

# Healthy Ageing

*A CHALLENGE FOR EUROPE*



# Healthy Ageing – A Challenge for Europe

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# Preface

The consequences of demographic change in Europe, with the continuously growing older population, is a huge challenge. European societies need to increase knowledge about how to promote good health among older people so as to promote health and quality in later life stages and to prevent costly and negative impacts effects on the population as a whole.

Policy-makers need good outlines on which to make decisions, based on research and good practice. This in turn requires that the “bridge” between research and public policy is open and constructive. Practitioners and NGOs also need to know about evidence and good practice in healthy ageing. This is why in 2003 the Swedish National Institute of Public Health, with the support of the European Commission and twelve partners including the WHO, AGE, EuroHealthNet and Member States’ public health institutes, ministries and universities initiated the “Healthy Ageing” project under the EU Public Health Programme.

The Healthy Ageing project has mapped and analysed facts and evidence concerning health promotion for people aged fifty and over. It has considered statistics, policies/strategies, good practice and the literature. Finally a set of recommendations on promoting older people’s health has been drawn up in co-operation with the project partners and ministries responsible

for public health throughout the European Union. With this report we have taken a step forward in the development of health promotion among older people. Our intentions are that this will contribute to and inspire future work. The next step will be to implement the results into national and European policy and practice.

We wish to thank the Project Group, the Steering Group, the authors and those who have reviewed and made comments on the Report for their hard work and valuable contributions. They are all listed on the Contributions page.

We are also very grateful to the European Commission, DG Health and Consumer Protection, for financial support of the project within the EU Public Health Programme for 2003–2008.

Finally we would like to welcome you to visit our website [www.healthyageing.nu](http://www.healthyageing.nu), where summaries of this Report are available in different European languages, along with more information on the project.

*Stockholm, December 2006*

*Gunnar Ågren  
Director General*

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Project Manager*



# Executive Summary

## *The challenge of Healthy Ageing*

The need for healthy ageing is a challenge to all European countries. By 2025 about one-third of Europe's population will be aged 60 years and over, and there will be a particularly rapid increase in the number of people aged 80 years and older. This will have an enormous impact on European societies.

There are powerful arguments for investing in health as an objective in its own right. Health is also an important determinant of economic growth and competitiveness. Investing in healthy ageing contributes to the labour supply, decreasing the likelihood of early retirement.

Co-funded by the European Commission, the three-year (2004–2007) Healthy Ageing project aims to promote healthy ageing among people aged 50 years and over. It involves ten countries, the World Health Organisation (WHO), the European Older People's Platform (AGE) and EuroHealth-Net. The goal is exchange of knowledge and experience among the European Union Member States, acceding countries and EFTA-EEA countries.

## **THE PROJECT'S DEFINITION OF HEALTHY AGEING**

*Healthy ageing is the process of optimising opportunities for physical, social and mental health to enable older people to take an active part in society without discrimination and to enjoy an independent and good quality of life.*

This Report brings together information from the Healthy Ageing project: literature on intervention, statistical data, examples of good practice and facts about policies and strategies for healthy ageing. It also proposes recommendations. National implementation will take place in the European countries.

## **Major topics and cross-cutting themes**

The Healthy Ageing project has a holistic approach and takes into account health determinants influenced both by society and its policies as well as the individual. The project partners have agreed to focus on ten major topics. Most are broad and interact with each other and with the following cross-cutting themes: *socio-economic determinants, inequalities in health, gender and minorities.*

- **Retirement and pre-retirement.** Employers and employees alike need to take responsibility for the health of the older members of the workforce so that these can work to higher ages. “Work ability” is a holistic concept including a balance between work and personal resources.
 

Anticipatory social interventions concerning pre-retirement have positive effects and contribute to empowerment.
- **Social capital.** A high level of social capital enhances a person’s sense of belonging and well-being. Providing opportunities for older people to do voluntary work among seniors improves the quality of life of the volunteers and those who receive the services. Low social capital correlates with mortality.
- **Mental health.** Ageing is a gradual process and there is much we can do to promote good mental health and well-being in later life. Participation in meaningful activities, strong personal relationships and good physical health are key factors, while age discrimination has a negative impact. Poverty is a risk factor for mental ill-health.
- **Environment.** Air pollution is responsible for a great burden of environment-related diseases and its effects are especially adverse on people already in poor health. Global climate change may have a widespread impact on the older population in the future, due to more episodes of extreme weather. Accessible green areas allow older people with poor mobility or disability to spend time outdoors, which is an important determinant of good health.
- **Nutrition.** Considerable gains in terms of mortality and function could be achieved if older people adopted a healthier lifestyle with healthy eating habits. Obesity and overweight are associated with unhealthy dietary habits and lack of physical activity.
- **Physical activity.** The broad benefits of physical activity for older people are well documented and associated with improved length and quality of life. People tend to become progressively less active as they get older.
- **Injury prevention.** The three leading causes of death due to injury in older people in Europe are self-inflicted injuries, falls and road traffic injuries. Exercising balance and strengthening muscles reduce falls in older people. Strained family relations are risk factors for the abuse of older people or for violence.
- **Substance use/misuse (tobacco and alcohol).** A majority of smoking-related deaths in the EU occur in older people. Smokers who stop at the age of 65–70 halve their excess risk of premature death. Smoking cessation remains the most effective method of altering the smoking-induced disease risk.
 

Health problems caused by alcohol use disorders are often under-detected and misdiagnosed among older people.
- **Use of medication and associated problems.** Older people are the largest per capita users of medication. The risk of adverse reactions increases with the number of individual drugs taken. Lack of overall knowledge of what medicines and treatment a patient is receiving is an important explanation of

drug problems. As well under-use, over-use and unsuitable combination of medication are other common problems. Some problems can be avoided through the inclusion of older people in clinical trials.

- **Preventive health services.** Older people with low socioeconomic status or from ethnic minorities may find access to health services difficult. They also may have low “health literacy”; that is, they may know significantly less than other people about disease and how to maintain good health. Health literacy is a more meaningful predictive factor than education for older people’s use of preventive services, and has implications for the design of interventions.

**Cross-cutting themes.** *Inequality in health* is best illustrated by the gap in life expectancy between people from low socioeconomic groups and those from high ones. Health inequality starts early in life and persists in later life. In healthy-ageing strategies, health promotion should give priority to addressing the health of the more disadvantaged older people.

Poverty is an important *socioeconomic health determinant*, with negative effects on health, life expectancy, disease and disability. Women living alone often risk poverty in later life because their lifetime earnings are less than those of men, as are their pension entitlements.

*Gender* has to be taken into account when planning and implementing health promotion. Women live longer than men in all European countries but report more psychological symptoms and consult health professionals more often and receive more treatment than men do. Men and women need to be motivated differently to participate in health promotion activities.

The relationship between belonging to a *minority group* and ageing and health needs more exploration.

#### *Policies and strategies*

Most European countries have policies and strategies for healthy ageing according to a questionnaire designed by the Healthy Ageing project. The policies are either separate or included in general health policies. The majority of the policies was on health and promoting the health of older people, rather than care of older people. Most policies do not refer to health data. Policies seldom allocate funds for health promotion, which may hinder local implementation.

There is a need to involve older people in planning, and to promote positive images of ageing, avoiding any arbitrary focus on chronological age.

#### *Good practice projects*

The sixteen ‘good practice’ projects presented in this Report indicate the importance of sustainability, i.e. transforming projects into programmes, and collaboration by people throughout the community. Most of the projects are considered suitable for implementation in other countries.

Social capital and physical activity are the most common major topics in the ‘good practice’ projects. Often in combination, they may lead to improved physical health and the alleviation of loneliness. The key issue is how to persuade people to change habits, especially those who for cultural, social and/or economic reasons are least inclined to do so. Gender has also to be considered: men are more difficult to motivate to participate in activities than women are. The ‘good practice’ projects suggest that

involving people from the target group in the planning and implementation phases may empower the less motivated and encourage their participation.

*Is health promotion for older people worthwhile?*

The usual cost-benefit model with consumption versus production discriminates against people with low incomes, such as pensioners. Including “senior production” (care of grandchildren, voluntary work etc) makes cost-effectiveness analyses fairer. Cost-benefit analyses of programmes relevant to older people indicate that the programmes lead to improved quality of life and decreased health care consumption. The potential health gains of a prevention programme are greater in the older population than among young people.

*Recommendations on policy, research and practice*

The recommendations in this Report on policy, research and practice are based on the findings of the project and on the following core principles:

- older people are of intrinsic value to society
- it is never too late to promote health
- equity in health
- autonomy and personal control
- heterogeneity



CHAPTER 1

# Introduction



# Introduction

**D**emographic trends are a key factor for the future of the European Union. The numbers and proportion of older people in the population are growing because of decreasing birth rates and increasing life expectancy. By 2014, there will be 33 per cent more people aged 80 and above in the present EU than there were in 2004. Life expectancy is projected to increase by almost seven years for men and by five years for women between 2005 and 2050. Older people, aged 65 to 79 years, will increase by 44 per cent during the same period of time (2). The need to improve and increase the exchange of knowledge on healthy ageing is a challenge for European countries. The European Commission has highlighted the importance of this issue in its EU Public Health Programme, and in 2004 the Commission approved support for the three-year multinational project “Healthy Ageing”.

One task of the Healthy Ageing project is to review current practices and policies for older people’s health across Europe. Another is to review the literature on evidence-based health promotion and to study practical interventions to prevent health hazards such as falls and depression. A third task is to present the findings on their effectiveness and make these findings accessible to practitioners and policymakers.

Health promotion and preventive measures, and a positive approach to ageing, would help to improve the quality of life for older people. Successful planning for an ageing society requires a comprehensive national, regional and local strategy.

## Health promotion can improve older people’s health

Health promotion has an important role in ensuring healthy ageing. Many diseases in later life are preventable and health promotion can even ensure that older people with chronic conditions and disabilities can remain active and independent, preventing institutionalisation and declining health. Evidence indicates that it may be possible to lengthen life and improve its quality so that older people can remain healthy, active, independent and productive (3).

Health promotion is defined in the Ottawa Charter (4) as the process of enabling people to increase their level of control over, and to improve, their health. It represents a comprehensive social and political process. It entails action to strengthen individuals’ skills and capabilities and to change unsatisfactory social, environmental and economic conditions in order to alleviate their impact on public and individual health. Participation is essential for sustaining health promotion.



## Improved health – a determinant of economic growth

Improved health is associated with national wealth; but it is only more recently that the contribution of better health to economic growth has been recognised. There is evidence that improved health can promote earnings and the supply of labour. Poor health, on the other hand, increases the likelihood of early retirement. All these provide powerful arguments for investing in health, both as an objective in its own right and because it is an important determinant of economic growth and competitiveness (5).

## DEFINITION OF HEALTHY AGEING

The phrases “healthy ageing”, “successful ageing” and “active ageing” have become increasingly common in research protocols and policy documents. An example from the World Health Organization (WHO) states: “Active Ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age”(6). The fourth phase (2003–2007) of the WHO Healthy Cities programme includes a definition of healthy ageing. It adopts a rights-based approach that recognises the rights to equality of opportunity and treatment in all respects, particularly as people age.

According to the European Commission’s contribution to the Second World Assembly on Active Ageing, active-ageing involves “an orientation towards *active-ageing policies and practices*. Core active ageing practices include life-long learning, working longer, retiring later and more gradually, being active after retirement and engaging in capacity-enhancing and health-sustaining activities. Such practices aim to raise the average quality of individual

lives and at the same time, at societal level, contribute to larger growth, lower dependency burdens and substantial cost savings in pensions and health. They therefore represent win-win strategies for people of all ages.” (7)

The Healthy Ageing project has formulated its own definition of healthy ageing which takes into account equity in health and an independent life of good quality.

### *THE PROJECT’S DEFINITION OF HEALTHY AGEING*

*Healthy ageing is the process of optimising opportunities for physical, social and mental health to enable older people to take an active part in society without discrimination and to enjoy an independent and good quality of life.*

## ASPECTS OF BECOMING OLDER

### Autonomy late in life to achieve personal control

The notion of healthy ageing also includes autonomy. This right to self-determination is an essential aspect of human dignity and integrity. Autonomy for older people ought to be promoted by preventing the restrictions and limits imposed upon that right by their communities and by themselves.

The crux of autonomy is personal control, the perception of having control over one’s self and the capability of defining one’s own needs and acting upon that understanding. Independent living means not only doing things for and by yourself but also being in control of *how* things are done.

People must be given the space and the opportunity for self-realisation and for self-development. This can happen only if the individual can share in decisions that essentially

concern him/herself and the competence for self-governance (8). Competence also concerns the implementation of the decision.

One way of constraining older people's freedom of choice is to withhold the information they require for making choices. If people are not informed about possibilities for improving health or available treatment; or if the information is given in a way that is not readily understandable, they will be deprived of their freedom of choice and can be exposed to unnecessary external control. Clearly, greater concern for older people's freedom of choice is also needed for healthy ageing.

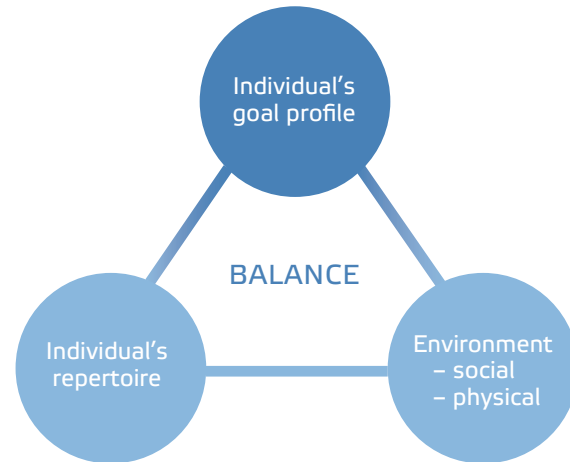
References also used in the text above: (9, 10)

### Maintaining balance in a changing life situation

Ageing for most people means, by definition, the eventual decline in personal, physical, cognitive and social resources or capacity. This in turn affects the ability to acquire and process information. One's personal resources also include the ability to make decisions about desirable goals and select appropriate means of realising these. Individual satisfaction lies in the balance between capacity and goals (11).

The notion of this kind of balance offers a start for further development of the concept of health in ageing. Balance involves adaptation to one's ever-changing life situation and this tends to disturb any balance achieved. This adaptation may include various actions.

Decline in personal resources may be prevented or reduced and capacity restored by, for example, changes in lifestyles or by medical and rehabilitative interventions. Goal attainment may be assisted by focusing on the most important meaning-bearing elements, by op-



**Figure 1.** The balance between capacity, goals and environment. SOURCE: HEIKKINEN, 2006. (12)

timising the available resources and by using compensatory measures. Further, balance may be enhanced through improvement in social support and by reducing physical obstacles to action (13). Because individual capacity, goals and environment are interrelated, these three factors need to be considered simultaneously in the promotion of healthy ageing.

### Disability in ageing

Functional decline and disability seem to be typical, uncomfortable features of ageing. The increase in life expectancy and the resulting increase in the number of older people are presumably also increasing the number of older people with disabilities. Disability means difficulty or dependency in carrying out daily self-care activities, living independently in one's own home and playing essential social roles. Disability de-

creases quality of life and increases the risks of hospitalisation or admission to nursing home, home help and premature death. The socio-economic burden of disability is great (14).

Approximately 20 per cent of people aged 70 years or over, and 50 per cent of people aged 85 and over report difficulties in the basic activities of daily living. A decline in e.g. mobility, muscle strength, balance and cognitive performance is also common (15).

The most widely-used conceptualisation of disability proceeds from pathology to the generation of organ and body-system impairments. This leads to functional limitations in the organism as a whole and finally to disability (16, 17). The disablement model has been widely used in research into ageing, and empirical evidence is accumulating on the progression from disease or trauma to disability.

A modification of the disablement process takes into account both the psychosocial and the medical aspects of late-life disability. It looks at broader risk factors in the physical and social environment that also contribute to disability. Identical physical and medical conditions may result in different patterns of disability, depending, for example, on the individual's home conditions or family structure. At the same time, similar types of disability may arise from different types of ill health. The fact that disability is unequally distributed suggests a distinct sociogenic component (18). Prevention of disability in late life has become a major public health concern, a key area of ageing research (12) and a target for the development of effective policies and programmes.

## HEALTH PROMOTION

### Involving older people

Opportunities for self-realisation and for self-development can be compromised if experts and authorities plan and implement health promotion objectives and programmes for older people “top-down”. This ‘paternalistic’ approach, which often also imposes limits and restrictions on the right to self-determination, could be reduced by enabling people to have their say about the values, objectives and methods of health promotion. Effective health promotion is often a matter of combining the best interests of the individual and of the community: the common good.

Modes of work with older people depend on environmental and cultural contexts. Non-governmental organisations concerned with ageing and old age, and organisations of senior citizens, can be included as partners in health promotion. This approach is appropriate for initiatives to improve the physical environment and social support for older people in the form of e.g. safety, mobility, transport, recreation, lifestyles, social relationships and access to nature.

Health promotion can also be strengthened through the active participation of the target group. This approach, health promotion *by* the people, assumes that attempts to change attitudes and behaviour will succeed best when activities are planned “bottom-up” by older people themselves. This approach can include helping older people to care for themselves through life-long learning, for example universities for older people, adaptation of information technology and involvement of interest groups of older adults as partners in health

promotion. A further line is to increase knowledge about health promotion and healthy ageing with studies among older people and to develop links between the experts and the people for whose benefit they are working.

### Ethical aspects

Health promotion programmes are believed to result in significant benefits such as increased average life expectancy (and particularly healthy life expectancy), improvements in the quality of life and savings in health services costs. While these outcomes are generally recognised as positive, health promotion also involves fundamental value contradictions and ethical questions.

The concepts of health and illness and the value systems on which the objectives are based may differ between individuals, authorities and the general public. Young people, for example, evaluate their health on the basis of symptoms whereas older people put emphasis on functional capacity.

Health promotion should focus on the most essential and generally accepted objectives, but also take into account specific issues related to older persons. These include a slightly different set of values, lower levels of education and income and a growing burden of disease and disability.

Health promotion programmes for healthy ageing are justified when they: are based on scientific research, are communicated to the general public in an easily understood way, enable individuals to make changes while still maintaining control of their lives and allow for informed consent.

References also used in the text above: (19–21)

### Cultural aspects

Significant cultural differences in many aspects of ageing appear, for example, in cross-cultural gerontology studies. These differences appear in the attitudes towards ageing and old people, in the cultural-moral visions of relationships among persons, families and states; in the roles of beliefs, spirituality and religion regarding health and disease; in perceptions of health, and in cultural norms and perceptions regarding the benefits of different behaviour and health practice. In addition, the differences are reflected in people's hopes and expectations about how they want and are able to live, how they want to die, how they work their way through life, how and when they learn, and how they comprehend and feel about the reality of ageing and old age. These differences create important challenges for health promotion in ageing.

Consistent with cultural theories of ageing, many studies have shown how important it is that health promotion programmes and interventions are in agreement with the target group's cultural norms, perceptions and self-awareness. Significant cultural differences exist between ethnic and cultural minority groups but also between social classes, between metropolitan areas, and between rural and urban areas. Contextual factors may either help or hinder health promotion, in 'troublesome' or 'better' neighbourhoods: community differences in what is termed social capital. The scales used in research to examine for example depression may yield different results due to cross-cultural differences in the concept of depression.

Similarly, the understanding and practice of exercise for physical fitness seems to vary greatly between older adults in different countries. Additional knowledge is required about cross-

cultural differences as well as cross-cultural universals, to prevent stereotypes and promote health promotion.

References also used in the text above: (12, 22–27)

## INEQUALITY IN HEALTH

Inequality in health is generally defined as the existence of systematic differences and variations in health status between different socio-economic groups. The differences are socially produced and unfair (28), and include:

- exposure to unhealthy, stressful living and working conditions,
- inadequate access to essential health and other public services,
- health-damaging behaviour where the degree of choice of lifestyle is restricted, and
- health-related social mobility involving the tendency for sick people to move down the social scale.

The existence of health inequalities is best illustrated by the gap in life expectancy between people from low socioeconomic groups and those from high ones. In many European countries, men in higher socioeconomic groups can expect to live up to six years longer than men in lower ones (30). In terms of ‘healthy life expectancy’ the gap between the poorest groups and the richest is even bigger. In the Netherlands, for example, it is 14 years (29)!

Health inequalities start early in life – even before birth due to differences in pre-natal conditions – and persist into old age. For most specific causes of death, inequalities tend to be larger among men (30, 31). There are direct connections between self-reported morbidity

and poor health status and the level of education and income of older people. Those with poorer education, a lower occupational class or smaller incomes tend to die younger, and to have, during their briefer lives, a higher prevalence of most types of health problems. An explanation of this persistence of health inequalities at an older age can be sought in the people’s past lives. This means that present inequalities are the net effect of a lifetime of socioeconomic differences and exposure to unfavourable material, psychosocial and behavioural risk factors (31).

