

# Healthy Aging: Nutritional Intervention to Improve and Extend Quality of Life among Older People

Giovanna Turconi\*

Department of Human Nutrition and Dietetics, University of Pavia, Via Bassi, 21 - 27100 Pavia, Italy

The population of industrialized countries is aging as a consequence of the increase in life expectancy, due to health and medical progress, and of the decrease in birthrate. A balanced nutrition covering nutrient demands, an adequate lifestyle and an improved quality of life are important factors for healthy aging.

From 1960 to 2000, the average life expectancy at birth for the European Union countries rose from 70 to 78 years. Between 1960 and 2004, the proportion of older people (65 years and over) in the population has risen from 10% to almost 17% in these countries. All the signs indicate that this trend will continue well into the new century. The proportion of people aged 65 and more in the total population is expected to rise in the period until 2050. The population in the European countries is expected to increase from 16% in 2004 to 30% in 2050 or from 75, 3 million in 2004 to 134, 5 million in 2050. The largest shares of elderly people in 2050 are expected in Spain (36%), Italy (35%), and Greece (33%), and the lowest in Luxembourg (22%), the Netherlands (24%) and Denmark (24%). The growth of the population aged 80 or more will be even more pronounced in the future as more people are expected to survive to higher ages [1].

In the United States, the Centers for Disease Control and Prevention (CDC) estimate that by 2030 the US population will double, to about 71 million older adults [2], that is about one every five individuals. We are, as they say, on the "brink of a longevity revolution".

These demographic changes present challenges to health care, food supply systems, and nutrition services for older individuals. Due to the increasing aging process the knowledge of health and nutritional status, as well as of the nutritional behavior, might help to improve the quality of life in the third and fourth life span.

Aging is often associated with a stage of life accompanied by illness and frailness, as well as by a variety of physiological, psychological, economic and social changes that may adversely affect nutritional status. Older people may have a higher prevalence of chronic diseases associated with increased costs for health care and long-term care, they may take multiple medications and tend to be sedentary.

While basal metabolic rate decreases with age, physical inactivity and an unhealthy diet, rich in fat and sugar, are likely the main causes of overweight and obesity, which have high prevalence rates also in the elderly, especially low income ones.

The USDA Center for Nutrition Policy and Promotion shows that, of Americans over age 65, malnutrition and obesity are common. Indeed, these data indicate that if the elderly receive what is known as "nutritional intervention," many diseases could be prevented.

Many risk factors can induce older people to an unhealthy nutritional status developing over nutrition or under nutrition. Intervention studies indicate that malnutrition is a major reason for hospitalization for the elderly.

Poor nutrition and under nutrition are widespread and occur in 15 to 50 % of the elderly population [3], but the symptoms of malnutrition

(weight loss, disorientation, lightheadedness and loss of appetite) can easily erroneously lead to wrong diagnoses.

Some of the most common reasons for malnutrition in the elderly include decrease in sensitivity, affecting a person's ability to taste and enjoy food; poor dental health and missing teeth causing painful chewing; physical difficulties dealing with debilitating conditions like fibromyalgia, arthritis, vertigo and disability; poor memory and dementia; side effects of medications reducing appetite, causing nausea, or changing food taste; lack of transportation, causing difficult dietary shopping for older people, and finally financial burden, so an old person may cut back on the food purchased or buy cheaper and less-nutritious foods to stretch his budget [4].

In Sweden, epidemiological studies show that malnutrition risk is quite low (0-6%) in free-living elderly, it becomes high in those institutionalized (10-30%) and among those receiving support at home (until 50%). Nutritional status assessment and a 3-year follow-up in elderly receiving support at home (aged 82+/-7 years), showed that the 3-year mortality was 50% for those who were malnourished, 40% for those at risk of malnutrition, and 28% for the well-nourished group [5].

The rapidly increasing number of old people in the EU countries and in the United States have far-reaching implications for the public health systems and will place unprecedented demands on aging services and the nations' entire health care systems.

In the United States, for example, health care spending has grown about nine-fold in the past 25 years, increasing from \$37 billion in 1980 to \$336 billion in 2005. If left unchecked, health care spending will increase 25% by 2030, largely because of the aging population [2].

Chronic diseases disproportionately affect older adults and are associated with disability, diminished quality of life, and increased costs for health care and long-term care. Today, about 80% of the elderly have at least one chronic condition, and 50% have at least two [2]. These conditions can cause years of pain and loss of function.

Older adults who practice healthy behaviors, take advantage of clinical preventive services, and who keep engaging with family and friends are more likely to remain healthy, live independently, and incur fewer health-related costs.

**\*Corresponding author:** Giovanna Turconi, Department of Human Nutrition and Dietetics, University of Pavia, via Bassi, 21 - 27100 Pavia, Italy, E-mail: [giovanna.turconi@unipv.it](mailto:giovanna.turconi@unipv.it)

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An essential strategy for keeping older adults healthy is preventing chronic diseases and reducing associated complications, including malnutrition. It is time to keep pace with recent findings and develop national and state-sponsored programs that will provide nutrition education and information transference to older people in the communities [6]. To assist with dietary changes and transference of information, nutrition education programs should be developed at the national and state levels targeting older people who are healthy and functionally independent. In addition, tailoring programs to specific subgroups of the older population would enhance the effectiveness of nutrition education.

To be more effective educators, one approach to nutrition education among older people may be to identify dietary needs by health and functional status and integrate the nutrition message within people's psychosocial living context and ethnic background [6].

Nutrition policies and national objectives should address the health and nutrition needs of older people and allocate resources for education and health promotion for healthy older individuals.

Public health efforts can help people avoid preventable illness, disability and malnutrition as they age by establishing programs, developing innovative tools, and providing a comprehensive approach to help older adults live longer, high-quality, productive, and independent lives.

Research has shown that poor health is not an inevitable consequence of aging. Effective public health strategies will help older adults to remain independent longer, improve their nutritional status and quality of life, potentially delay the need for long-term care, slow the expected growth of health care and long-term costs for this and future generations.

In the United States, the CDC Healthy Aging Program [7] enhances the ability of states and communities to identify and implement effective strategies, policies, programs and nutritional interventions to promote healthy aging and assist in translating research into sustainable community-based programs; expands efforts to integrate public health and aging services and enhances outreach for health promotion and disease prevention for the elderly and finally promotes health and preserves health-related quality of life for older adults within health care and other systems.

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