (HEI) (2). Data from USDA’s Continuing Survey of Food Intakes by Individuals (CSFII) 1994-96, a nationally representative survey containing information on people’s consumption of foods and nutrients, were used in the analysis. Scores for the elderly groups are compared with the overall HEI for “pre-elderly” adults aged 45-64.

## About the Healthy Eating Index

The HEI is a summary measure of people’s overall diet quality. It is an excellent tool both for assessing the quality of Americans’ diets and for understanding better the influence of food choices on Americans’ health. The HEI is expressed as one score on a scale of 1-100 but is comprised of the sum of 10 components. Each component score can range between 0 and 10. Components 1-5 measure the degree to which a person’s diet conforms to the serving recommendations from the USDA Food Guide Pyramid’s five major food groups: Grains, vegetables, fruits, milk, and meat. A high score for these components is reached by maximizing consumption of recommended amounts. Components 6-9 measure compliance of total fat and saturated fat intake according to the *Dietary Guidelines for Americans* and of cholesterol and sodium from the *Daily Values* listed on the Nutrition Facts Label. A high score is reached by consuming at or below recommended amounts. The last component evaluates variety in the diet. A person consuming 8 or more different foods each day will score 10 points. A summary HEI score above 80 implies a “good”

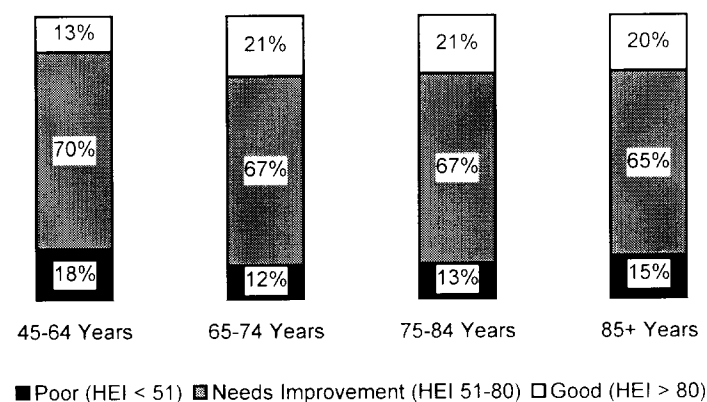
diet; a score between 51-80 implies a diet that “needs improvement”; and a score less than 51 implies a “poor” diet.

## Overall HEI Snapshot

The CSFII 1994-96 data show the average HEI score for elderly persons 65+ years old is 67.2 out of a possible score of 100. The average HEI score for the pre-elderly group aged 45-64 is 63.4. Both fall midway in the “needs improvement” range.

Among the three elderly groups, as age increases, those with an overall diet quality of “good” remain consistent at around 20-21 percent (fig. 1). Most movement in diet quality occurs between the “needs improvement” and “poor” ratings. The data indicate that with an increase in age there is a slight, but gradual, increase in the percentage of elderly with a “poor” diet (12 to 15 percent). In comparison, fewer individuals in the pre-elderly group (aged 45-64) achieve a “good” diet, and more of them have a diet rated as “needs improvement” or “poor.” However, the elderly people’s mean HEI scores decrease as income levels decrease, indicating a greater risk for a poor diet quality among lower socio-economic groups.

Figure 1. Overall diet quality, older age groups



## Looking Closer at the Components

A closer look at the HEI component scores reveals more pronounced differences between age groups (fig. 2). Among the three elderly age groups, the median scores for each of five components—total fat, saturated fat, cholesterol, sodium, and

variety—are 8.0 or better. Despite good scores, the pre-elderly group's component scores were not as high as the elderly groups' scores in three of those same five components. A high score for total fat, saturated fat, cholesterol, and sodium is reached by consuming at or below recommended amounts; thus interpretation of these high scores may be deceiving. A review of CSFH food energy intake data showed that an elderly person's caloric intake declines by as much as 500 calories between ages 65 and 85. Therefore, although the score is high, without further study, it is not possible to know whether educational messages have reached this population, whether reduced food intake is keeping the intake of these components low, or whether the elderly are receiving well-balanced nutrition assistance.

The fruits and milk components had the lowest HEI scores for all age groups. Median fruit scores for the three elderly age groups ranged from 4.6 to 4.9. A slight decrease is noted with advancing age. Median fruit scores for the pre-elderly age group hovered around 3.1, much lower than even the lowest fruit score of the three elderly age groups. Milk component median scores "see-sawed" tightly with advancing age.