Certain groups of older people such as disadvantaged or vulnerable persons, those facing social exclusion, older migrants, refugees or the homeless are even more prone to ill-health and disabilities, and therefore need special attention (32). This raises the question of how far health services are prepared for, and adequately responsive towards, the needs of these older groups. Most national health care systems in Europe are ill-equipped to address the needs of the ageing members of their populations, let alone the more vulnerable of the older groups (33). Richer people make more use of preventative and specialist care than poorer – who make more use of emergency hospital care (34).

Adequate access to good-quality health services for older people with lower socioeconomic status is however not the only measure necessary to reduce the health inequalities they experience. To reduce inequalities, any healthy-ageing strategy should concentrate more on the disadvantaged than on the better-off. Strategies should include special measures and approaches to reach out effectively to disadvantaged groups of older people. Measures that have proved effective in promoting the health of socially excluded people include outreaching, home

visits, intercultural mediators (for older migrants) or experience experts, self-help groups and other low-barrier activities that involve and empower participants (35).

In short, tackling health inequalities in later life and improving the underlying socioeconomic determinants for older people in disadvantaged situations should be at the core of any healthy ageing strategy.

## GENDER AND AGEING

There is a lack of knowledge about the gender perspective on older people and health, for example on the biological and social aspects of ageing and on living conditions. But gender differences necessitate a special gender perspective: women as a group and men as a group, and comparisons between women's and men's living conditions. Gender-based differences in opportunities and living conditions accompany the individual through life.

Thus older women run a higher risk of poverty than older men do. Pension systems differ widely across the EU. In most countries they are designed to replace earnings from work as a result of lifelong contributions rather than awarding benefits to all older people on the basis of residence. Women's entitlements are significantly lower than men's due to their reduced participation in the labour market. However, some countries are adapting their systems by adding pension rights for periods of care of children or dependent elderly or disabled people (36).

The gender aspect is evident in life expectancy and cause-of-death. Women have a higher life expectancy than men, although longer life does not inevitably lead to more years in better health.

The EU-co-funded MERI project<sup>1</sup> was a response to demands by scientists, associations and national governments for more knowledge of the living conditions and problems of older women. This is needed for improving the empirical basis for social and public policy, for work by national and European associations and for encouraging future research on older women while also raising general awareness of older women's circumstances. The MERI project was carried out in twelve European countries.

The MERI research has shown that research on older women as an independent target group is still inadequate. Approximately every fifth person in Europe now is a woman aged 50 years or older. In almost all the twelve countries studied, women more often than men present generalised symptoms such as pain, arthritis and arthrosis, visual impairment or osteoporosis. At the same time older women are more affected by disorders caused by injuries and falls. Given these facts, there are reasons why older women's self-perception of health is worse than that of older men in the MERI countries.

The gender difference in life expectancy is also smaller when years lived with disability are taken into account. Women's longer life means in many cases a longer life with chronic and incapacitating disease. Older women suffer longer and are highly dependent. At the same time older disabled women are more likely to live alone than older disabled men are. Older women may report more psychological symptoms than men do. Another fact is that older women in the MERI countries make more use of medical consultations and medical treatment than do older men.

1. <http://www.own-europe.org/meri>

In the majority of the MERI countries older women pay more attention to health issues than older men do and they show healthier habits concerning alcohol and tobacco. Older women also tend to be more aware of healthy nutrition than men are. In Europe, obesity is less common among older women than among older men. Nevertheless, older men more often take part in physical activities and sport, although the number of older women doing physical exercise is increasing in many countries (37).

Note, however, that enormous social and cultural changes are going on in Europe and all over the world. The fact that older women today drink more alcohol than did previous generations requires new knowledge. The increase in overweight might afflict men and women differently.

## FRAMEWORK FOR THE HEALTHY AGEING PROJECT

The factors which influence health interrelate and many can be influenced. They can be thought of as a series of layers<sup>2</sup>. See figure 2.

First there are the close family relations such as children's relations with adults, the social network and support from friends and neighbours and the community.

On the next layer come the lifestyle factors such as eating habits, physical activity, sleeping habits, alcohol and tobacco use.

There are also the material and social conditions in which people live and work. These are determined by housing, education, social services, traffic, work environment, health care and others.

In addition, there are major structural determinants, including environmental and socio-economic strategies.

### *Health determinants and major topics*

The Healthy Ageing project focuses on the different levels of health determinants: those determined by society and political policies and those determined by individuals themselves.

The many important issues for older people include: older people living in rural areas; personal finances; technology and health; internet access; technical aids in the home; responsiveness of health care to older people; sexuality; cultural activities and oral health.

However the project has agreed on ten major topics important for promoting healthy ageing. Most are broad and include subtopics: injury prevention, for example, includes violence.

The selected major topics are:

- Retirement and pre-retirement
- Social capital
- Mental health
- Environment
- Nutrition
- Physical activity
- Injury prevention
- Substance use/misuse (tobacco and alcohol)
- Use of medication and associated problems
- Preventive health services

2. Background document to WHO Strategy paper for Europe "Policies and strategies to promote social equity in health" by Dahlgren and Whitehead (1991).

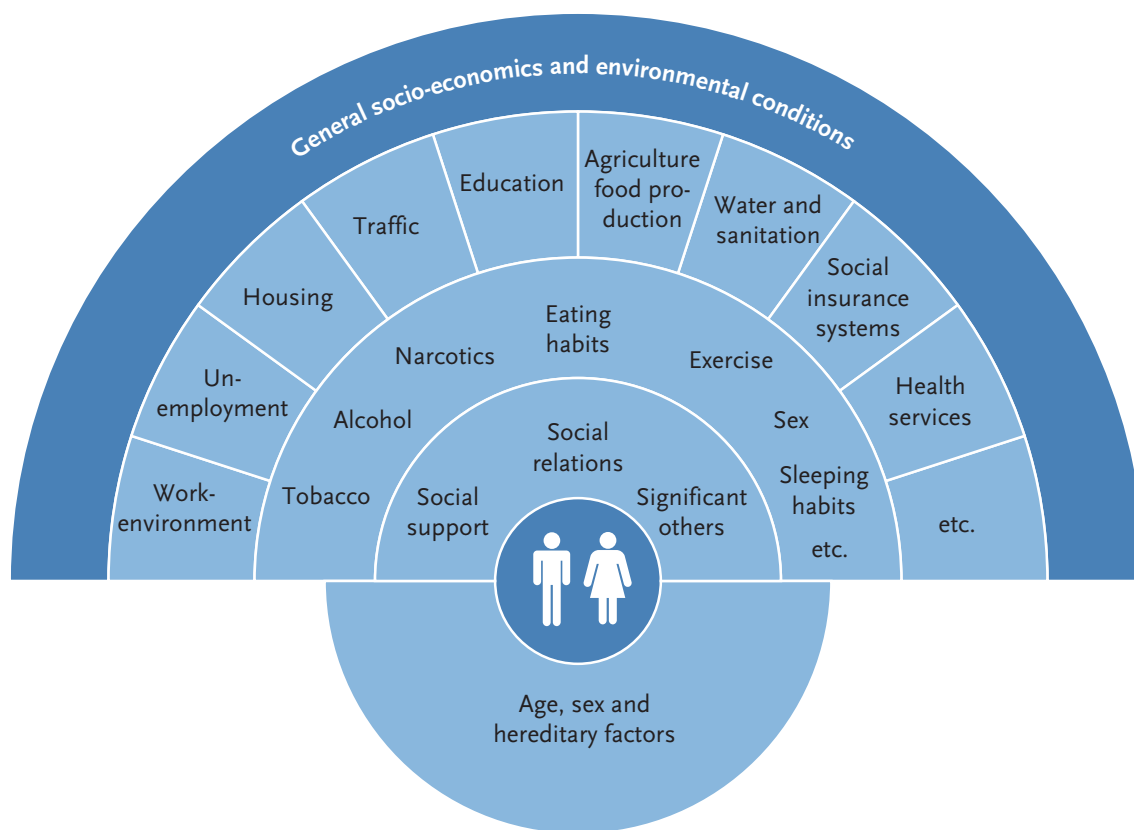


Figure 2. Health determinants. SOURCE: DAHLGREN AND WHITEHEAD, 1991.

The cross-cutting themes considered by the project are socioeconomic determinants, inequalities in health, gender and minorities. They should be considered as key health determinants.

As already pointed out, the major topics interact. For example physical activity is often practised together with other people and hence also affects the social determinants. One perhaps becomes more aware of nutrition when one is physically active; and the risk of injury may decrease when physical activity is combined with good nutrition.

Chapters 3, Retirement and pre-retirement, to 12, Preventive health services, are based on literature on the respective topics. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

*The ageing population is a heterogeneous group*

Health determinants for older people depend on the smaller age group within the larger group of older people. The needs of fifty-year-olds differ greatly from those of people aged 100.





Figure 3. Major topics for the Healthy Ageing project. ILLUSTRATION: NINNI OLJEMARK.

At any time point, a person aged 50 has been brought up and has lived differently from a person aged 75 or 100, and they have reached very different phases of life.

Phases in life have been described in different ways, for example Laslett’s “four ages” (38). The second age consists of work, independ-

ence, social responsibility and responsibility for family. The third age is the part of the pensioner’s life which consists of work-free financial security without too many limitations due to illness and disability. The fourth age has limits due to illness and disability and people become dependent on other people again.

The circumstances of a person aged 60 today differ from those of 20 years ago. The ageing generations of today tend to expect to live longer in better health than their parents' generation did.

Demands for health promotion differ greatly in different groups, depending on gender, socioeconomic status and ethnicity. Other factors to consider include disability (39) and sexual identity. The link between sexual identity and health, for instance, is a subject that needs further examination.

According to a report from the Swedish National Institute of Public Health, a significantly larger proportion of lesbian, gay, bisexual and transgender people (LGBT people) are in poorer health than the rest of the population. Mental health in particular is significantly worse. As an example 55 per cent of lesbian and bisexual women between the ages of 45 and 64 report impaired mental well-being, compared to 16 per cent of women of the same age in the rest of the population. The authors of the report suggest that social discrimination against non-heterosexual people is one of the reasons for these inequalities in health between LGBT people and the rest of the population (40).

Eastern and Central European contexts also differ: older people's circumstances are more difficult in many new Member States, where many older people are poor. They face other kinds of problem than people in the Western EU countries, such as inadequate access to health and social services.

To give an example: men in many of the old EU Member States have a significantly higher life expectancy at ages 50 and 65 than men of the same age in many of the new Member States (see Appendix 1). Living conditions also differ between urban and rural areas in the European countries (41).

With better evidence, prevention could be more effective and life could be improved for the general population as well as for the more vulnerable older groups.

#### *A basis for the Healthy Ageing project*

"Proven Strategies to Improve Older People's Health" is a Eurolink Age Report for the European Commission (42). The report recommends an integrated approach and highlights the cross-cutting benefits. It provides a background and is a good basis for the Healthy Ageing project with its recommendations for the promotion of older people's health at local, national and EU levels. It also discusses the potential for promoting older people's health, focusing on recommendations for policy action, evidence-based health promotion and structural opportunities for health promotion for older people.

## THE HEALTHY AGEING PROJECT

### Aims

The aim of the project is to promote healthy ageing in later life stages (people aged 50 plus). The project will focus on different aspects of health and promote healthy ageing through the development of an integrated and holistic approach to health in later life. The main aims are:

- to review and analyse existing data on health and older people at both EU and Member State level and produce and disseminate a report,
- to make recommendations for policy at both EU and Member State level based on current evidence and practice for promoting the health of older people while taking cultural differences into account, and
- to disseminate the findings by developing a comprehensive strategy<sup>3</sup>.

### Age group 50 and over

To promote health and prevent diseases it is important to start early in people's lives. The Healthy Ageing project has defined the age groups considered for the project as those aged 50 years and older. It is based on WHO's definition of people aged 50+ as the target group when discussing older people. The EU uses the same age limit in order to include older workers' health and health and safety policies at workplaces, which are also objectives for WHO. However, there are many different definitions in the European countries.

### Work outline for the project

To achieve the aims, the project has reviewed and compiled:

- health data
- literature on interventions
- examples of good practice
- policies and strategies

Finally recommendations are suggested based on the findings of the Healthy Ageing project.

3. A comprehensive strategy is a strategy that covers many sectors.

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CHAPTER 2

# Statistics on older people and health



# Statistics on older people and health

This chapter maps statistical data on the health and social circumstances of older people living in the EU countries. The methodology is descriptive, with the main purpose of presenting statistical data and related data from a sample of official sources on international and European levels. In addition to using official sources of statistics, we also point out other data of relevance to this project.

The statistics presented in this chapter relate to data on people of age groups from fifty upwards (50+). Most of the comparable data stem from available statistics from Eurostat and the WHO. It has not been possible to find other statistics that cover all the 32 countries in Europe that are either Member States, applicants or associated countries.

The Healthy Ageing project has gathered information on official statistical sources concerning older people living in EU countries. For further information on statistical sources, see Appendix 6 Official statistical sources on older people and health.

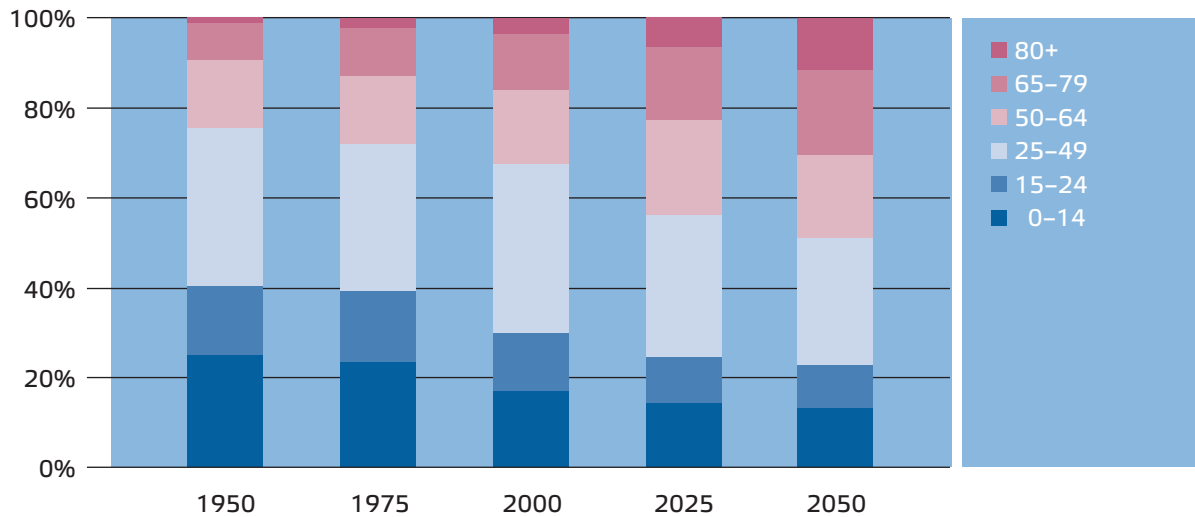
## CHALLENGES DUE TO DEMOGRAPHIC CHANGE

### Demographic change

In Europe, the present 25 EU countries have 18.2 million inhabitants aged 80+, which is 4 per cent of the total population. In 2014 the corresponding number will be 24.1 million (5.2 per cent) (3). About one-third of Europe's population will be aged 60 or over in 2025, with a particularly rapid increase in those aged 80 years and older (9). The number of older people aged 65–79 has increased significantly since 2000 and will do so until around 2050 (see figur 4).

The demographic effect of the post-war baby boom will start to decrease around 2030 and is expected to disappear not earlier than in the middle of the century (10). The EU population is expected to grow just slightly until 2025 before starting to drop in 2030. This trend is even greater when only the total working-age population (15–64 years) is considered.





**Figure 4.** Population distribution in EU25 by age group (1950–2050).  
 SOURCE: GREEN PAPER – CONFRONTING DEMOGRAPHIC CHANGE: A NEW SOLIDARITY BETWEEN THE GENERATIONS (11).

Europe has the world’s highest proportion of older women. Today there are approximately three women for every two men between the ages of 65 and 79, with over twice as many women over the age of 80 (12).

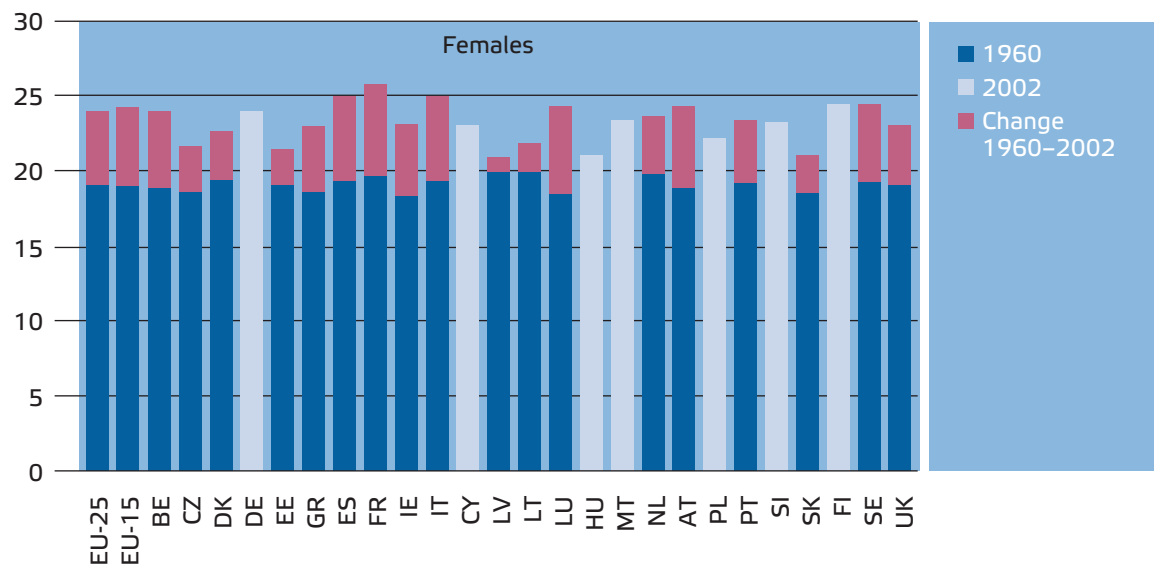
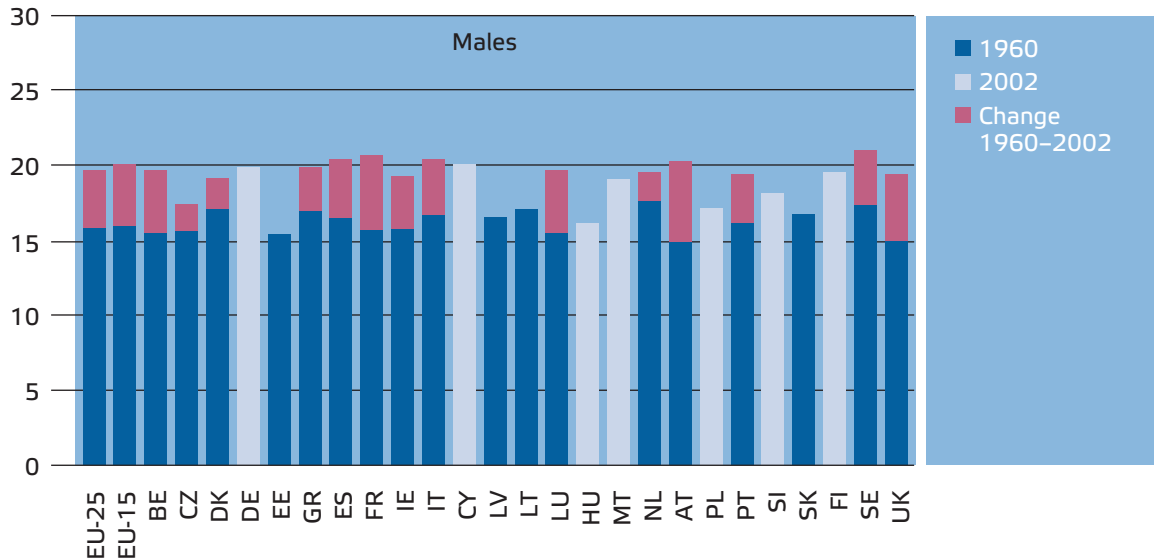
Ageing could cause a fall in potential annual growth in GDP in Europe by 2040 (11). The statistics show that countries with high GDPs (rich countries) usually also have long life expectancy. Denmark and Ireland (both males and females) and males in Finland and Belgium are exceptions. Poland has a higher ranking in life expectancy than their ranking in GDP per inhabitant.

*Oldest and youngest populations*

Sweden has the oldest population in Europe in percentage of people 80 years and above, followed by Italy. Turkey has the youngest population, followed by Romania. Italy has the highest percentage of people aged 65 and over, while Albania has the lowest.

