

# **Nutrition for older persons**

## **Ageing and nutrition: a growing global challenge**

Both the number and the proportion of older persons - defined as aged 60 and over - are growing in virtually all countries, and worldwide trends are likely to continue unabated. In 2002 there were an estimated 605 million older persons in the world, nearly 400 million of whom were living in low-income countries. Greece and Italy had the highest proportion of older persons (both 24% in 2000). By 2025, the number of older persons worldwide is expected to reach more than 1.2 billion, with about 840 million of these in low-income countries.

In order to achieve the ultimate goal of health ageing and active ageing, WHO has developed a policy framework, which focuses on such areas as:

## **The challenge of a sex-differential imbalance**

- preventing and reducing the burden of disabilities, chronic disease and premature mortality;
- reducing the risk factors associated with noncommunicable diseases and functional decline as individual age, while increasing factors that protect health;
- enacting policies and strategies that provide a continuum of care for people with chronic illness or disabilities;
- providing training and education to formal and informal carers;
- ensuring the protection, safety and dignity of ageing individuals;
- enabling people as they age to maintain their contribution to economic development, to activity in the formal and informal sectors, and to their communities and families.

Women comprise the majority of the older population in virtually all countries, largely because globally women live longer than men. By 2025, both the proportion and number of older women are expected to soar from 107 to 373 million in Asia, and from 13 to 46 million in Africa. This pattern involves its own special nutritional needs, emphases and patterns of malnutrition, including for example the incidence of osteoporosis in older women.

Osteoporosis and associated fractures are a major cause of illness, disability and death, and are a huge medical expense. It is estimated that the annual number of hip fractures worldwide will rise from 1.7 million in 1990 to around 6.3 million by 2050. Women suffer 80% of hip fractures; their lifetime risk for osteoporotic fractures is at least 30%, and probably closer to 40%. In contrast, the risk is only 13% for men.

Women are at greater risk because their bone loss accelerates after menopause. Prevention is possible with hormone therapy at menopause. Lifestyle factors – especially diet, but also physical activity and smoking – are also associated with osteoporosis, which opens the way for primary prevention. The main aim is to prevent fractures; this can be achieved by increasing bone mass at maturity, by preventing subsequent bone loss, or by restoring bone mineral. Particularly important are adequate calcium intake and physical activity, especially in adolescence and young adulthood.

## **Defining the specific nutritional needs of older persons**

Older persons are particularly vulnerable to malnutrition. Moreover, attempts to provide them with adequate nutrition encounter many practical problems. First, their nutritional requirements are not well defined. Since both lean body mass and basal metabolic rate decline with age, an older person's energy requirement per kilogram of body weight is also reduced.

The process of ageing also affects other nutrient needs. For example, while requirements for some nutrients may be reduced, some data suggest that requirements for other essential nutrients may in fact rise in later life. There is thus an urgent need to review current recommended daily nutrient allowances for this group. There is also an increasing demand worldwide for WHO guidelines which competent national authorities can use to address the nutritional needs of their growing elderly populations.

## **Malnutrition and older persons**

Many of the diseases suffered by older persons are the result of dietary factors, some of which have been operating since infancy. These factors are then compounded by changes that naturally occur with the ageing process.

Dietary fat seems to be associated with cancer of the colon, pancreas and prostate. Atherogenic risk factors such as increased blood pressure, blood lipids and glucose intolerance, all of which are significantly affected by dietary factors, play a significant role in the development of coronary heart disease.

Degenerative diseases such as cardiovascular and cerebrovascular disease, diabetes, osteoporosis and cancer, which are among the most common diseases affecting older persons, are all diet-affected. Increasingly in the diet/disease debate, the role that micronutrients play in promoting health and preventing noncommunicable disease is receiving considerable attention. Micronutrient deficiencies are often common in elderly people due to a number of factors such as their reduced food intake and a lack of variety in the foods they eat.

Another factor is the price of foods rich in micronutrients, which further discourages their consumption. Compounding this situation is the fact that the elderly often suffer from decreased immune function, which contributes to this group's increased morbidity and mortality. Other significant age-related changes include the loss of cognitive function and deteriorating vision, all of which hinder good health and dietary habits in old age.

Elevated serum cholesterol, a risk factor for coronary heart disease in both men and women, is common in older people and this relationship persists into very old age. As with younger people, drug therapy should be considered only after serious attempts have been made to modify diet. Intervention trials have shown that reduction of blood pressure by 6 mm Hg reduces the risk of stroke by 40% and of heart attack by 15%, and that a 10% reduction in blood cholesterol concentration will reduce the risk of coronary heart disease by 30%.

Dietary changes seem to affect risk-factor levels throughout life and may have an even greater impact in older people. Relatively modest reductions in saturated fat and salt intake, which would reduce blood pressure and cholesterol concentrations, could have a substantial effect on reducing the burden of cardiovascular disease. Increasing consumption of fruit and vegetables by one to two servings daily could cut cardiovascular risk by 30%.

## **Activities**

In the light of the pressing need to review factors affecting the nutritional status of nutrition guidelines, the Department of Nutrition has collaborated with the programme on Ageing and Health on a number of nutrition and ageing activities, especially contributing to the 1999 International Year of Older Persons (see <http://www.who.int/hpr/ageing/>). There has also been collaboration older persons, and to update relevant with the United States Department of Agriculture's Human Nutrition Research Center on Aging at Tufts University, Boston, USA. These efforts led to the organization of a joint consultation in Boston (1998) on the most recent scientific data on the role of nutrition in disease prevention and health promotion among older persons.

Recommendations were made at this meeting concerning:

- epidemiological and social aspects of ageing;
- factors affecting dietary intake and nutrient absorption in older persons;
- nutritional requirements of older persons;
- nutrition and older persons in developing countries;
- nutrition and immune function among older persons;
- dietary guidelines for older persons;
- community support for improved nutrition for older persons; and community-based interventions.

## Outputs

During the production of a comprehensive report, representing the outcome both of the preparatory work and of the consultation itself, it was recognized that new information emerging in several key areas should also be included. The combined results, which are presented in **Keep fit for life. Meeting the nutritional needs of older persons (WHO, 2002)**, are intended as an authoritative source of information for nutritionists, general practitioners, gerontologists, medical faculties, nurses, care providers, schools of public health and social workers. The specific recommendations concerning nutrient intakes, food-based dietary guidelines, and exercise and physical activity should also interest a larger audience, including the general reader.

The main body discusses the epidemiological and social aspects of ageing, health and functional changes experienced with ageing, the impact of physical activity, assessment of the nutritional status of older persons, and nutritional guidelines for healthy ageing. Additional material covers food-based dietary guidelines for older adults – with particular emphasis on healthy ageing and prevention of chronic noncommunicable diseases – and guidelines for promoting physical activity among older persons.

Source: WHO – <http://www.who.int/nutrition/topics/ageing/en/index.html>