In terms of age group, the HEI component scores of the younger, pre-elderly group lagged behind those of the elderly age groups in 3 of the 10 food components (fruit, total fat, and sodium), but they either met or exceeded the elders' scores in 6 other components (grains, vegetables, milk, meat, saturated fat, and variety). All ages studied have a median score of 10.0 for cholesterol.

### As Aging Advances

A noticeable, but not extreme, decline in the overall diet quality of Americans aged 65 and over is indicated in Figure 1. This trend, however, is more clearly observed by looking at their median HEI component scores in Figure 2. Only milk, total fat, and sodium scores deviated from this trend. Milk and total fat component scores vacillated from 4.3 to 5.0 and from 7.4 to 8.4, respectively, among all age groups studied. Sodium component scores showed a reverse trend—the older the group, the higher the component score. Until age 85, the groups' median variety score remained at a constant 10.0. After age 85, the group's score dropped dramatically to 8.0.

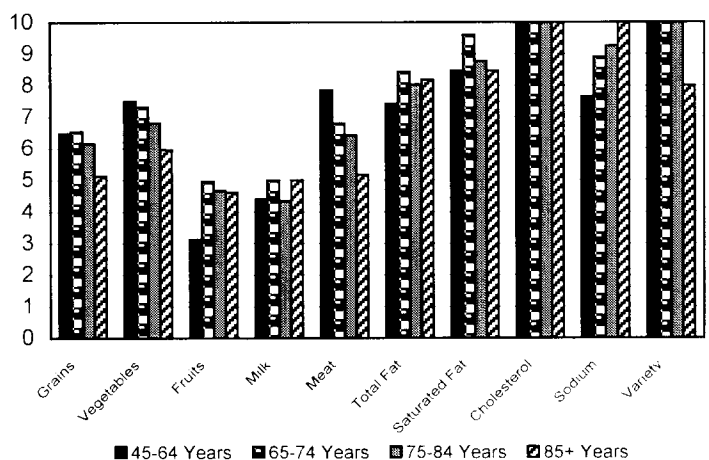
### Conclusions

The overall diet quality of the elderly seems to be better than for their pre-elderly counterparts, but it still falls into the "needs improvement" category. The data indicate the elderly are consuming enough different foods (i.e., variety). However, research efforts and nutrition education strategies should target the quantity and nutrient density of foods the elderly consume, because both quantity and nutrient density are integral to

meeting the recommended intake levels of the five major food groups. Inadequate intake of the milk and fruits components, in particular, needs addressing. In addition to eating patterns and income status, poor HEI scores also may be affected by other influential risk factors, such as physical limitations, depression, and non-participation in nutrition programs. Such factors should be considered when conducting research and developing nutrition communications that lead to successful aging.

The United Nations International Year of the Older Person is being celebrated during 1999. Its theme "Healthy Aging, Healthy Living – Start Now!" is indicative that it is time to focus more of our nutrition research, nutrition policy development, and nutrition promotion efforts on the elderly now and into the next millennium.

**Figure 2. Median HEI component scores**



Contributors: Nancy W. Gaston, M.A., R.D., Anne Mardis, M.D., M.P.H., Shirley Gerrior, Ph.D., R.D., Nadine Sahyoun, Ph.D., R.D., and Rajen S. Anand, Ph.D.

### References

1. U.S. Department of Commerce, Economics and Statistics Administration (visited 1998, December 9). U.S. Census Bureau the Official Statistics Statistical Brief, "Sixty-five plus in the United States," May 1995 [WWW document]. URL <http://www.census.gov/socdemo/www/agebrief.html>.
2. Bowman, S.A., Lino, M., Gerrior, S.A., and Basiotis, P.P. 1998. The Healthy Eating Index: 1994-96. U.S. Department of Agriculture, Center for Nutrition Policy and Promotion. CNPP-5. Available at <http://www.usda.gov/cnpp>



Nutrition Insights is issued by the Center for Nutrition Policy and Promotion, an organization of the U.S. Department of Agriculture. Nutrition Insights may be accessed at the CNPP Web Site (<http://www.usda.gov/cnpp>).

The mission of the Center for Nutrition Policy and Promotion is to improve the nutritional status of Americans by serving as the focal point within the U.S. Department of Agriculture for linking scientific research to the consumer.

The United States Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. USDA is an equal opportunity provider and employer.