**Migration**

In 2004, the European Union registered 1.8 million immigrants. Significant net immigration into Europe will continue for the next 15 to 20 years. Eurostat’s projection is that around 40 million people will emigrate to the EU between now and 2050. As many of them are of working age, migrants tend to bring down the average age of the population. However, the longer-term repercussions remain uncertain, as they depend on the more or less restrictive nature of family reunification policies and on migrants’ birth patterns. Despite the current flows, immigration can only partially compensate for the effects of low fertility and extended life expectancy on the age distribution of the European population (13).



**Figures 5 and 6.** Life Expectancy at the age of 60 (1960–2002).  
 SOURCE: GREEN PAPER – CONFRONTING DEMOGRAPHIC CHANGE: A NEW SOLIDARITY BETWEEN THE GENERATIONS (11).

Country codes are listed at the end of this chapter, see page 56.

### Average life expectancy

Important gains in life expectancy<sup>4</sup> in the European Union have been realised between 1960 and 2002, with the exception of men in the Baltic States. For the future, demographers estimate that the difference in life expectancy between men and women will narrow and that life expectancy of men in the Baltic States will within a few decades improve towards the EU average. The increase in life expectancy is the result of drops in the mortality of all age groups and is not limited to the very old.

According to the figures above, between 1960 and 2002 life expectancy at age 60 increased almost everywhere, except for men in Latvia and Slovakia. The differences at the age of 60 are smaller than at birth, for both genders. It is also clear that during this period the gender gap in life expectancy has further increased. Nevertheless the new baseline projection assumes that this gap, measured in terms of life expectancy at birth, will start to shrink from 6.3 years in 2002 to 5.2 in 2050 (11).

Iceland, Switzerland (14) and Sweden have the longest life expectancy at birth<sup>5</sup> (80.2–80.6 years). Turkey has the shortest (68.7 years), followed by Estonia and Romania (71.2 years). The pattern of high life expectancy in EU 15, especially women in France, and lower life expectancy in the new Member States is the same as above at 50, 60 and 80 years (for more information on life expectancy in EU/EFTA/EEA countries, see Appendix 1).

Average life expectancy at birth is calculated to increase by 1.1–2.7 years for males between 2004 and 2014. For females it is estimated to increase within the interval of 1.4–1.9 years during the same period.

### Healthy life expectancy at 60 years

Healthy life expectancy (HALE) is based on life expectancy but includes an adjustment for time spent in poor health. It is most easily understood as the equivalent number of years in full health that a person who has reached 60 years can expect to live based on current rates of ill health and mortality (8).

The differences between the European countries in relation to healthy life expectancy are similar to those regarding life expectancy, but there are some exceptions. Females in Spain and Switzerland live in good health longer than anticipated from their life expectancy. Females in France and Switzerland have the longest HALEs. The shortest HALEs for females are in Turkey.

For males, Iceland has the best situation followed by Sweden and Switzerland, but the difference is smaller than the difference in life expectancy. Sweden shows the best HALE situation for males. The poorest situation is in Latvia, followed by Estonia. (For more information about the HALE method and figures on healthy life expectancy in EU/EFTA/EEA countries, see Appendix 3.)

4. Average years an individual can expect to live if the current mortality rates persist.

5. The average years a newborn infant can expect to live divided by the mortality in the infant's birth cohort.

## HEALTH STATUS IN THE EU COUNTRIES

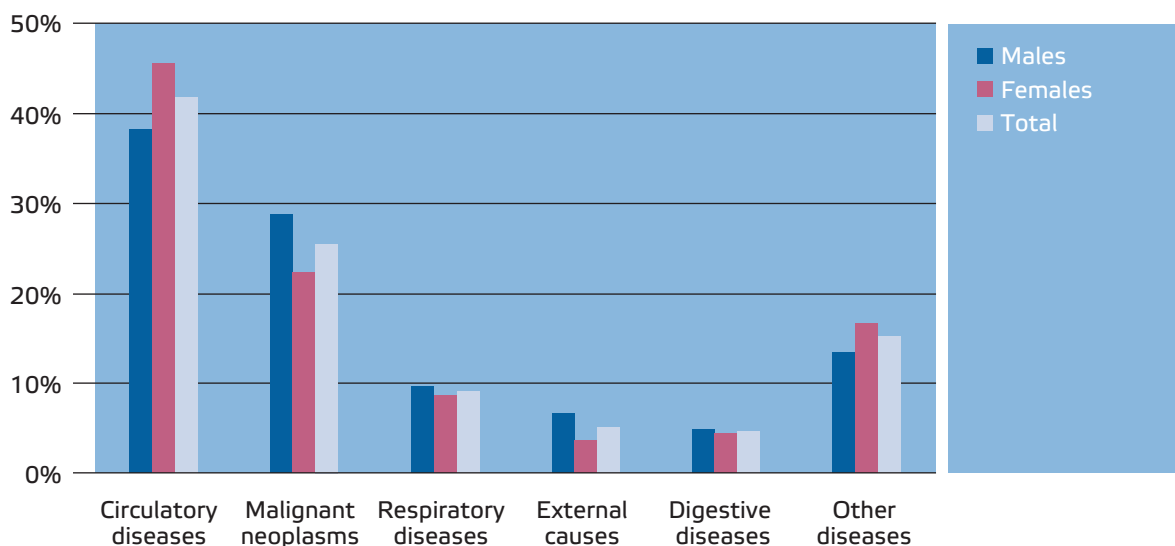
A comparison between the 15 EU Member States (EU 15) and the ten new Member States (EU10) as well as the three candidate countries (CC3), using data based on the European Quality of Life Survey (EQLS), shows that health status in EU10 and CC3 is generally poorer than in EU15 (15). Although older people's health status and longevity in EU10 and CC3 are improving, their health status will probably not reach the level of that of older people in EU15 for at least another two decades.

The EQLS also showed that age plays a key role in e.g. long-standing illness or disability. More than half of the people aged 65 or over in EU10 and CC3 reported a long-standing illness or disability, except in Cyprus and Malta (15).

## Health among older people in the European Union

The prevalence of physical health problems among older people is high. According to the Survey of Health, Ageing and Retirement in Europe (SHARE)<sup>6</sup>, around 40 per cent have some degree of activity limitation due to health problems, and almost 50 per cent report that they have some long-term health problems. Around 40 per cent of the respondents rate their health as less than 'good', and 10 per cent rate it 'poor' or 'very poor'. Self-reported chronic diseases and symptoms were both very common: more than two thirds having at least one chronic disease diagnosed during their lifetimes; and around 40 per cent reported two or more diagnosed chronic diseases. Similar numbers reported at least one, two or more current symptoms. Around one-third reported no chronic disease at

**Figure 7.** Deaths by selected cause and by sex, 1998, EU15.  
SOURCE: HEALTH STATISTICS. KEY DATA ON HEALTH 2002 – DATA 1970–2001 (17).



6. SHARE has collected data on the individual life circumstances of about 22,000 persons aged 50 and over in 11 European countries from Scandinavia to the Mediterranean.

all, or no symptoms at all. The most commonly reported chronic diseases were arthritis, diabetes and heart disease; many respondents also reported hypertension and high cholesterol, which are important risk factors for heart disease and other cardiovascular problems. The most commonly reported symptoms were pain, sleeping problems and swollen legs (16).

The principal causes of death in the EU are circulatory diseases and malignant neoplasms, together accounting for two-thirds of all deaths, among both genders. Within the group of circulatory diseases, ischaemic heart disease (IHD) accounts for one in six of all deaths, and cerebrovascular disease for about one in ten (17).

### Fewer working people to support more older people

The population of Europe is ageing because of increasing life expectancy and a declining fertility rate. There will be fewer people of working age to support those in retirement (18). The number of working-age people per pensioner will nearly halve by the year 2050, from 3.5 to 1.8 at EU level (10). In other words, in 2050 there will be two persons of 15–64 years per one person of 65+, compared to four at present (19).

Together with the declining birth rate of the past 20 years, there will be a problem in recruiting qualified workers, and more workers will leave working life than will enter it (20). The continuing growth in the number of workers over 60 will not stop until around 2030, when the baby-boomer generation will become “elderly” (11).

## HEALTH AND INEQUALITY

Regarding self-reported morbidity, inequalities persist into old age. After the age of 60, relative and absolute inequalities in, for example, self-assessed health, limitations in daily activities and long-term disabilities by income level and level of education tend to decrease. However, they remain substantial until at least the seventies for all health indicators, income-related health inequalities, socioeconomic position and level of education (21).

### Inequalities between age-groups

While those of ‘productive age’ (25–64) enjoy relative financial security, children (under 16), youths (16–24), and the elderly (65+) are at particular risk of poverty. The risk-of-poverty-rate<sup>7</sup> in 1995 was considerably higher for these groups than for the wider EU15 population (37, 28 and 16 per cent higher respectively). The relationship between age and ‘risk of poverty’ extends to long-term poverty. According to the report “Social Exclusion and Unemployment in the European Union”, the age groups under 24 and over 65 show an above-average risk of persistent poverty.<sup>8</sup> This overall trend is largely mirrored nationally, although the degree to which these groups are likely to be disadvantaged varies noticeably from country to country (22).

Poverty has a negative impact on health and life expectancy. Lower-class people in the United Kingdom, at the age of 65, have a lower life expectancy, by 2–2.6 years (women/men), than

7. EUROSTAT estimates a risk-of-poverty rate: the share of persons with an equalised disposable income below the risk-of-poverty threshold, which is set at 60 per cent of the national median equalised disposable income (after social transfers). This share is calculated before social transfers (original income including pensions but excluding all other social transfers) and after social transfers (total income).

8. The share of persons with an income below the risk-of-poverty threshold in the current year and in at least two of the preceding three years.

their coevals in the upper social classes. As far as comparable analyses are possible in other countries, similar gradients can be discerned. Poverty aggravates disease and disabilities among old people. The manifestations of disabilities and the loss of independence in everyday life activities are “crucial turning points”. The loss of a partner is also of considerable importance (23).

Inequalities in mortality persist into the highest age-groups but tend to become smaller at higher ages. On the other hand, relative inequalities increase consistently with advancing age and reach their highest values among the oldest-old. In general, inequalities in mortality are smaller among women than among men. While the rate ratios among men decline rapidly at higher ages, they do not do so, or do so much less, among women.

In northern Europe, poor older people living alone are concentrated in large cities. On the contrary, in the Scandinavian countries people in these circumstances live mostly in the countryside. Southern Europe shows a different geographical composition of poverty, both in general and among older people. In northern-central Italy, the most economically disadvantaged older people live in single-person households (mainly women) and/or aged couples, while in southern Italy poor older people live in larger households (23).

## STATISTICS CONCERNING THE MAJOR TOPICS

All the Central Statistical Offices in Europe (30 countries) have been scanned for age-related statistics for the major topics of the project. Very few countries have this kind of statistics at present. The available data are from different years, with different age groups and with

differing sample sizes, which makes comparisons difficult. The data and statistics presented below therefore lack many aspects of comparability. The statistical sources of this data are taken from studies from various countries or from EU-related research projects and different databases.

### Retirement and pre-retirement

Unemployment is often regarded as a health risk factor for most people. The employment rate is also important regarding future income from pensions and the pension burden of coming generations, depending on a country’s pension system. Between 1997 and 2002 the employment rate increase for older workers was very similar to the increase in the overall rate, but in 2002 alone the rate for older workers went up by a significant 5.4 per cent, leading to an increase in the overall rate of 1.3 percentage points for both genders.

Iceland has the highest employment rate for males and females 50–64 years old (93 and 82 per cent, respectively) of the European countries. The lowest employment rate among males is in Poland (47.2 per cent). The lowest rate for females aged 50–64 years is in Malta (17.2 per cent). For more information on employment rates among people aged 50–64 years in EU/EFTA/EEA countries, see Appendix 4.

### *Retirement at different ages*

Retirement and average exit age differ between the European countries. Among males, the United Kingdom had the highest average exit age from the labour market (64.2 years), followed by Portugal (63.7 years) and Sweden (63.5 years). Among females, Romania reported the highest (62.9 years), followed by Ireland, Norway and Sweden (all at 62.8 years).

The lowest average exit age among males was reported in Belgium with 58.6 years, followed by Austria with 59.4 years and France with 59.7 years.

The Slovak Republic had the lowest average exit rate for females at 55.9 years, followed by Poland at 56.4 years and Bulgaria at 57.5 years.

One-fourth of Finnish men and one-third of Finnish women often think about retiring before retirement age for medical reasons. About 30 per cent of men and women continue to work without thinking about retiring. Statistics show that the deterioration of health and work ability particularly increases thoughts about retirement. Even though these statistics do not show the effects of economic factors, work-life quality issues or, for example, the situation of the spouse or other close ones on thoughts of retirement, they nevertheless in-

dicate that people over 55 years of age think about their own situation and its implications for their future more and more actively (24).

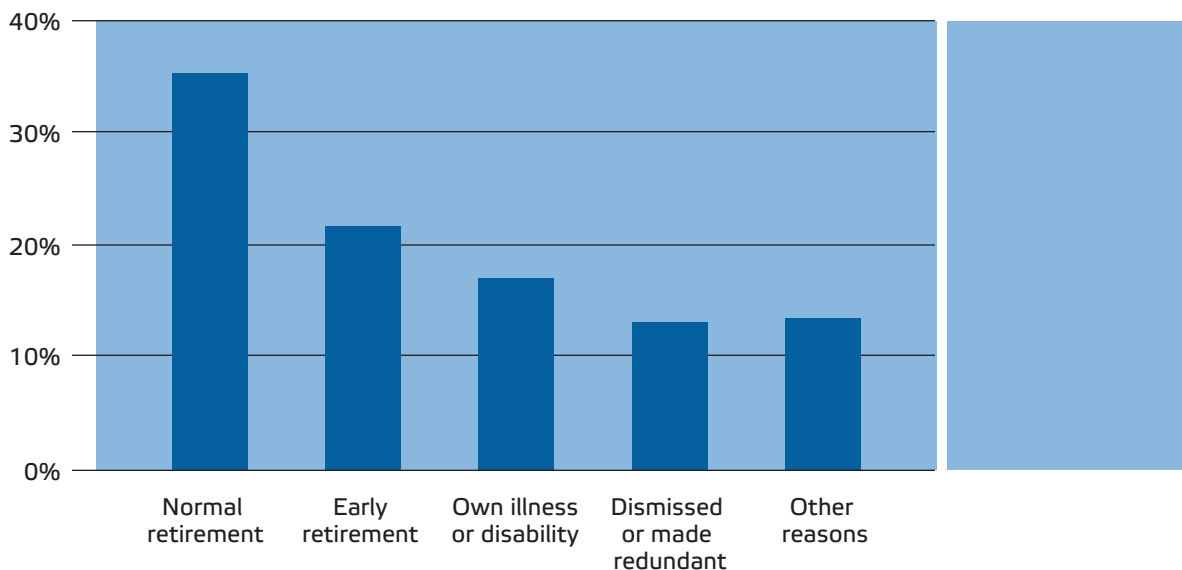
There are many reasons for older workers to leave their jobs. About one-third of inactive people aged 55–64 report their main reason for leaving their last job as normal retirement, but more than 20 per cent indicate early retirement as the main reason, (around three million persons per year). Another important reason to leave a job is long-term illness or disability. The standardised prevalence rate of work-related health problems increases with age (24).

*Pensions systems*

Pension systems contribute to around 60 per cent of the total net income of older people. Other incomes include other social transfers, income from property and income from work

**Figure 8.** Main reasons for leaving last job or business for older workers aged 55–64 in the EU15 (per cent of all reasons given).

SOURCE: TOWARDS A LONGER WORK-LIFE, AGEING AND THE QUALITY OF WORK-LIFE IN THE EUROPEAN UNION (24).



(10). Over the past few decades, Europe’s pension systems have been remarkably successful in meeting their social objectives and have made older people independent, allowing them to enjoy a prolonged period of leisure after their working lives. The risk of poverty in old age has also been greatly reduced, as has the number of people who have to rely on their descendants or means-tested social assistance benefits.

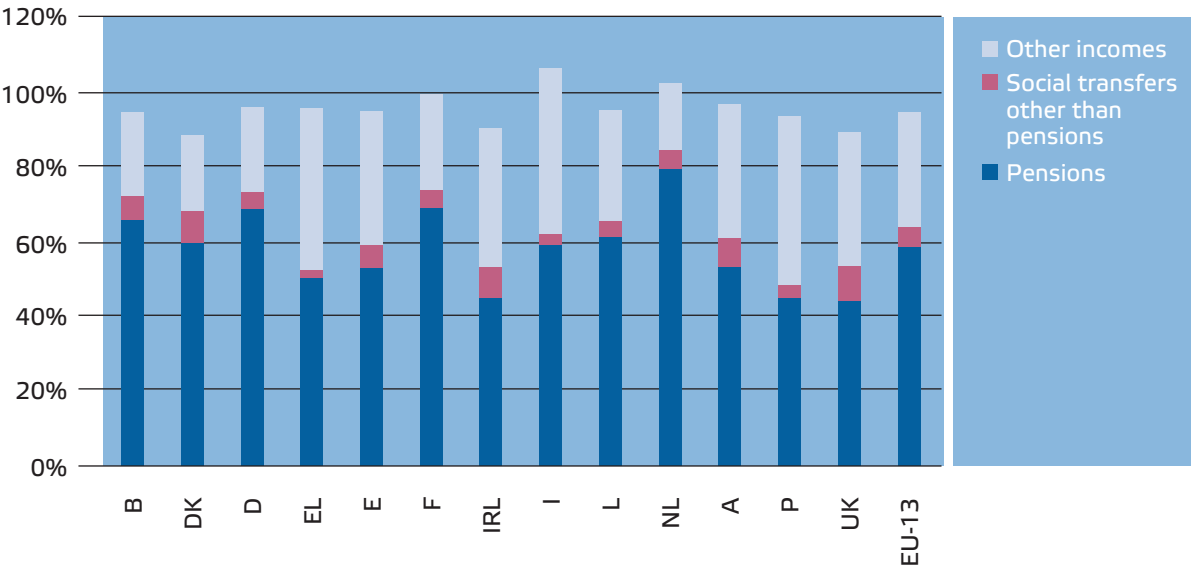
Despite this success, there are still cases in which pension systems fail to provide adequate minimum resources, especially for older women, who constitute two-thirds of pensioners above the age of 75. In some countries, poverty rates are still higher among older people than in the total population, although the difference has narrowed (10).

Nearly 45 per cent of total social protection spending in the EU15, or around 12 per cent of

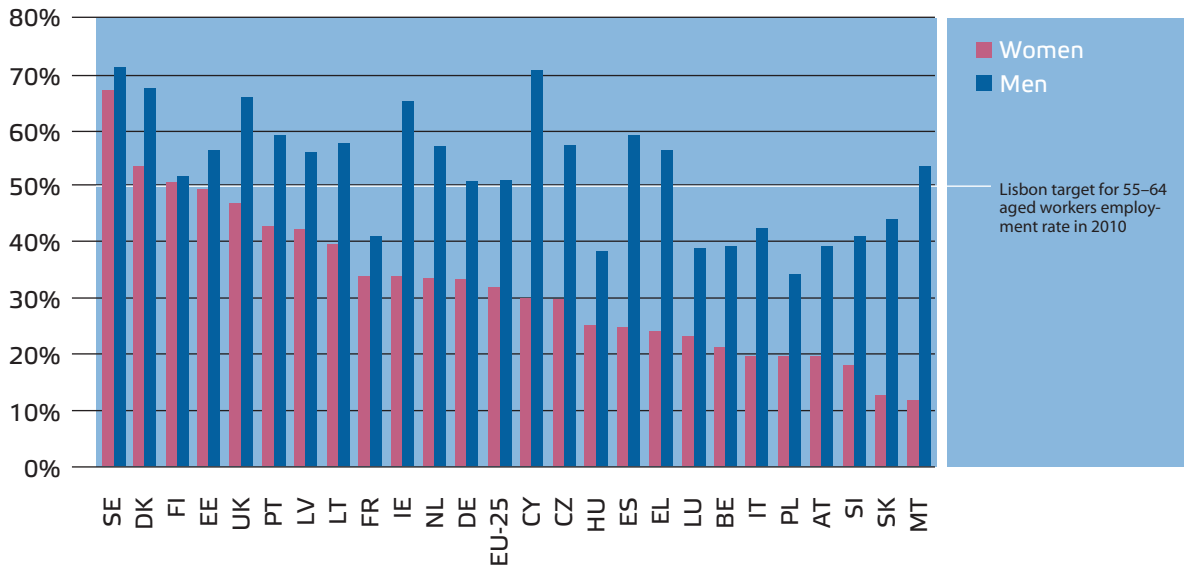
GDP, goes to old-age and survivors’ benefits. The main source of pension income is public pension schemes, and most expenditure for old age and survivors comes out of statutory pension schemes. It is financed out of social insurance contributions and general taxation. As older people are the largest beneficiaries of health and long-term care, they are the people who are most dependent on social protection systems (10).

In most countries pensions systems are designed to replace earnings from work in exchange for lifelong contributions, rather than awarding benefits to all older people on the basis of residence. Women’s entitlements are significantly lower than men’s due to their smaller labour-market participation. However, some countries are adapting their systems by awarding pension rights for periods of care of children, dependent elderly people or disabled people (25).

**Figure 9.** Relative equivalised income of persons living in households receiving pensions. SOURCE: COMMUNICATION FROM THE EUROPEAN COMMISSION – THE FUTURE EVOLUTION OF SOCIAL PROTECTION FROM A LONG-TERM POINT OF VIEW: SAFE AND SUSTAINABLE PENSIONS (10).







**Figure 10.** Employment rates (women and men aged 55–64 in EU Member States – 2004).  
 SOURCE: REPORT ON EQUALITY BETWEEN WOMEN AND MEN (25).

### Social capital

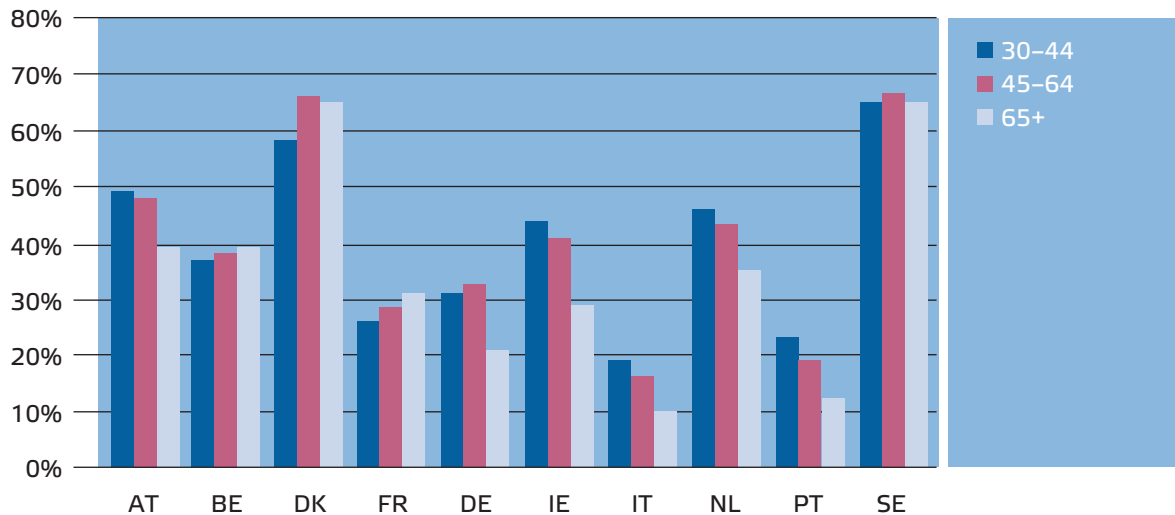
Social capital is a community resource based on individuals’ shared values, attitudes, behaviour and commitment to the community (26). Being a member of an organisation, active in a political party or charitable organisation, having trust in others and voting in elections can be regarded as promoting social capital and the social cohesion of a society while strengthening a person’s sense of belonging and well-being.

Providing help and being engaged in political or charitable organisations and performing voluntary work strengthens civil society structures and is often regarded as promoting social capital and the social cohesion of a society. For the individual, such commitment stabilises social networks and is likely to promote a sense of belonging and subjective well-being (27).

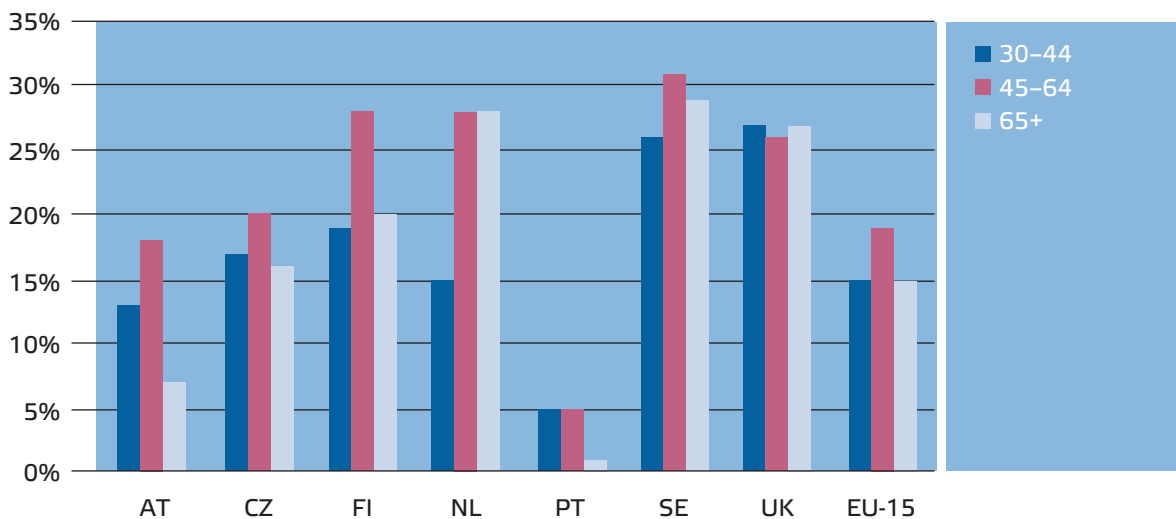
Membership of political or charity organisations among older people varies in the European countries. In Austria, Germany, Italy, Ireland and Portugal younger age groups are better represented in organisations than are the older age

groups. By contrast, in France and Belgium, older age groups are better represented. In Denmark and Sweden the older age groups are not only represented in organisations to the same extent as younger ones, but the total membership of organisations is significantly higher than in the other European countries surveyed.

Political activity (measured as having attended a trade union, political party or political action group meeting, or having attended a protest or demonstration, signed a petition, or contacted a politician or public official over the past year) is also unequally distributed. Such involvement is most prevalent in the EU15, where 17 per cent of the population is active in one way or another. The relevant share of the population is lower in the EU10 (12 per cent) and even lower in the CC3 (9 per cent). Among the EU15, political involvement is most widespread in Sweden and Denmark. Latvia and Malta are the EU10 countries where political engagement is most common. This pattern goes through all age groups, although it is clear that the older age



**Figure 11.** Social participation: membership of an organisation 1998, percentage of individuals. SOURCE: EURLIFE<sup>9</sup> BY ECHP<sup>10</sup> DATABASE 2000. DATA PROCESSED BY HANS TEN BERG OF THE HEALTHY AGEING PROJECT (JUNE, 2006).

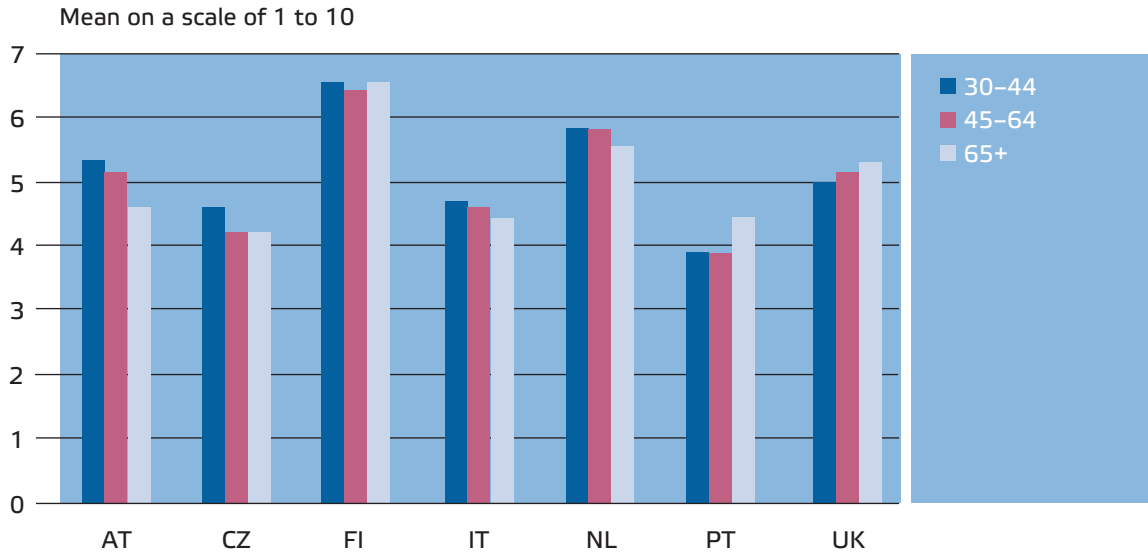


**Figure 12.** Activity in a political or charitable organisation in 1999, percentage of individuals. SOURCE: EURLIFE BY EVS<sup>11</sup> DATABASE 1999. DATA PROCESSED BY HANS TEN BERG, HEALTHY AGEING PROJECT (JUNE, 2006).

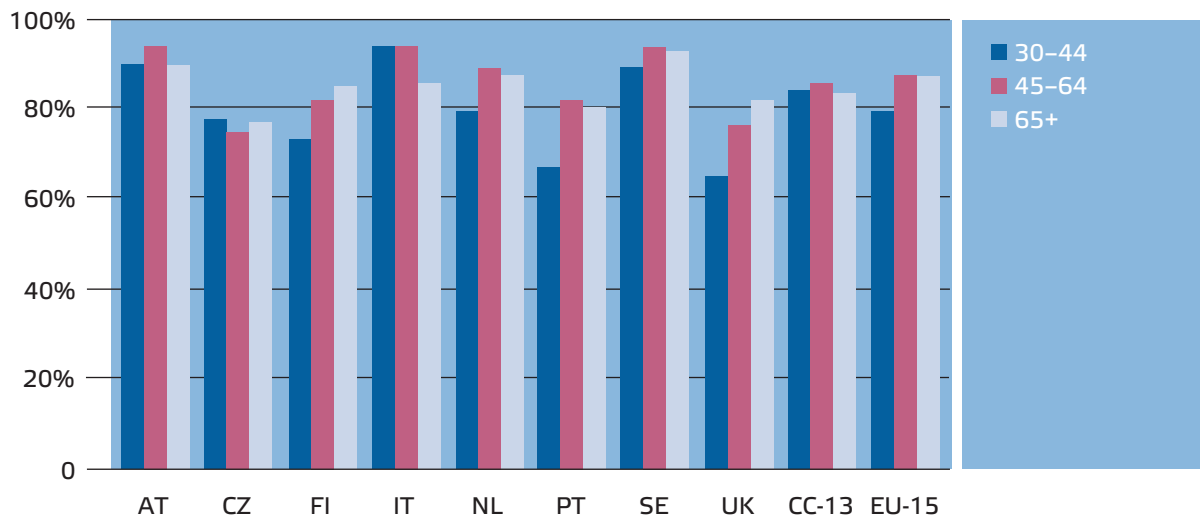
9. EurLife is an interactive database on living conditions and quality of life in Europe. It offers data drawn from the surveys conducted by the European Foundation for the Improvement of Working and Living Conditions and from other published sources. The data provided deals with the objective living conditions and subjective well-being of European citizens. It covers the 25 current EU Member States and three candidate countries: Bulgaria, Romania and Turkey.

10. The European Community Household Panel.

11. European value studies.



**Figure 13.** Trust in people 2003. Mean value on a scale of 1, 'You can't be too careful in dealing with people', to 10, 'Most people can be trusted'.  
 SOURCE: EURLIFE BY ESS<sup>12</sup> 2002 AND EQLS<sup>13</sup> 2003. DATA PROCESSED BY HANS TEN BERG, HEALTHY AGEING PROJECT (JUNE, 2006).



**Figure 14.** Percentage of people aged 18 over who in 2003 voted in the last national election, percentage of electorate.  
 SOURCE: EURLIFE BY EQLS. DATA PROCESSED BY HANS TEN BERG, HEALTHY AGEING PROJECT (JUNE, 2006).

12. European social survey.  
 13. European quality of life survey.

groups are not as active in political or charitable organisations as younger age groups (27).

The EU15 population is the most trusting, whereas trust is less in the EU10 and lowest in the CC3. Social trust is understood as a collective property, as a powerful social good and as an indicator of social capital. The trustworthiness or the degree of trust within a society is more widespread in the EU15, where people are on average more affluent and less affected by severe disadvantages (27).

These results are in line with recent research on this subject, emphasising that individual living conditions, success and, above all, societal conditions are decisive in generating social trust (28). With few exceptions, people with low income and especially those who are unemployed, in almost all the countries, report lower levels of trust in other people (29). The experience of hardship obviously leads to scepticism, suspicion, insecurities and a more self-centred attitude.

## Mental health

The ageing of the population in Europe during the coming decades will have many social effects. The effect on health care will be amplified by a disproportionate increase in dementia, depression and mental illness. Increased substance abuse disorders and delirium will also be of major concern (30).

Differing definitions of mental health, and many different surveys, make it difficult to compare mental health between the Member States. Two EU-designed surveys are used in the report “The state of mental health in the European Union” – the Eurobarometer and the “European Study of the Epidemiology of Mental Disorders/Mental Health Disability: a European Assessment” (ESEMeD). Although both surveys are EU-designed, they pose methodological chal-

lenges when interpreting differences. There is no consensus in the literature about whether the prevalence of depression increases or decreases with age. This is partly because many studies excluded institutionalised people where the oldest-old predominate. Regional studies on dementia seem to reflect methodological differences rather than real differences.

### *Depression and psychological distress*

The prevalence of depression in old age has been widely studied across Europe. Defined in recent classificatory systems, major depression seems to be a relatively rare disease among older people. But when all depressive syndromes are considered, these symptoms appear common among older people. The prevalence of depressive syndromes ascertained by categorical diagnosis varies between 7.9 per cent and 26.9 per cent, the majority of these studies giving results between 9 per cent and 15 per cent (31).

In the ESEMeD, Italy remains the only country where the older group’s mental health scores are lower than those of the general population between 25–64 years old. The remaining countries, except Spain, have better mental health for older people. The interaction is very significant. For major depression, prevalence ranged from 6.4 per cent in Germany to 16.1 per cent in France. These results should be interpreted cautiously since the data presented are un-weighted (31).

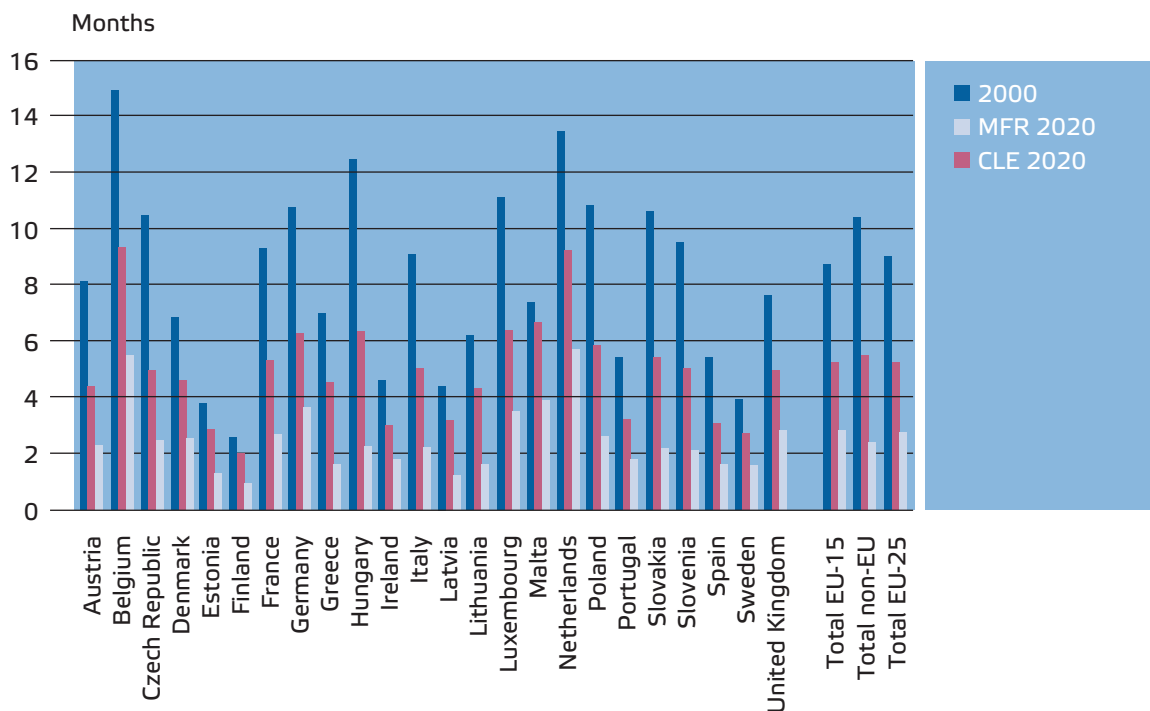
Studies based on anxiety disorders diagnosed according to current criteria are less common. Estimates of prevalence in more recent European studies vary from 2 to 10 per cent. The ESEMeD study found that lifetime prevalence of any anxiety disorders in people over 65 years ranged from 8.7 per cent in Germany to 15.9 per cent in France (31).

## Environment

Air pollution is an environmental factor that greatly affects health in Europe and is responsible for the largest burden of environment-related disease. Recent estimates indicate that 20 million Europeans suffer from respiratory problems every day. The majority of them are children, older people or people with asthmatic problems, people with cardiovascular diseases and the socioeconomically deprived (32).

Exposure to particle matter<sup>14</sup> (PM) in ambient air has been linked to various health outcomes involving the cardiovascular respiratory systems. The most severe effects in terms of overall health burden include a significant reduction in the life expectancy of the average population by a year or more, and this is linked to long-term exposure to PM (33). Larger estimates of the effects of particles on mortality are found in warmer cities.<sup>15</sup> It is generally accepted that

**Figure 15.** Loss in average statistical life expectancy attributable to the identified anthropogenic contributions to PM<sub>2.5</sub> (fine fraction of particle matter) (in months) in Europe for emissions in 2000, the CLE scenario for 2020 and the MFR scenario for 2020 (calculated for 1997 meteorological conditions). SOURCE: HEALTH RISKS OF PARTICULATE MATTER FROM LONG-RANGE TRANSBOUNDARY AIR POLLUTION. EUROPEAN CENTRE FOR ENVIRONMENT AND HEALTH, WHO EUROPE 2005 (33).



14. Particle matter is an air pollutant consisting of a mixture of solid and liquid particles suspended in the air. These particles differ in their physical properties such as size and chemical composition. PM can either be directly emitted into the air (primary PM) or formed secondarily in the atmosphere from gaseous precursors.

15. 0.8 per cent versus 0.3 per cent increase in mortality per 10- $\mu$ g/m<sup>3</sup> change in PM<sub>10</sub>.

air pollution causes larger effects in members of sensitive population sub-groups. There is evidence that the effects are greater among the elderly (33).

Figure 15 compares the national estimates of loss in life expectancy in the 25 EU countries for the year 2000 and predictions for 2020 under the current legislation (CLE), with the effects of PM reduced to the maximum feasible reduction (MFR). For most countries, the reduction expected under current legislation amounts to about half the difference between current effects and those persisting under the MFR scenario (33).

### Lifestyle factors

There are today different ways of measuring aspects of life-style such as smoking (smoking-related deaths, regular smokers by age and gender), alcohol (alcohol-related deaths, total alcohol consumption, heavy drinking among adults etc.), nutrition and malnutrition (body mass index, overweight people by age group, average number of calories, average amount of cereals, fruits and vegetables), physical activity (time spent, energy expenditure) and environment (housing, water, air, food etc.)

In total, the Healthy Life Expectancy (HALE) project showed that a healthy lifestyle lowers the risk of all-causes and cause-specific mortality. The project also found relationships between physical, psychological, cognitive and

social functioning and self-perceived health and lifestyle. In particular, a combination of healthy lifestyle factors decreased mortality risk. Considerable gains in terms of mortality and functioning could therefore be achieved if older people changed their lifestyle in a healthy way (34). The project also observed regional differences in nutrition (generally in favour of the south of Europe), self-perceived health (no clear pattern) and functioning (psychological functioning in favour of the north, physical functioning in favour of the south). The observed improvement in functional status was more pronounced in the south of Europe than in the north (34).

All these data are available, in some cases also by age group, from the ECHI list<sup>16</sup>, ES-TAT, EU-HIS<sup>17</sup> module on health status, ETS<sup>18</sup>, WHO-HFA<sup>19</sup> and OMC<sup>20</sup>.

### Physical activity and nutrition

According to Eurodiet, there are four different aspects of physical activity which benefit health: total amount regulates weight; short, intense activity induces fitness and influences well-being; moderate exercise reduces morbidity by 30–50 per cent; and weight-bearing activity limits bone loss and the chance of fracture. One hour's walking per day appears to be sufficient to slow down bone demineralisation (35).

16. The ECHI (European Community Health Indicators) project was carried out under the Health Monitoring Programme and the Community Public Health Programme 2003–2008. The result is a list of 'indicators' for the public health field arranged according to a conceptual view on health and health determinants.

17. European Health Interview & Health Examination Surveys (HIS/HES) Database, an outcome from a project of the health monitoring programme (1997–2002).

18. European Union Greenhouse Gas Emission Trading Scheme (EU ETS).

19. World Health Organization – Health for All database.

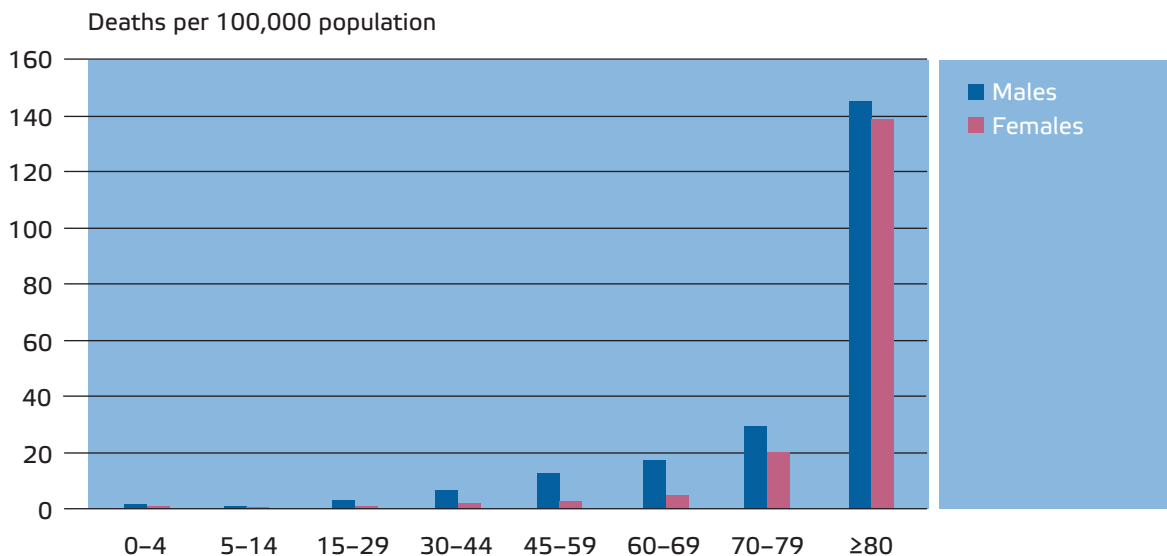
20. Review of Statistics for the OMC on Health and Long-Term Care, Discussion paper for the ISG meeting on 12 October 2005, European Commission, 2005.

Both women and men tend to become progressively less active as they get older. By late life, only a small minority are active enough to benefit their health and well-being. A Norwegian survey shows that 6 per cent of elderly men and women (65 years +) are physically active at the level recommended (30 minutes or more of at least moderate-intensity physical activity on most, preferably all, days of the week) (68). The prevalence rates are related to sociodemographic factors. The oldest-old (> 80 years), those who have an illness and use medication, and individuals with lower levels of education and income are the least active segments of the population. Interestingly, small gender differences in the level of activity were obtained

(36). Another study, from Sweden, shows that the level of vigorous activity decreases with increasing age, while moderate activity and walking increase with age (37).

A person with a BMI<sup>21</sup> between 25 and 30 is considered to be overweight and a person with a BMI of 30 or more is considered as obese. Overweight and obesity are regarded as the origin of serious public health problems because they increase the risk of premature death and disability; but this issue is still controversial. Obesity and overweight are associated with bad dietary habits and a lack of physical activity (38). BMI generally increases with age, peaking in the middle-aged and in older age, who are at greatest risk of health complications. The

**Figure 16.** Age- and gender-specific mortality rates for falls in the WHO European region, 2002.  
SOURCE: INJURIES AND VIOLENCE IN EUROPE: WHY THEY MATTER AND WHAT CAN BE DONE, WHO (40).



21. Body mass index (BMI) or Quetelet Index is a statistical measure of the weight of a person scaled according to height. BMI is defined as the individual’s body weight divided by the square of the height, and is almost always expressed in the unit kg/m<sup>2</sup>, which is therefore often left out. BMI value can be calculated as: BMI= Weight (kg)/height x height (mxm).

increase corresponds to higher levels of free sugars and saturated fats in the diet combined with reduced physical activity (39). Norwegians of 65–74 years old are less overweight or obese than any citizens of the same age group from other European countries. Thus, 33.7 per cent of Norwegian men of this age group are overweight, 4.9 per cent are obese. For women, the proportions are respectively 25.0 per cent and 8.8 per cent. Greece is the country where the proportion of overweight men and women of 65–74 is the highest (almost 60 per cent for men and more than 53 per cent for women) (38).

### Injury prevention

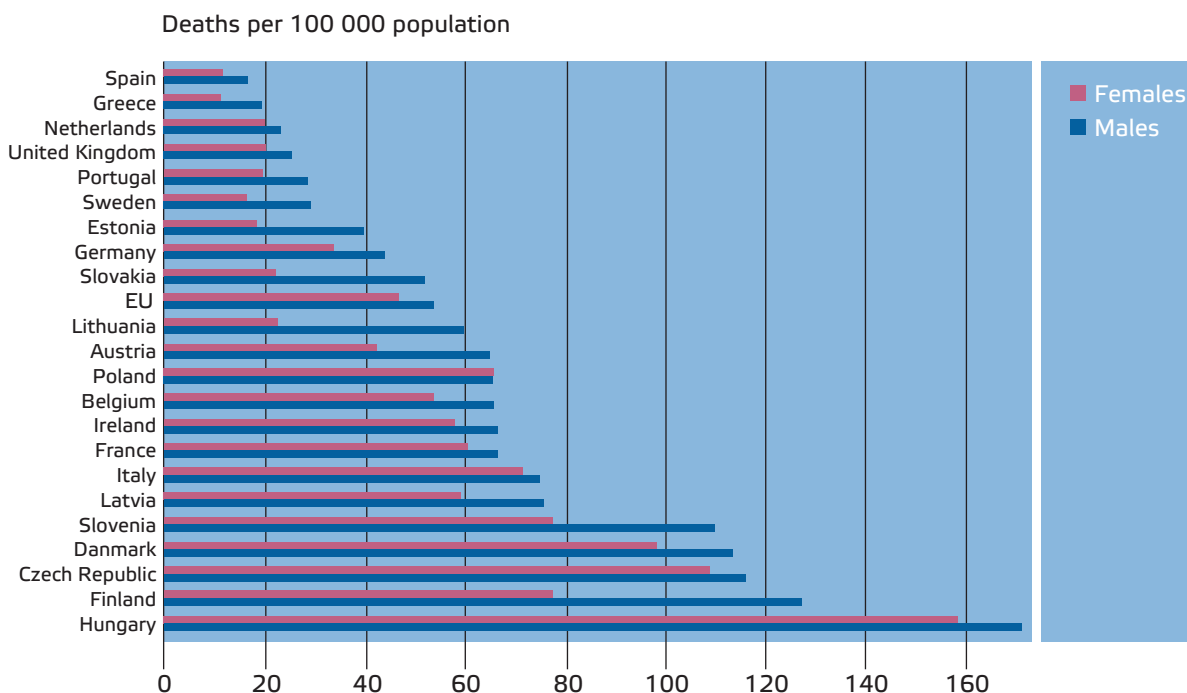
Each year about 235,000 citizens of the European Union lose their lives due to injuries.

Non-fatal injuries account for more than 6.7 million hospitalisations in EU25 (1,500 per 100,000 people), while 3.9 million years of life (YLL) are lost due to injuries. Finally, injuries are the second cause of years of potential life lost in both the EU15 and the EU25.

People aged 65 years of age and over are more likely to be injured because of various medical problems and impairments of vision, gait and balance; their injuries are more likely to be severe because of osteoporosis and frailty, and once injured they are more susceptible to fatal complications and longer ill-health because of their diminished recovery capacity. Falls are a particular problem, and older people who experience them, as well as other injuries, have longer hospital stays and greater mortality.

**Figure 17.** Age-adjusted mortality due to fall injuries/100,000 people among elderly (65+ years) by gender in the EU-25, excluding countries with <1,000,000 inhabitants.

SOURCE: FIRST INTERIM TECHNICAL IMPLEMENTATION REPORT 01/07/04 – 01/07/05 WITHIN EUROPEAN NETWORK FOR SAFETY AMONG ELDERLY (EUNESE)





Although people over 60 years of age make up 18.6 per cent of the population, they account for 28.2 per cent of injury deaths. The ageing population of Europe implies that the injury problem is likely to increase (40).

The injury mortality rate (age-standardised) in EU15 is about 39 deaths per 100,000 people, while in EU25 it is about 45 deaths per 100,000 people. Nevertheless, the European Union, either as EU15 or as EU25 seems to be one of the world’s safest regions.

The country with the lowest injury mortality is Spain. The three countries with the highest injury mortality from falls are Hungary (which may be partly explained by the high suicide rates), the Czech Republic and Finland.

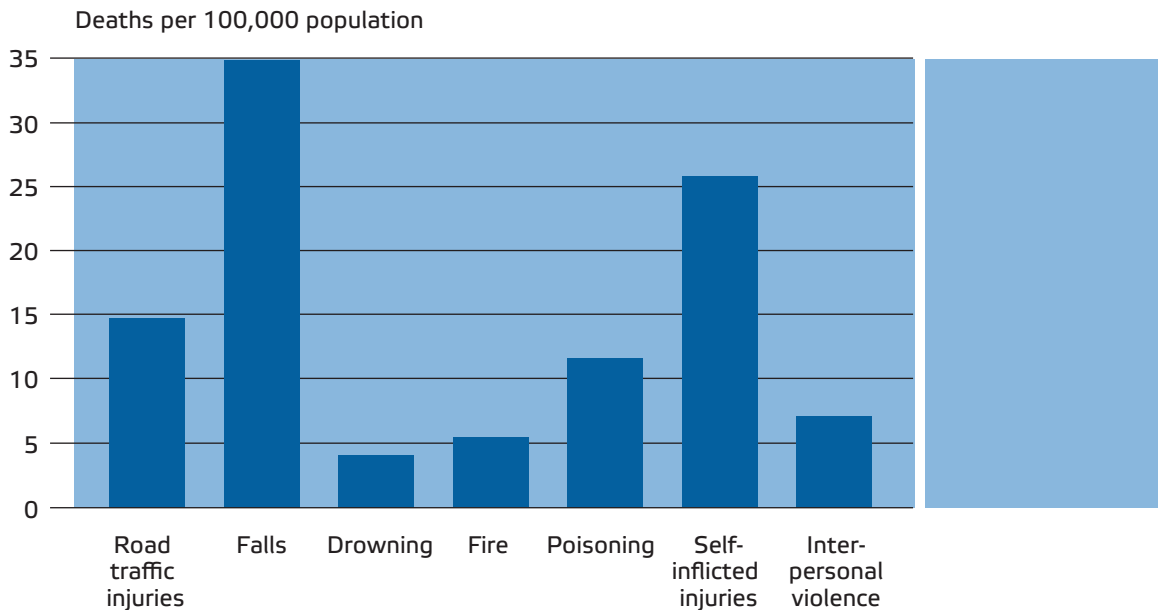
The three leading causes of injury death in older people in Europe are self-inflicted injuries, falls and road traffic injuries (RTI) (40).

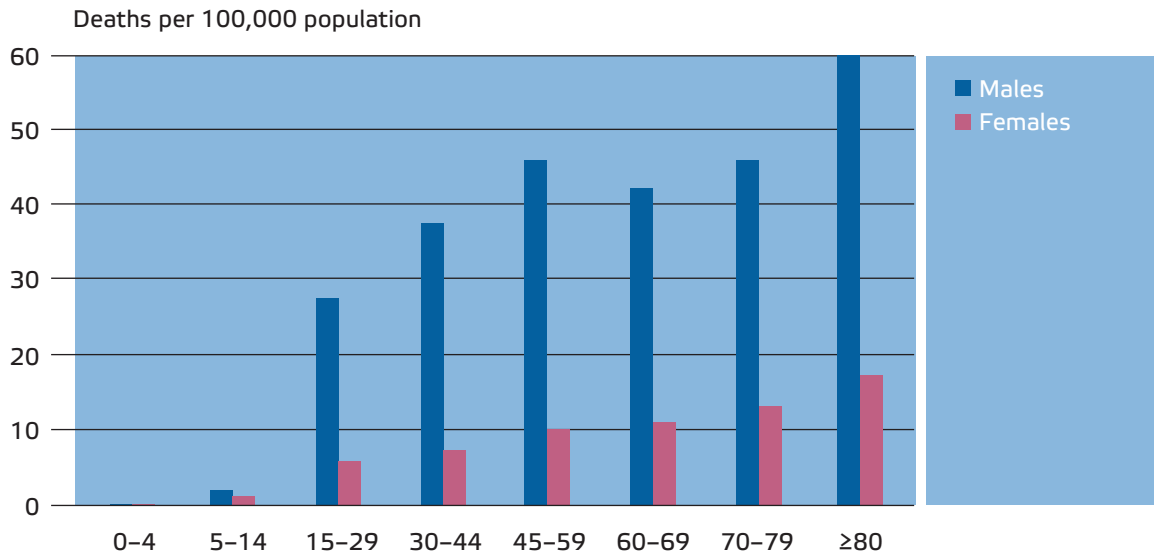
Regarding data on the European Union, other important databases are provided by different injury surveillance systems in some EU countries, and at EU level there is the European Home and Leisure Accidents Surveillance System (EHLASS), recently re-named the Injury Database (IDB).

**Suicide**

Suicide is still usually higher at ages over, rather than under, 65years (exceptions include men in Ireland, and women in Ireland and Luxembourg). Under the age of 65, the lowest suicidal mortality cluster of countries includes Greece, Spain, Ireland, Italy, Portugal and the United Kingdom and the highest includes Belgium, Luxembourg and Finland. For males and females under or over the age of 65, the overall EU trend is currently stable (41).

**Figure 18.** Standardised mortality rates for people over 65 by injury cause in the WHO European region, 2002. SOURCE: INJURIES AND VIOLENCE IN EUROPE: WHY THEY MATTER AND WHAT CAN BE DONE, WHO (40).



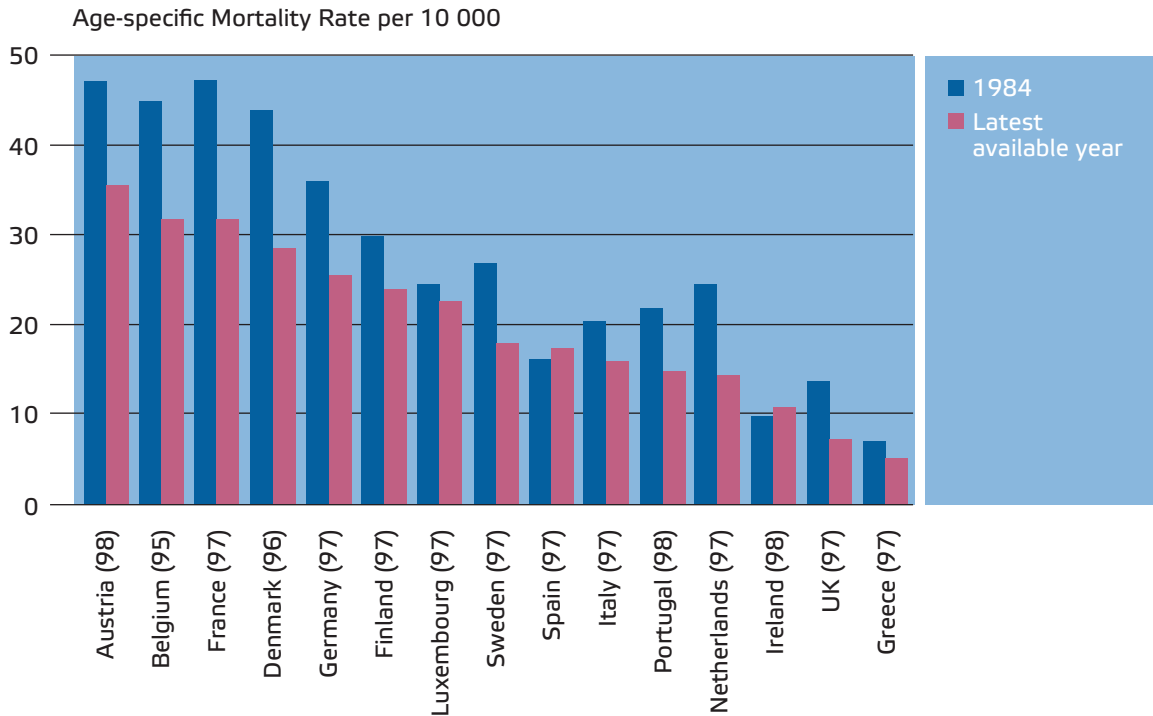


**Figure 19.** Age-and gender-specific mortality rates for suicide in the WHO European region, 2002. SOURCE: INJURIES AND VIOLENCE IN EUROPE: WHY THEY MATTER AND WHAT CAN BE DONE, WHO (40).

Risk factors for suicidal behaviour are numerous, and interact. Apart from age and gender, they can be divided into psychological, biological, social and environmental. Many people who commit suicide may have demonstrated features of the following psychological factors: major depression and mood disorders (12–15 per cent lifetime risk), schizophrenia (10 per cent lifetime risk), anxiety, conduct and personality disorders, impulsiveness and hopelessness (42, 43). Hopelessness can be associated with nine out of ten cases of suicide (44). Drugs and alcohol use also play an important part, a quarter of suicides involving alcohol abuse (45). A previous suicide attempt is also a good predictor: 10 per cent of those who attempt suicide will eventually do so fatally, although most people committing suicide have not

attempted it previously. Suicide may also be the consequence of severe and painful illness, especially when the person has become increasingly disabled. As many as one in four of those who attempt suicide have such an illness, particularly older people.

Rates of suicide are higher in rural areas than urban areas, presumably due to social isolation (46). Suicide rates increase during periods of economic recession and unemployment. The lethality and availability of the chosen suicide method influences the outcome. The success of methods such as hanging, ingestion of pesticides, barbiturate overdoses, jumping from a height and firearms varies according to the setting and the determination to succeed. Men tend to use more violent means than women (40).



**Figure 20.** Age-standardised suicide rates among 65-year-olds in the EU.  
 SOURCE: FINAL REPORT OF THE EUROPEAN REVIEW OF SUICIDE AND VIOLENCE EPIDEMIOLOGY (EUROSAVE) PROJECT (2002).

### Substance use/misuse

#### Tobacco

Each year, half a million people in the EU die from the effects of smoking, and half of these deaths occur in middle-aged or older people, ages between 35 and 69 – well below average life expectancy. Deaths from smoking will rise substantially over the coming decades as changes in population structure and the delayed impact of smoking on health come fully into effect. The highest percentage of smoking-related deaths is from cardiovascular disease. However, lung cancer is the disease most strongly linked to tobacco consumption, and death rates resulting from it are the best indicator of long-term exposure (17).

According to the Institute of European Food Studies (IEFS) survey carried out in 1997 about a third of European men in the EU15 and a quarter of women were smokers. More than a third of people aged 15 and over in Greece, Denmark, Italy and France smoked, while less than a quarter did so in Finland, Sweden and Portugal.

The European Commission’s own survey, carried out in 1999, shows that in specific age groups, the largest proportions of male smokers aged 55–64 were found in Spain (52 per cent), and in Denmark aged 65 and over (39 per cent). The smallest proportions of male smokers were found in Sweden in each age group from 15 to 64, and in Finland and then

**Figure 21.** Smokers, by age and sex, 1999.

SOURCE: HEALTH STATISTICS. KEY DATA ON HEALTH 2002 – DATA 1970–2001<sup>22</sup>.

Do you smoke?	EU-15	B	DK	D	EL	E	F	IBL	I	L	NL	A	P	FIH	S	UK
<b>Total</b>																
Males	40	47	32	41	58	47	43	38	35	39	37	47	44	40	19	37
Females	28	28	44	27	32	28	34	27	20	29	27	30	14	22	25	33
All	34	37	38	34	45	37	38	32	27	34	31	38	28	30	22	35
<b>15–24</b>																
Males	43	53	21	45	47	46	53	32	34	50	34	45	33	34	16	45
Females	40	38	49	45	43	45	53	27	23	39	29	39	16	29	26	41
All	41	46	35	45	45	46	53	30	29	45	32	42	25	31	21	43
<b>25–34</b>																
Males	46	55	33	49	64	49	56	34	38	43	39	50	66	49	20	35
Females	38	40	38	37	53	50	46	37	22	33	26	43	27	30	33	43
All	42	48	35	43	59	49	51	35	30	38	33	47	46	39	26	39
<b>35–44</b>																
Males	45	49	32	41	74	54	52	55	34	42	45	63	55	41	21	46
Females	38	40	55	34	42	38	49	41	33	25	34	50	24	28	34	37
All	41	44	43	37	58	46	50	48	33	34	39	57	39	34	27	41
<b>45–54</b>																
Males	46	48	40	45	83	65	41	38	45	36	36	51	55	62	23	34
Females	28	27	48	34	36	21	31	23	20	30	37	21	6	20	33	32
All	37	38	44	40	60	43	36	31	32	33	36	36	30	41	28	33
<b>55–64</b>																
Males	35	42	29	35	48	52	22	36	35	44	42	35	29	26	17	33
Females	20	23	41	17	16	8	28	27	14	35	23	18	11	12	24	29
All	27	32	35	26	31	29	25	31	24	38	32	26	20	19	21	31
<b>65+</b>																
Males	25	32	39	27	36	18	22	32	24	19	20	26	20	15	17	28
Females	10	8	34	8	7	5	5	13	10	7	11	11	:	12	8	19
All	16	17	36	15	20	11	12	21	15	14	15	17	8	13	12	23

22. Based on 1,000 individuals by country, distributed by age and sex, the Eurobarometer data are not considered to be exact and should be interpreted cautiously.

**Figure 22.** Total alcohol consumption (litres 100%/year) by gender and age.

SOURCE: ALCOHOL IN POST-WAR EUROPE. CONSUMPTION, DRINKING PATTERNS, CONSEQUENCES AND POLICY RESPONSES IN 15 EUROPEAN COUNTRIES (47).

Study countries	Age-groups	Men		Women		Ratio men/ women
		Total consumption	Index Total=100	Total consumption	Index Total=100	
Finland	18-29	8.2	117	2.9	121	2.8
	30-49	6.2	89	2.2	32	2.8
	50-64	6.8	97	2.4	100	2.8
	Total	7.0	100	2.4	100	2.9
France	18-29	6.1	81	1.8	82	3.4
	30-49	8.0	107	2.4	109	3.3
	50-64	8.6	115	2.4	109	3.6
	Total	7.5	100	2.2	100	3.4
Germany	18-29	4.3	81	3.2	133	1.3
	30-49	6.1	115	2.2	92	2.8
	50-64	5.2	98	2.1	88	2.5
	Total	5.3	100	2.4	100	2.2
Italy	18-29	6.4	90	2.5	71	2.6
	30-49	7.0	99	3.8	109	1.8
	50-64	7.7	108	3.8	109	2.0
	Total	7.1	100	3.5	100	2.0
Sweden	18-29	7.5	142	1.9	112	3.9
	30-49	4.7	89	1.6	94	2.9
	50-64	3.8	72	1.6	94	2.4
	Total	5.3	100	1.7	100	3.1
UK	18-29	16.0	122	7.9	155	2.0
	30-49	11.1	85	5.0	98	2.2
	50-64	13.2	101	3.1	61	4.3
	Total	13.1	100	5.1	100	2.6

in Sweden aged 65 and over. The largest proportions of female smokers were in Denmark aged 35 and over. The smallest proportions of female smokers were found in Spain, aged 55 and over along with France, aged 65 and over (17).

There is great variety among the age groups regarding smoking. In most countries the highest prevalence is among the age groups 45–64 years, though in some, prevalence is higher among the 15–24-year-olds, due to the development of the smoking epidemic. The prevalence regarding smoking is also lower at higher ages due to the fact that smokers die earlier than non-smokers.

### *Alcohol*

In terms of gender-specific total consumption<sup>23</sup>, in Finland, Sweden and the UK the youngest group reports the highest consumption both for men and women, while in France, Germany and Italy, consumption peaks in the middle or oldest age group (except for German females). The table also shows that, in all age groups, men consume 2–3 times more alcohol than women do. In the UK, it appears that gender differences are most pronounced among the oldest group, whereas the opposite seems to be the case for Sweden. In Finland and France, the ratios are very similar between all three age groups. In Germany, the youngest group stands out with a lower gender ratio (47).

The 1994 General Household Survey found that 17 per cent of men and 7 per cent of women aged 65 and over exceeded the ‘sensible limits’<sup>24</sup> of regular consumption i.e. around 1 in 6 men and 1 in 14 women. These are relatively

high proportions of the regular drinker, given that in this age group 28 per cent of men and 55 per cent of women consume less than one drink per week or are non-drinkers (48).

### **Use of medication**

Many studies show that older people are the largest per capita users of medications associated with both physical and mental ability. Pharmaceutical expenditure accounts for a large proportion of health care spending; it is rising faster than expenditure on any other area of health care (49).

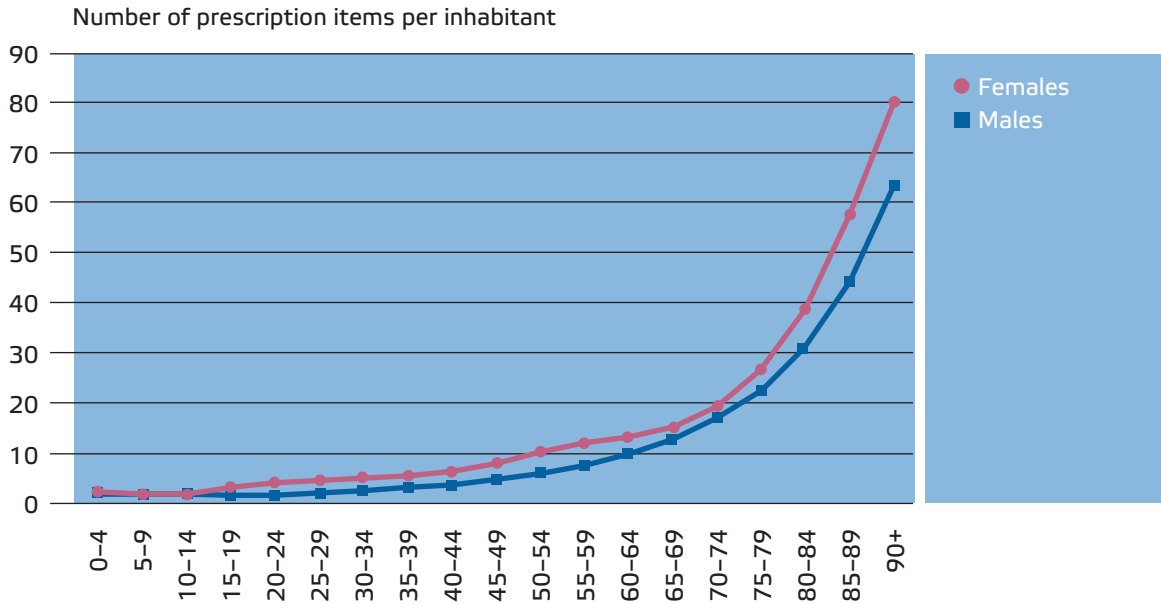
There are no reliable, comparable European-level statistics on the relationship between age and use of medicines. Statistics from the Swedish Pharmaceutical Association show the distribution of prescribed pharmaceutical expenditure by age group. Clearly, people use more prescribed medication at higher ages, a circumstance that is probably similar in several countries.

Potentially inappropriate medication use among older people is a common problem, though European studies on the subject are rare. Fiavola D et. al. (50) conducted a retrospective cross-sectional study of 2,707 elderly patients receiving home care in eight European countries. The study compared all available explicit criteria for inappropriate medication use to generate the most comprehensive evaluation of this issue in Europe, where specific criteria are not available.

The prevalence of inappropriate medication use varied substantially among countries. In the Czech Republic 41 per cent of home-care elderly patients were prescribed at least one

23. Total consumption is calculated as the product of the frequency of drinking occasions and the volume per occasion summed across all alcoholic beverages.

24. Sensible limits of alcohol consumption should not exceed 3–4 units a day and 21 units in one week for men and 2–3 units a day and 14 units a week for women. A unit equals 10 ml of pure alcohol: the amount the body can safely get rid of in an hour.



**Figure 23.** Relationship between age and use of medicines reflected in number of prescription items per inhabitant – Sweden 2000.

SOURCE: EURO-MED-STAT – LIBRARY OF EUROPEAN UNION PHARMACEUTICAL INDICATORS: EXPENDITURE AND UTILISATION INDICATORS. FINAL VERSION, MARCH 2004 (49).

inappropriate medication compared with only 16 per cent in Western Europe. Among the Western European countries, Finland and Italy had a higher prevalence of potentially inappropriate medication use. The differences between countries probably reflect country-specific drug policies, care provision differences, inequalities in socioeconomic background, differences in overall health conditions, and specific regulatory measures.

### FORTHCOMING EUROPEAN STATISTICS

With an ageing Europe it is important to improve and strengthen the knowledge about health promotion concerning older people. Comparable data plays an important role regarding increased knowledge of healthy age-

ing and will hopefully lead in the long run to even more effective policy-making. This is one reason why the European Commission has developed a statistical technique, Response Conversion (RC), with strategies and harmonisation methodologies, to improve comparability. Another solution to the problem of the lack of comparable data may be the consistent effort taken by the European Union and the Member States to further develop appropriate health monitoring. Commonly agreed methods, surveys and monitoring programmes with indicators should help Member States reach common socioeconomic and public health goals.

The European Community Health Indicators (ECHI) project was carried out in the framework of the Health Monitoring Programme and the Community Public Health Programme between 2003 and 2008. The result is a list of ‘indica-

tors' of public health covering demographic and socioeconomic factors, health status, determinants of health and health interventions.

The "Open Method of Coordination" (OMC) was introduced by the European Council in Lisbon in March 2000. It was designed to help Member States progress jointly in the reforms needed to reach the Lisbon goals. One element in the method is to establish quantitative and qualitative indicators and benchmarks tailored to the needs of Member States and sectors involved, as a means of comparing best practices. Eighteen indicators have been decided on so far. They follow developments regarding e.g. pensions, health and elderly care. A second cycle (2004–2006) is in progress.

The European Community Household Panel (ECHP) was in 2005 replaced with a new instrument, Statistics on Income and Living Conditions (EU-SILC). This continuous survey covers statistics on income and living conditions for different types of household in European countries. With the EU-SILC, the European countries intend to address poverty, social exclusion and inequality in health, using commonly agreed indicators. One important indicator to be studied, by region etc<sup>25</sup>, with the EU-SILC is the percentage of households risking poverty due to care costs. For older people these circumstances naturally remain of great importance, influencing health and the quality of health. However, the specific circumstances of people aged 50+ are not yet being studied in these fields, although this will probably be possible in a future EU-SILC (for more information on the European data sources, see Appendix 6).

The EUGLOREH Project started in 2005 and will be completed in 2008. Its members are 25 EU Member States plus Iceland and Norway,

as well as several organisations and agencies. The project is financially supported by the DG "Public Health and Consumer Protection" of the European Commission. The main task is the preparation and publication of a "Global Report on the Health Status in the European Union" that will cover at least the past ten years. It intends to provide a coherent picture of the health of the European population and of related time-trends and determinants. It should also be a valuable tool for decision-makers and other stakeholders when monitoring the effects of health policies.

Another important contribution to more comprehensive health monitoring is the Healthy Ageing Sub-Network of the WHO European Healthy Cities Network. The Network's Health profiles are important tools for health development planning, monitoring of progress and accountability for community health. They should be accessible and readable, and should provide quantitative and qualitative information on older people's health and living circumstances. This initial guidance for Sub-Network cities consists of a template proposing 75 indicators grouped into three sections:

- 1) population profile
- 2) health and social care systems
- 3) social picture

Along with joint efforts to create appropriate structures for health monitoring, the most important issue for the European Union and its Member States is the emphasis on health promotion for the European region's ageing population so that the region can continue to flourish, withstand global competition and be a good society for all.

25. Review of statistics for the OMC on Health and Long-Term Care, Discussion paper for the ISG meeting on 12 October 2005, European Commission, 2005.



## COUNTRY CODES

### EU25

AT	Austria
B or BE	Belgium
CZ	Czech Republic
CY	Cyprus
DK	Denmark
EE	Estonia
FI or FIN	Finland
F or FR	France
D or DE	Germany
EL	Greece
HU	Hungary
IE or IRE	Ireland
IS	Iceland
I or IT	Italy
LV	Latvia
LT	Lithuania
LU or L	Luxembourg
MT	Malta
NL	Netherlands
NO	Norway
PL	Poland
PT	Portugal
SK	Slovakia
SI	Slovenia
ES	Spain
SE	Sweden
UK or GB	United Kingdom/Great Britain

### CC3

BG	Bulgaria
RO	Romania
TR	Turkey

**EU15** 15 EU Member States (pre May 2004)

**EU25** EU Member States (post May 2004)

**EU10** New Member States that joined the EU in May 2004

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# Major topics



## MAJOR TOPICS OF THE HEALTHY AGEING PROJECT

Chapters 3 to 12 of the Report are each dedicated to one of the ten major topics that have been the focus of the project. The ten chosen topics interact with each other and with the cross-cutting themes: socioeconomic determinants, gender, minorities and inequalities in health.

Chapter 3. Retirement and pre-retirement

Chapter 4. Social capital

Chapter 5. Mental health

Chapter 6. Environment

Chapter 7. Nutrition

Chapter 8. Physical activity

Chapter 9. Injury prevention

Chapter 10. Substance use / misuse (tobacco and alcohol)

Chapter 11. Use of medication and associated problems

Chapter 12. Preventive health services

CHAPTER 3

# Retirement and pre-retirement



*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Increase the participation of older workers and the quality of their working lives using new management concepts. Keep a balance between personal resources and work demands and do not tolerate age discrimination. Prevent illness in the workplace, promote healthy lifestyles and a supportive and stress-free transition from work to retirement.*

# Retirement and pre-retirement

► For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

The actual relationship between work and ageing is strongly affected by socioeconomic developments and policies. The demographic trends in Europe are posing new challenges for ageing workers, for enterprises, for pension schemes and for the social security system as a whole (1). By 2030 there will have been a dramatic change in the structure of the population. Instead of those aged between 35 and 45 years being in the majority as at present, in 25 years time the majority will be aged between 60 and 70 years. They will be either retired or preparing for retirement.

## Increased participation of older workers needed

Many European countries are debating how to finance their statutory pension systems. This is because the early-retirement systems of the past twenty years were intended to create jobs for younger workers. Given the ageing of the working-age population and the future shrinking thereof, the current policy issue is generally formulated as a need to increase the participation and employment rates of older workers (2). This has received considerable attention in recent national and EU policy documents (3).



Proposed financial changes in the transfer system can work only in the long term. This approach needs to be supplemented with additional measures. The general aim needs to be the extension of work ability and the maintenance of good health up to a higher age. This means that both employers and employees will have to take responsibility for the health of the ageing workforce. In most European countries workplace health promotion has already provided

*As work ability is a balance between work and personal resources, people search for such a balance through their entire working life. The balance can differ in different phases of life.*

good examples. One is a recent collection of measures presented by the European Network for Workplace Health Promotion (ENWHP) for promoting the health of ageing employees at the workplace (4). These measures and interventions are also being increasingly evaluated (5), though at the time of writing reviews or meta-analyses which will underpin the evidence statements in this report are not yet available.

### **Work ability – a holistic concept**

Finland is a leading country in the area of work ability (6). A severe labour shortage has led to a new ‘work ability’ concept, a holistic concept that the Finnish government has been promoting since 1998 to keep older people in the workplace and retain their knowledge and experience. The concept is based on the balance between a person’s resources and the demands of their work. A person’s resources consist of health and ability, education and competence, and values and attitudes. Work covers the work environment and the community, as well as the actual contents, requirements, and organisation of work. Management is also associated with work.

Work ability has been described as a concept with several levels. The basic level is health and physical, psychological and social functional capacity. The second level consists of professional knowledge and skills. The third level contains values, attitudes and motivation. The fourth level represents work and its related factors.

As work ability is a balance between work and personal resources, people search for such a balance through their entire working life. The balance can differ in different phases of life.

Finnish research shows that in 60 per cent of people older than 45 years work ability over the 11 years studied remained good or excellent. It decreased for 30 per cent and increased for 10 per cent.

An important element in practice is age management. Age management means managing both the staff’s work ability and the success of the organisation or enterprise: it is the everyday management and organisation of work from the viewpoint of the employees’ life courses and resources (5).

### **General recommendations**

Using data from a European study of work environment conditions in 1995 and 2000, Ilmarinen (5) has formulated overall recommendations concerning workplaces, personal resources and society. These recommendations can be seen as an agenda for the kind of European-level intervention and policy measure we need. Along with these recommendations he argues for holistic development through a new type of co-operation between the parties involved.

Ilmarinen’s recommendations for workplaces concern the work environment, demands, tasks, supervision, hours and age discrimination. Physical exposure (to heat, cold, noise etc.) must still be decreased for ageing employees, as should physical work demands. The psychological work environment should be developed to achieve an inspiring and chal-

lenging workplace in which new things can be learned; the scope for employees to plan their own work should be improved; good individual supervision and age management have to be developed; individual and flexible working hours are needed; and there has to be zero tolerance in age discrimination.

Recommendations concerning ageing workers' personal resources are broad. There is a need to step up health promotion and encourage people to take more responsibility for their lifestyles; the prevention of illness in occupational health needs more investment; the effect of illness on work should be reduced; remaining work ability should be better used; the risk of occupational disease should be significantly reduced or prevented; functional capacity should be supported and developed multidimensionally; ageing employees should be offered more life-long learning opportunities; the basic values of ageing employees should be taken into account in working-life management; their work ability and well-being should be supported by measures which are monitored; and co-operation between parties should be improved.

The social recommendations are: altering attitudes towards ageing to reflect reality; stopping management's poor treatment of ageing people; reducing the costs of ageing in working life; developing new methods to shorten working hours and reduce workload; better preparation for retirement in the latter stages of working life; improvement of service systems for ageing employees; securing the right to life-long learning; and developing working life in an age-positive direction as a common goal for people of all ages.

*Ageing involves many physical and mental changes and there is huge variation between individuals.*

### Methods to prolong working life

Fairly 'traditional' work-related and career-development measures can be taken. During the next few years the results of experience and practice will be accumulated. These include task adjustment and change, job rotation, permanent education, adjustment of working hours, demotion policy and more comprehensive ageing workforce policies (1). However development in, and good examples from, the new area of healthy lifestyle (and work) are needed.

In occupational health and workplace health promotion, older workers and the relationship between work and ageing are receiving increasing attention. Both positive and negative factors characterise differences between older and younger workers. Some differences are well documented but many are based on stereotypes. The interaction between age, work and health is complex and not fully understood (7).

Ageing involves many physical and mental changes and there is huge variation between individuals. Some variance is genetically determined, but much can be attributed to differences in social factors, for example lifestyles. Physical strength declines with age and ageing can also affect work-related mental ability, for example information processing. However, people develop coping strategies to compensate for age-related changes and the relationship between these changes and job demands is not clear.

The most important condition for older employees to work longer is good health. Examples here are: promotion of exercise and an active lifestyle, healthy food, limited use of alcohol, a non-smoking policy and measures to reduce work stress for older employees (4).

The need for a healthy lifestyle and a preventive approach is also important in view of the relevant social and medical developments, such as obesity, that will affect the workplace.

### Preparing for retirement

Very little research has focused on preparing for retirement, the transition from work to retirement. This concerns the individual and his/her social environment and the process of adjustment to retirement. Good-practice examples of pre-retirement interventions have been demonstrated. On general principles it can be argued that these anticipatory social interventions have positive effects, and an evaluation study in England concludes that they are likely to contribute to a sense of empowerment (8). However, current literature reports no evidence on what policy and practice can be developed (9).

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CHAPTER 4

# Social capital

*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Encourage the participation of older people in the community.  
Increase educational and social activity group interventions targeting older people to prevent loneliness and isolation.  
Provide opportunities for voluntary work by older volunteers.*

# Social capital

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

The concept of social capital has been debated in the literature as a useful construct to be applied to the study of health and health-related behaviour. Social capital is described in terms of characteristics such as local democracy, citizenship, civic engagement, social cohesion, social relationships, community networks, trust of others in the community and social support (1, 2). Social capital in the Putnam tradition falls within the boundaries of political science and economics but it has recently been associated with positive health outcomes and with health promotion (3). Investment in one aspect of social capital can increase the levels in other aspects (1). For example, investment in education and training might have the potential to improve communication skills, enhance self-confidence, improve job prospects and give people access to better housing, better nutrition and better health.

Policymakers should take note of those initiatives that successfully generate social capital when they plan interventions to tackle problems such as deteriorating standards of education in schools (1).

In relation to ageing, the influences of socioeconomic status, social network and competence on subjective well-being in later life have



been discussed by Pinqart and Sorensen (4) and the main findings of their analysis are given below:

- higher socioeconomic status, better social integration and higher competence are associated with higher subjective well-being,
- income is more strongly correlated with subjective well-being than is education,
- the *quality* of social contacts is more strongly associated with subjective well-being than the *quantity* of social contacts,
- having contact with friends is more strongly associated with subjective well-being than having contact with adult children,
- associations between life satisfaction and quality of contact are stronger for contact with adult children than with quality of friendship.



- for older men, the relationship between socio-economic status and subjective well-being is stronger than for older women,
- social network has a higher influence on the subjective well-being of females,
- for older groups, the association between social network and subjective well-being is greater; the same is true for happiness and competence,
- socioeconomic status is more important for the subjective well-being of the young-old than for the old-old.

A correlation exists between low levels of social capital and mortality that is mediated by income inequality. The latter is thought to damage social cohesion and integration; it also leads to lack of social support within the community, characterised by social isolation, which in turn contributes to premature mortality (5).

## EFFECTIVENESS OF INTERVENTIONS

One meta-analysis, one systematic review and a literature review are reported in this chapter on certain aspects of social capital relevant to older people. The aspects include volunteer work, social support and social isolation and loneliness.

### Volunteer work

The meta-analysis by Wheeler et al. (6) investigated and assessed the benefits of volunteer work for older volunteers as well as for the people they serve. Older people are referred to as ‘seniors’ or ‘elders’ in the paper. Thirty-seven studies were identified, using a wide range of databases that were conducted in the US and Canada. Most volunteers were white, female,

unmarried, with a mean age of 71. The majority of studies described volunteer programmes which used face-to-face help or direct help to the client.

Twenty-nine studies reported outcomes for the older volunteers. Most older volunteers had scored higher on quality of life measures than those in the control group. Those engaged in a direct helping role derived greater benefit than those engaged in more indirect helping roles. There was also a greater effect from counselling-type volunteering than from other helping roles such as mediation, advocacy or informal referral. Nine of every ten clients who received counselling from older volunteers reported experiencing more improvement on outcome measures such as diminished depression than those who did not receive services from an older volunteer.

The authors conclude that the evidence suggests that interventions providing opportunities for older people to do voluntary work improve the quality of life of those who volunteer. Such interventions also reduce depression in older people who receive services including visits and peer counselling from an older volunteer. Face-to-face volunteer approaches had greater effect than indirect helping approaches.

### Social support

Greenwood et al. (7) reviewed observational studies with over 100 participants from the general population to examine the role of social support and life stress on coronary heart-disease mortality. Older male and female participants up to the age of 97 were included. Methods of assessing life stress and social support in the included studies varied. Studies had assessed life stress and social support by means of objective measures (e.g. life

events scale) or subjective measures (e.g. measures involving the individual's emotive response to stress).

This review found that both life stress and lack of social support had an influence on coronary heart diseases. However, lack of social support had a greater influence than life stress and both had a stronger influence on coronary heart disease mortality than on initial incidence of clinical disease. The authors state that the lack of social support increases coronary heart disease mortality by up to four times when compared with that of normal people. The review also highlights the inconsistency in measures used to define the psychological factors in the studies included.

### Interventions for preventing social isolation and loneliness

A systematic review by Cattani et al. (8) investigated the effectiveness of health-promotion interventions to prevent social isolation and loneliness among older people. The authors point out that international policy and national health strategies are increasingly recognising the importance of tackling social isolation and loneliness to improve older people's well-being and quality of life. Quantitative outcome studies published between 1970 and 2002 in any language were included. Most were conducted in the USA and Canada. Thirty studies were identified using a wide range of databases, and 17 interventions included in these studies were categorised as "group", ten as "one-to-one", three as "service provision" and one as "community development" interventions.

*This review found that both life stress and lack of social support had an influence on coronary heart diseases.*

The findings indicate that nine of the ten effective interventions were group activities with an educational or support input. Group activities included bereavement support groups for recently widowed older people, peer-led as well as professionally-led counselling/discussion groups for adult daughters who were primary carers and other types of activity involving a therapeutic/educational input such as discussion groups for older people with mental health problems. Six of the eight ineffective interventions provided one-to-one social support, advice and information, or health-needs assessment.

### Summary of the findings

There is evidence to suggest that:

- voluntary work undertaken by older volunteers increases mental well-being among those who volunteer and improves the mental health of older people who receive the services (6), and
- educational and social activity group interventions that target specific groups can prevent social isolation and loneliness among older people (8).

There is inconclusive evidence for:

- the effectiveness of social support in reducing mortality from heart disease, due to the inconsistency in the measures used in studies to define psychological factors (7).

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CHAPTER 5

# Mental health

*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Address the wider determinants, such as social relationships, poverty, discrimination, that influence mental health and well-being in later life. Raise awareness of mental issues relevant to older people, such as depression and dementia. Increase the provision of psychotherapeutic and psychosocial interventions for older people.*

# Mental health

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

**M**ental health is a resource that enables us to grow and learn and experience life as enjoyable and fulfilling. The World Health Organization (WHO) defines mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”. Having enough money, things to do, places to go, a comfortable place to live and people to turn to in times of trouble, all play a role in promoting and strengthening mental health.

The stigma associated with mental health problems is very powerful and must be taken into account when discussing mental health in relation to later life. We must also keep in mind the whole spectrum of mental health services, from promotion and prevention, through to detection, diagnosis, treatment, care and support to recovery or end-of-life care.

Ageing is a normal, gradual process that is marked by change. Interviews with older people show that most of them had positive impressions of ageing (1). Subjective health (how older people rate their own health) declined only slightly in old age (2). However, older people have negative views of some ageing-related changes such as declining health, death



of loved ones, increasing depression and forgetfulness (1). Interviewees used a range of coping strategies to stay active and engaged and to maintain high levels of functioning in later life.

There is much we can do to ensure that we stay mentally healthy and fit as we grow older. Studies of older people’s views and experience (3) point to the importance of action on the following themes:

1. *Discrimination.* Age discrimination is the most common type of prejudice experienced by people aged 55 and over, and older people say that it has a negative effect on their mental health. Eliminating it would help to promote good mental health and well-being in later life.
2. *Participation in meaningful activity* is important for good mental health and well-being in later life. Older people say they want to make contributions to society, but they often face barriers to participation in public and private life.

*The experiences of people growing older with severe and enduring mental illnesses such as schizophrenia are often neglected, and evidence shows that they tend to have poor access to social support and services.*

3. *Strong personal relationships*, for example with friends, family and pets, may provide crucial social support and also help to preserve a sense of one's social and familial role (1). Social isolation and loneliness are major risk factors for poor mental health.
4. *Physical health*. Older people consistently identify physical health as extremely important and inextricably linked to their mood and mental well-being. They emphasize the importance of physical activity and a good diet. Other evidence shows the mental health benefits of physical activity (4).
5. *Poverty* is a clear risk factor for poor mental health. Many older people have inadequate incomes, live in poor housing and are generally excluded from society.

More work is needed to strengthen the evidence base for mental health promotion in later life (4) and to implement current knowledge and findings. More work is also needed to change people's perceptions. Mental health problems are not an inevitable part of the ageing process, yet they are often treated that way by professionals and by older people themselves. Older people may not draw attention to symptoms of illness that they consider to be part of normal ageing (1).

The mental health problems that may affect people in later life include depression, anxiety, dementia, schizophrenia, bipolar disorder and

alcohol and substance misuse disorders. Depression is the most common, affecting up to one in seven people aged 65 and over. But dementia is perhaps the most feared and the most researched. While the causes of

depression are fairly well known, the causes of dementia and ways of preventing it are less understood (5). See also page 43.

### **Those affected often neglected**

The experiences of people growing older with severe and enduring mental illnesses such as schizophrenia are often neglected, and evidence shows that they tend to have poor access to social support and services (5). Older people with alcohol and substance misuse disorders are also often neglected. More work is needed to generate a balanced understanding of the full range of mental health conditions that may affect people in later life.

More attention needs to be paid to the views and experiences of older people with mental-health problems, and carers. In 1989 Keller et al. identified the "lived experience" of people who are growing old as a major gap in the literature on ageing. Today, much of this gap has been filled but another gap remains – the lived experience of older people with mental health problems and their carers (5), and of minority groups within this population. Work is also needed to ensure that the priority given to younger adults' mental health needs is extended to include older adults; only then will we be able to ensure that all older people are able to experience good mental health and well-being in later life.

## EFFECTIVENESS OF INTERVENTIONS

One meta-analysis, one systematic review with meta-analysis and two systematic reviews are reported in this chapter.

### Psychotherapeutic and psychosocial interventions

A systematic review by Pinquart and Sorensen (6) investigated the effectiveness of psychotherapeutic and other psychosocial interventions targeting older adults with mental problems. This review identified 122 primary studies comparing an intervention group with a control group. The interventions evaluated were: cognitive behavioural therapy, reminiscence, psychodynamic approaches, relaxation, supportive interventions, control enhancement, psycho-educational treatments, activity treatments and training in cognitive skills. Outcomes included depression, subjective well-being, life satisfaction, morale and self-esteem. The authors carried out meta-analyses and found that the psychosocial and psychotherapeutic interventions in older adults significantly improved self-reported psychological well-being. There were 3,718 participants across all studies.

The results of the analyses showed that relaxation had greater impact than supportive treatments, psycho-educational interventions, activity promotion and cognitive training. Control-enhancing interventions and cognitive behaviour therapy had an above-average impact on self-reported measures of psychological well-being compared with reminiscence, miscellaneous

therapies, supportive interventions, psycho-educational interventions, activity promotion and cognitive training.

Psychosocial and psychotherapeutic interventions in older people had significantly improved self-reported well-being across the studies. Furthermore, individual interventions were associated with significantly greater improvements in self-reported psychological well-being compared with group interventions. Interventions with nursing-home residents were associated with significantly greater improvement in self-reported psychological well-being compared with interventions in the community.

Therapists with advanced degrees and either professional experience or special geriatric experience, were more effective than those with advanced degrees but no special geriatric training, or those with no advanced degree.

### Prevention or reduction of depression

Depression is often considered to be a major health issue for all population groups. However there is a lack of focus on the prevention, reduction and non-drug treatment of depression in the literature, particularly for older people.

In a systematic review and meta-analysis, Lawlor and Hopker (7) investigated the effectiveness of exercise as an intervention in the management of depression for people diagnosed with depression aged 18 and above, with

*Work is also needed to ensure that the priority given to younger adults' mental health needs is extended to include older adults; only then will we be able to ensure that all older people are able to experience good mental health and well-being in later life.*



no upper age limit. Studies using any method of depression diagnosis and/or covering all levels of depression severity were eligible for inclusion. Ten of the 14 studies included used the Beck depression inventory.

Three studies included older people aged 60 and above. Two of the three were carried out in the USA, the other in Canada. The interventions lasted between six and 12 weeks. The three types of intervention covered were non-aerobic resistance training three times a week, walking near home with the experimenter three times a week for 20–40 minutes and supervised running twice a week.

Two of the three studies found no statistically significant difference in the effectiveness of the exercise groups in comparison with control groups and standard treatments for depression. One study found a statistically significant effect between the exercise group (mean age 72.5; walking near home) and the control group. Lawlor and Hopker (7) reported that it was not possible to determine from the available evidence the effectiveness of exercise in the management of depression for all age groups.

### Interventions for caregivers

In a meta-analysis, Brodaty et al. (8) reviewed 30 studies (34 interventions) excluding respite care, targeting caregivers of people with dementia. Interventions included individual and family counselling, support groups, education and skills training. The primary outcome measures included psychological morbidity and

burden. Other outcome measures included caregivers' coping skills and social support. Caregivers were predominantly spouses of people with dementia, female and aged 55 and above. They found modest but significant benefits to caregivers, who reported reduction in psychological distress, improvements in their own coping skills and knowledge and improvements in their relationship with the person they were caring for.

Interventions were more likely to succeed if they involved people with dementia and their families and were more intensive and modified to caregivers' needs such as teaching the caregiver skills. Successful interventions also included practical support, structured individual counselling and consistent, long-term, professional support. Brodaty et al. (8) suggest that caregiver interventions can delay admission to a nursing home.

However, short-term educational programmes, single interviews, support groups alone and brief interventions that were not supplemented with long-term contact were not effective.

Peacock and Forbes (9) conducted a systematic review to investigate the effectiveness of interventions designed to enhance the well-being of caregivers of older people with dementia living in the community. They reviewed 36 studies categorised according to type of intervention: education, case management, psychotherapy and computer networking. The most commonly measured outcome was institutionalisation of the care recipient, followed by death of the care recipient, perceived behaviour

*Successful interventions also included practical support, structured individual counselling and consistent, long-term, professional support.*

disturbances in the care recipient, caregiver depression, caregiver strain, caregiver stress and use of formal services.

Positive findings indicated that:

- case management increased the likelihood of using formal services,
- psychotherapy for caregivers delayed institutionalisation of the care recipient,
- the use of computer networking improved decision-making confidence,
- education interventions that included training in coping skills, in addition to information on dementia, were more effective than those that offered education alone.

Peacock and Forbes conclude that the use of computers for networking would particularly benefit caregivers living in rural communities. They suggest that when reliable resources are available to assist with the strain of caregiving, case managers would be invaluable in referring caregivers to these resources.

### Summary of findings

There is evidence to suggest that:

- psychotherapeutic and psychosocial interventions targeting older people significantly improve self-reported psychological well-being, specially when delivered to nursing-home residents (6),
- interventions including individual and family counselling, support groups, education and skills training can be effective in reducing psychological distress and improving caregivers' own coping skills and relationship with the person they are caring for (8), and

- case management for caregivers increases the likelihood of using formal services such as computer networking (9).

There is inconclusive evidence for:

- the effectiveness of exercise in the management of depression for all age groups (7).

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CHAPTER 6

# Environment

*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Improve access to safe and stimulating indoor and outdoor environments for older people. Access to technology should be considered as well as the impact of climate change, excessive heat/cold and storms.*

# Environment

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

**B**oth indoor and outdoor environments affect the ability of an older person to stay active, participate in and contribute to the community. Environmental improvements have a direct effect on the quality of life of an older person and also on his or her caregiver. However, more research needs to be carried out in this area.

## Outdoor mobility

Older people travel around in their local area less than younger people, because they have no need to travel in connection with work, and they spend more time at home or doing outdoor activities. Many older people would like to be more mobile and active (1).

The naturally reduced mobility of older people together with the lack of private or public transport “clearly demonstrate that the decline in outdoor mobility in late life is not an entirely voluntary retreat from the world. Instead, it means that elderly people are more or less being compelled to cope with health impairments and adverse external circumstances” (1).

Accessible green areas and time spent outdoors have been highlighted as important determinants of good health in Sweden’s new public-health policy. Older people with poor mobility and persons with disabilities are more



dependent than others on having areas for recreation and recuperation close to where they live. Pleasant design of these areas is therefore of particular significance (2).

## The technological environment

Developments in technology influence all public domains and private life – and how older people can cope with these developments. Older people need encouragement and time to become accustomed to the ever-changing world of technology, “social functionality”. This challenge of adjustment is often greater for the older generation than for the younger. Technology may not be accessible, affordable or acceptable to older people (3).

## Climate changes

Global climate change may have a widespread influence on the older population in the future, due to more episodes of extreme weather (4).

*With advancing age, the efficiency of the body's heat-regulating mechanisms declines, placing many older people at high risk of cold discomfort and hypothermia, even in warm environments.*

One focal point will be how infrastructural disturbance affects social service systems and vulnerable population groups. There is a need to examine the local consequences for the health, social care and security of older people in the event of extreme weather episodes.

Older people are often more dependent on the function of social service systems and often rely on them for their daily care. Today many older people receive care at home. During an extreme weather episode such care will probably be more difficult to distribute, while the need for it will no doubt increase. Such was the case, for example, during Sweden's 'Gudrun' storm in 2005 when electricity, telephones and heating systems were cut off. The storm also disturbed traffic and hampered rescue operations (5).

#### **Excessive cold and excessive heat**

With advancing age, the efficiency of the body's heat-regulating mechanisms declines, placing many older people at high risk of cold discomfort and hypothermia, even in warm environments. Unfortunately, the thermoregulatory problems of the aged have received insufficient attention in the education of caregivers (6). As a consequence, some routine procedures in the care of frail older people may inadvertently cause cold discomfort and increase the risk that core temperature will

fall. Some guidelines for the assessment and emergency care of older people with hypothermia are given in this paper.

A worldwide trend towards more hot and humid summers raises concern for the health of our older populations. Older adults are more vulnerable to heat illness than younger people because of this thermoregulatory mechanism dysfunction, chronic dehydration, medications, and disease. Information is often provided for caregivers to enable them to protect their patients from heat illness (7). It also discusses age-related changes in the thermoregulatory system's response to heat, risk factors, assessment criteria, preventive measures, and first aid for victims of heat exhaustion and heat stroke.

#### **Air quality**

People are more likely to develop certain illnesses at higher ages. Air pollution causes cardiovascular and heart disease, cancer and lung disorders. The greatest negative impact is from particulate matter such as large particles (PM10), fine particles (PM2,5), and ozone. They originate in transport and combustion. People already in poor health (respiratory-, heart- and cardiovascular disease) are more adversely affected by air pollution than others.

Air pollution is a global matter because substances are spread through atmospheric exchange and winds. Therefore international agreements play a significant role in negotiations about targets and limit values for the reduction of air pollution (8).

## EFFECTIVENESS OF INTERVENTIONS

Two systematic reviews are reported in this chapter.

### Housing improvement and health gain

The systematic review by Thomson et al. (9) focused on determining how housing improvements could improve health in the population as a whole. The authors searched the international literature, identifying nineteen studies, the earliest from 1936. Fourteen ongoing housing intervention studies were identified, suggesting an increased interest in producing data on how housing might improve health. Participants were drawn from the whole population including older people.

The key interventions were: medical priority re-housing; energy efficiency advances; re-housing; community regeneration and refurbishment (ibid. p. 2). The main research methods used in these studies were prospective or retrospective measures of health and the use of control groups. Qualitative methodology was also used. The results of this review indicated that housing improvements can generally improve health, specifically mental health; but they can also have adverse effects. Housing improvements reported in studies on re-housing and regeneration can also result in rent increases and cause e.g. distress; and the original residents when relocated may not benefit from the improvements.

The authors found it quite difficult to produce a clear statement of the effect of housing improvements due

to the variety of methodologies and outcomes used, and problems with study methodologies. They experienced many difficulties in measuring the health outcomes of housing interventions. The relationship between the two is influenced by many factors and interactions. For example, it is the more vulnerable groups in the general population, such as the elderly, the sick, unemployed single mothers, who spend most time inside their homes, being therefore more exposed to potential risks.

### Housing improvement and reduction of injuries

A systematic review by Lyons et al. (10) of the existing scientific literature sought to determine whether alteration of the indoor environment reduces injuries occurring in the home. After reviewing<sup>26</sup> the significant secondary data they found twenty-eight published studies and one unpublished. These they divided into three clusters based on a primary population model: children, older people and the general population.

Of the intervention studies among older people, none demonstrated a decrease in injuries due to risk reduction, although two showed a reduction in falls that could be associated to hazard reduction.

The authors argue that many people are encouraged to change their indoor environment ('fixtures and fittings') by installing locks on cupboards, putting covers on electric sockets,

*The results of this review indicated that housing improvements can generally improve health, specifically mental health; but they can also have adverse effects.*

26. Selection criteria: randomised controlled trials, non-randomised controlled trials, controlled before-and-after studies and interrupted-time-series studies.



installing grab rails, removing rugs and improving lighting in hallways or other falls hazards. It is logical to consider that changes in the indoor environment, good house design and layout can reduce injuries; but there is still a lack of significant scientific evidence. An older person's fall, injury or fracture can be caused by several factors. The cause of the fall, the lack of reaction, the impact and the weakness of their bones are all important and contribute to an older person sustaining an injury.

The authors suggest that global injury research and the gerontology community should collaborate to design and implement studies of sufficient size, rigorous design, and acceptability to participants, to answer these important questions.

See also Chapter 9, Injury.

### Summary of findings

There is inconclusive evidence that:

- housing interventions can have a positive effect. Although they may generally improve health and specifically mental health in certain cases, they can also have a negative effect on health. Thus for example housing improvements can also result in rent increases and have an adverse effect on people's health by causing distress (9), and
- changes to the indoor environment can reduce injuries in older people due risk reduction, as an older person's fall, injury or fracture can involve several confounding factors (10).

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CHAPTER 7

# Nutrition

*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Promote healthy food and eating habits among older people, with an emphasis on low intake of saturated fats and high consumption of fibre-rich foods, green vegetables and fruits.*

# Nutrition

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

**F**ood and eating habits have nutritional, medical, psychological, cultural and social aspects. Good nutrition also plays a significant part in the well-being of healthy older people and in delaying and reducing the risk of contracting disease (1).

General dietary recommendations on what we should eat to feel well are also relevant and important for older people. They should, for example, not choose food that has a high salt or sugar content, but they should choose soft fats instead of hard fats, choose food with good carbohydrates and large amounts of fibre, and prepare their food with as little cooking fat as possible. Other important dietary components include vitamin D and calcium, especially considering the high prevalence of osteoporosis and hip fractures.

Even though older people’s energy requirement is lower than younger people’s, their need for essential nutrients is just as high or sometimes even higher. The nutrient density of food, i.e. its nutritional content in relation to its energy content, becomes increasingly important as a person gets older. Special attention needs therefore to be paid to the balance between energy and nutrients. Among older people, higher body weight does not necessa-



rily mean poorer health. Retained body weight in older people can be seen as an indicator of sound health (2).

## Factors that may influence eating habits

The conditions in which older people live can sometimes lead to isolation, perhaps because they live alone, have impaired sight and/or hearing or are incontinent (3). The loss of friends or a spouse, or depression, can lead to loneliness which may subsequently cause people to adopt poorer eating habits: they lose interest in food and cooking and therefore eat too little.

*Physiological changes* caused by ageing and problems as a result of disease and treatment can influence older people’s appetite and eating habits.

*Medicines* can have side-effects that affect appetite, sense of taste and smell and the ability to digest food. Examples of such side-effects include dryness of the mouth and constipation.

*Taste is experienced through a combination of smell, taste and sight. If one of these senses deteriorates, a person's experience of food is also negatively affected.*

*Disabilities* can reduce people's ability to eat unaided, and their sense of taste and smell. Impaired sight, for example, can make it difficult for a person to see what he/she is eating.

*Sense of taste* diminishes with age. Taste is experienced through a combination of smell, taste and sight. If one of these senses deteriorates, a person's experience of food is also negatively affected. Sweet and sour are the tastes that deteriorate first, leading older people to perceive their food as sour and bitter. The sense of smell deteriorates before the sense of taste.

*Poor teeth* can have a negative effect on a person's ability to chew. *Fungal infections* in the mouth can lead to pain while eating. Good oral hygiene and medical treatment are important here.

*Throat-muscle coordination* can deteriorate, resulting in food getting stuck in the throat.

*Lack of exercise* can decrease a person's appetite.

*Dementia and depression* are often associated with poor intake of energy and nutrients.

### **A positive attitude to food**

It is important that food gives people all the nutrition they require. It is also important to spread mealtimes throughout the day, as this helps to utilise the nutrients in the most effective way. Put rather simply, regular mealtimes

are good for the metabolism, help retain body weight, and keep people active and in good spirits.

Many older people can not manage large amounts of food at a time.

Three main meals and two-to-three snacks a day are appropriate. One important consideration is that mealtimes are experienced as something positive; that they provide both pleasure and fun. A positive attitude towards food is enhanced by being able to enjoy a good meal in peace and quiet, in a pleasant environment with friends. Food and social relationships are interlinked and if older people are left alone, they may well lose interest in food. Evaluation of experiments where older people cook food in teams and eat together show that this can be a way of stimulating both good eating habits and social contact. A person who loses interest in food risks a vicious circle.

The results of the HALE project (2) emphasise the importance of older people retaining body weight whilst maintaining their blood pressure and cholesterol levels within recommended limit values (RR <140 mmHg and cholesterol <5mmol/l). A "Mediterranean" diet is recommended for older people, with an emphasis on low intake of saturated fats and high consumption of fibre, green vegetables and fruit.

The HALE project also recommends that lifestyle should be the starting-point of health-promoting interventions. Changing eating habits can create synergy effects, for example on social functions, risk of overweight and some forms of cancer (2).

## EFFECTIVENESS OF INTERVENTIONS

Three meta-analyses, one systematic review with meta-analysis, two systematic reviews and a literature review are reported in this chapter.

A site-specific literature review of policy and environmental interventions was conducted by Matson-Koffman et al. (4). The aim was to review selected, recent environmental and policy interventions designed to increase physical activity and improve nutrition as a way to reduce the risk of heart disease and stroke, and promote cardiovascular health. The review also summarised recommendations.

Literature searches included studies conducted from 1970 to 1990. Forty-eight studies were identified. There were participants of all ages including those aged 50 and above. These studies used policy or environmental approaches to promote good nutrition. They focused on providing primary and secondary prevention and health-promotion interventions using several approaches such as mass-media campaigns, educational campaigns involving classes, television and newspapers. They also included community organisation and activation, social marketing, and programmes containing environmental interventions for nutrition.

Several of the studies showed that labelling heart-healthy foods in restaurants, grocery stores and vending machines significantly increased the rate at which those foods were selected. One intervention, albeit with no comparison group, showed that sales of targeted food items were higher during the price-decrease intervention than during the health-message intervention. The

results suggest that policy and environmental strategies may promote physical activity and good nutrition. The authors suggest that further research is needed to determine the long-term effectiveness of policy and environmental interventions with various populations and to identify the steps necessary to successfully implement such interventions.

### Prevention of osteoporosis and cholesterol concentrations

In a summary of a report by the Swedish Council on Technology Assessment in Health Care (5) based on a systematic review and meta-analysis, the report findings indicate that eating habits are associated with bone-density and fractures with osteoporosis. The report suggests that when considering cost-effectiveness of treatments, it remains important to assess whether, in the prevention of non-vertebral fracture, it is necessary to combine calcium supplementation with administration of vitamin D, or whether – at least in high-risk individuals – vitamin D alone may be effective. The aim of the evaluation was to check systematically for scientific evidence of effectiveness for differing outcome measures.

The Swedish Council review established that a lack of daylight and sunshine during the winter for people living in Scandinavian countries causes nutritional vitamin D deficiency. Medical treatment combined with calcium and vitamin D, decreasing the risk of hip-fracture, was recommended for elderly women (5).

*Several of the studies showed that labelling heart-healthy foods in restaurants, grocery stores and vending machines significantly increased the rate at which those foods were selected.*

Malnutrition and low weight increase the risk of osteoporosis and fractures caused by osteoporosis. The review also suggests that a high intake of vitamin K in nutrition is associated with reduced risk of hip-fractures. Increased intake of calcium before menopause affects bone density. High intake of vitamin A is associated with reduced bone density and increased risk of hip-fracture for both women and men.

The systematic review by Gillespie et al. (6) included 21 studies, of which 20 were randomised controlled trials regarding prevention of falls. The results indicate that almost all estimates of treatments are based on single studies and therefore uncertainty remains about the efficacy of regimens which include vitamin D or vitamin D analogues in fracture prevention. In one of the studies included in this systematic review the administration of vitamin D3 with calcium co-supplementation to frail elderly people aged 80 and over living in sheltered accommodation was associated with a reduction in hip-fracture incidence. The conclusion was that vitamin D3 with calcium co-supplementation appears to be effective and might be considered in fracture prevention for frail elderly people. In other groups, a fracture prevention programme using vitamin D or vitamin D analogues cannot yet be confidently recommended.

Muldoon et al. (7) investigated the effects of lowering cholesterol concentrations on total and cause-specific mortality. Their meta-analysis included six randomised controlled primary-prevention trials. The participants, mostly white, in five trials had mean ages ranging between 45 and 51 years, with a mean age of 65

in men enrolled in the Veterans Administration study. Mean duration of treatment was 4.8 years. Primary prevention was defined as any investigation in which criteria for participants' eligibility omitted a history of coronary disease. Mortality included deaths from coronary heart disease, cancer and causes not related to illness. The rate of mortality from coronary heart disease tended to be lower in men receiving interventions to reduce cholesterol concentrations than that in control subjects ( $p=0.06$ ), although total mortality was not affected by treatment.

Analysing the drug trials separately showed that the treatment for lowering cholesterol concentrations significantly reduced mortality from coronary heart disease.

Milne et al. (8) examined the evidence for the effectiveness of nutritional supplements containing protein and energy for older people at risk of malnutrition. Their systematic review comprised 49 trials with 4,790 participants and examined the evidence from trials for improvement in nutritional status and clinical outcomes with extra protein and energy supplementation. Weight change benefited from energy and protein supplementation compared with that of control groups. There was no evidence of improvement in clinical outcome, functional benefit or shortened hospital stay with supplementation.

The trend was still towards a slightly shorter stay for patients who were given supplements. To provide functional benefit the gain should be in muscle mass. Milne et al. (8) recommend further trials focusing on older people's quality of life, well-being and functional ability.

*Malnutrition and low weight increase the risk of osteoporosis and fractures caused by osteoporosis.*

## Dietary patterns and cancer risk

Riboli and Norat (9) summarised meta-analytically the evidence from case-control and prospective studies on intake of fruit and vegetables and cancer risk. They found a significant risk reduction associated with vegetables for many cancers, while only the protective effect of fruit on lung- and bladder cancer was statistically significant in the meta-analyses of the cohort studies (9). Participants' age range was 40 to 80 years<sup>27</sup>. The authors suggest that there might be many reasons for the discrepancies, such as recall and selection in case-control studies, or in prospective studies the imprecise dietary measurement and limited variability of dietary intake within each cohort. Many other lifestyle factors such as smoking, alcohol and physical activity have a role in preventing cancer.

The authors argue that it is unlikely that a major cancer prevention effect will be achieved in practice by varying only one of the risk factors; but there is substantial potential for preventing cancer through diet.

## Long-term weight-loss

The meta-analysis by Anderson et al. (10) examined the long-term weight-loss maintenance of individuals completing a structured weight-loss programme in the United States. The average ages of the participants were between 50 and 59.

Primary outcome variables were weight-loss maintenance in kilograms, weight-loss maintenance as a percentage of initial weight-loss, and weight-loss as a percentage of initial body weight (reduced weight). Twenty-nine studies met the inclusion criteria. Successful very-low-energy diets were associated with significantly greater weight-loss maintenance than successful hypo-energetic balanced diets at all follow-ups. Weight-loss maintenance did not differ significantly between women and men.

Six studies reported that groups that exercised more had significantly greater weight-loss maintenance than did those that exercised less. The analysis of long-term weight-loss maintenance indicated that weight-loss maintenance 4 or 5 years after a structured weight-loss programme averages 3 kg or 23 per cent of initial weight-loss, representing a sustained reduction in body weight of 3.2 per cent. After very-low-energy diets or weight-loss of 20 kg or more, individuals maintained significantly more weight-loss than after hypo-energetic diets or weight-loss of less than 10 kg. The authors suggest that further research is required to enable most individuals to sustain the lifestyle changes in physical activity and food choices necessary for successful weight maintenance.

*The authors argue that it is unlikely that a major cancer prevention effect will be achieved in practice by varying only one of the risk factors; but there is substantial potential for preventing cancer through diet.*

27. Participants' ages were not given in the paper, but were kindly supplied by E. Riboli.



## Summary of findings

There is evidence to suggest that:

- vitamin D3 with calcium co-supplementation is effective in the prevention of fractures following a fall in frail older people,
- intake of vegetables is effective in reducing cancer risk significantly among those aged 40–80 years (9), and
- five years after completion of structured weight-loss programmes, older people with an average age of 50–59 can maintain a weight-loss of more than 3 kg and a reduced weight of more than 3 per cent of initial body weight (10).

There is inconclusive evidence for:

- the effect of lowering cholesterol concentrations on total mortality in men with a mean age of 65 (7), and
- the effectiveness of nutritional supplements containing protein and energy for older people at risk of malnutrition in improving functional status and in reducing the length of hospital stay (8).

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CHAPTER 8

# Physical activity

*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Increase the level of physical activity among older people in order to reach the international recommendations of 30 minutes or more of, at least, moderate-intensity physical activity on most, preferably all, days of the week.*

# Physical activity

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

The importance of physical activity emerges in public-health issues ranging from disease prevention and enhancement of a healthy lifestyle for all to the maintenance of an independent lifestyle in later life stages. It has been stated that frequent physical activity is “the best preventive medicine” for old age. The broad benefits of physical activity for older people are well documented.

Physical activity is associated with improved length and quality of life, and plays an important role in maintaining health and effective function in older people (1). People who are physically inactive run twice as great a risk of developing cardiovascular diseases as those who are physically active (2). Exercise reduces blood pressure (3). Lack of physical activity is also a modifiable risk factor for stroke (4).

Moderate physical activity on three-to-five occasions per week with a duration of 30–60 minutes seems to be effective in reducing blood pressure (5). Moreover, there is strong evidence that regular physical activity has a beneficial effect on insulin sensitivity (6). Risk factors for falls and fractures such as muscle weakness in the limbs, poor balance and poor level of overall physical fitness can all be improved through physical activity (7).



Physical activity, preferably weight-bearing, contributes to increased bone density and can thus counteract osteoporosis. Moreover, it elevates physical function (improving endurance, strength, balance and mobility) to levels which can guarantee more years of independent living (8, 9).

Finally, physically inactive people are at greater risk of developing depression than those who are physically active (10), while physically active persons may have reduced risk of developing Alzheimer’s disease (11, 12), and older people who are physically active report higher levels of well-being and physical function than the less active do (13).

*The most consistent positive effects were observed in strength, aerobic capacity, flexibility, walking and standing balance, with over half of the studies that examined these outcomes finding positive effects.*

There is evidence from epidemiological studies that physical activity may prevent or postpone the onset of dementia (11). However the few intervention studies in this area report great difficulties in separating the effect of physical activity, as physical activity almost always occurs together with mental activation and social stimulation. One recent study shows that activities including all these three components, physical, social and mental activity, are the most likely to have a protective effect on dementia (12).

## EFFECTIVENESS OF INTERVENTIONS

One meta-analysis, one systematic review and two literature reviews are reported in this chapter.

### Interventions to increase physical activity

Conn et al (14) conducted a meta-analysis to study interventions to increase physical activity among ageing adults. Their meta-analysis included 43 studies that measured the activity behaviour of at least five participants aged 60 years or over. The effect was greater when interventions targeted activity only, excluded general health education, incorporated self-monitoring, used centre-based exercises, recommended moderate intensity activity, were delivered in groups, used intense contact between interventions and participants, and targeted patient populations.

The effect was greater in studies that measured exercise duration and in studies with a time interval of less than 90 days between interventions and behaviour measurement. The findings suggest that group-delivered interventions should encourage moderate activity, incorporate self-monitoring, target only activity, and encourage centre-based activity; and also that patient populations may be especially receptive to activity interventions.

### Exercise and its health effects

Keysor and Jette (9) evaluated how far exercise among older adults improves function and prevents or decreases disability. Their review included thirty-one experimental and quasi-experimental aerobic and resistance exercise interventions. The participants were at least 60 years old and varied in health status. Exercise sessions lasted 45–60 minutes and were performed two-to-three times per week. The duration of the interventions ranged from 2 to 18 months, with most lasting 2 to 3 months. The most consistent positive effects were observed in strength, aerobic capacity, flexibility, walking and standing balance, with over half of the studies that examined these outcomes finding positive effects. Of the studies that examined physical, social, emotional or overall disability outcomes, most found no improvements.

### Progressive resistance training

Latham et al. (7) conducted a Cochrane review to investigate the effect of progressive resistance training (PRT) on physical disability, functional limitations and impairment in older people. PRT is defined as ‘a strength-training programme in which the participants exercised

their muscles against an external force that was set at specific intensity for each participant, and this resistance was adjusted throughout the training programme'. The review included 66 randomised studies with 3,783 participants of mean age 60 years or older. PRT appears to be an effective intervention to increase strength in older people and has a positive effect on some functional limitations such as gait speed.

### Primary care-based interventions

Eakin et al (15) summarised the literature (15 studies) on primary-care-based interventions for increasing physical activity and made recommendations for integrating successful strategies with practice. Their review consisted of both randomised controlled trials (nine studies) and quasi-experimental studies (six studies) with participants aged between 18 and 75 years. Four studies included only adults aged 50 years and older. Interventions tailored to participant characteristics and offering written materials to patients showed strong results. Physical-activity-only interventions fared better in the short term than multiple-risk-factor interventions (including e.g. smoking, diet, alcohol). The results also indicate that brief counselling (3–10 minutes) may be as effective as lengthier counselling in increasing physical activity for older people. And finally, theory-based physical activity interventions were no more effective than those not based on explicit theories of behaviour change.

### Summary of findings

There is evidence to suggest that:

- interventions incorporating self-monitoring and regular contact with an exercise specialist, promoting moderate intensity, and centre-based, are effective in increasing physical activity in older people (14),
- interventions consisting of a single factor (for example physical activity only) compared to multiple-risk-factor interventions are effective in increasing physical activity in older people including e.g. smoking, diet, alcohol (14, 15),
- exercise among older adults is effective in increasing strength, aerobic capacity, flexibility, walking and standing balance (9),
- progressive-resistance training is effective in increasing strength in older people and in producing a positive effect on some functional limitations such as gait speed (7),
- primary-care-based interventions consisting of brief advice given by a health professional and supported by written materials are effective in increasing physical activity among older people (15),
- interventions consisting of referral to an exercise specialist and targeting individuals are effective in increasing physical activity among older people (15),
- interventions consisting of brief counselling (3–10 minutes) may be as effective as more lengthy counselling in increasing physical activity for older people (15), and
- theory-based physical activity interventions are not more effective than those interventions not based on explicit theories of behaviour change in older people (15).

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CHAPTER 9

# Injury prevention



*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Initiate safety promotion and injury prevention, including programmes against violence and suicide, at all relevant policy levels. The individual approach should include physical and nutritional aspects, careful prescription of psychotropic drugs, and safe housing.*

# Injury prevention

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

Falls result in significant health problems for older people and also affect society in general due to high treatment costs. Falls also result in significant morbidity and mortality among older people. Injuries, long-term hospitalisation, rehabilitation and loss of autonomy ending with institutionalisation are all factors that lead to deterioration in health, well-being and life itself. Physical health impairment, mental health deterioration and fear of falling prevent older people from walking and experiencing social contact to a greater extent than the injury from the fall itself (1).

Not all the causes and risk of falls are preventable, but most can be modified by intervention. The two main target groups are: older people living in their own homes and older people living in institutions. Both groups need specific intervention. Women are more vulnerable than men as they are more fragile in later life: they are more likely to have e.g. osteoporosis and less muscle strength (2).

Appropriate and effective intervention requires assessment of the risk of falls. An assessment tool is described by Nandy et al. (3). The tool is based on the existing systematic review of community-based prospective studies identifying risk factors for falling. Five risk factors were identified:



- history of any fall in the previous year,
- four or more prescribed medications,
- diagnosis of stroke or Parkinson’s disease,
- reported problems with balance, and
- inability to rise from a chair without the use of one’s arms.

The presence of three or more of the above factors increases the risk of fall in the next six months (3).

Another important factor in preventing falls is adequate nutrition, see Chapter 7, Nutrition.

## Community interventions

Fall-related injuries are among the most serious and most common medical problems experienced by older people. Every third woman in the County of Stockholm who reaches the age of 80 years either risks eventually incurring a

hip fracture or has already had such an accident (4). Prospective studies have reported that 30 to 60 per cent of community-dwelling older adults fall each year, with approximately half experiencing several falls (5). In population-based fall-prevention programmes several measures are introduced as a package across an entire community or a large part of it.

The WHO “Safe Communities” model for the prevention of injury in whole populations has been accepted around the world as a model for coordinating efforts to improve safety and reduce injury (6). Over 100 communities throughout the world have been formally designated as “Safe Communities” by the World Health Organization. The Safe Communities ideology refers to safety that can be achieved through integrated, collaborative efforts that are implemented in a supportive social, cultural and political environment. The emphasis in these programmes is on collaboration, partnerships and community capacity-building that is the core of the Safe Community model.

### Violence towards older people

Violence towards older people has many ill-health consequences including injuries. Violence has many forms – physical, psychological and economic abuse or neglect. Older people are subjected to all kinds of violence in families and in care facilities including health-care settings. A case-control study on violence among older people in nursing homes examined resident-to-resident violence resulting in injury (7). The authors suggest that injured residents are more likely to “put themselves in harm’s way”, to be verbally aggressive, and to be cognitively impaired.

Risk factors for abuse of older people include strained family relationships as a result of stress and frustration as the older person becomes more dependent on others; and social isolation because of physical or mental infirmities.

Where institutional care standards are low and the staff are generally poorly trained, the relationships between staff and residents are difficult and of poor quality. Psychological and physical violence from the emotional exhaustion of staff is significantly related to the number of working hours and to depersonalisation (8). Neither sex nor age are correlated with violent behaviour. Interventions should concentrate on the training and work environment of staff caring for older people (8). Older men are as much at risk of abuse as women, but in those cultures or societies in Europe where women still have an inferior status, older women are at higher risk of abuse or neglect (9).

Prevention of and intervention against violence towards older people are a very sensitive issue and depend on the culture and the legal environment of each country. Screening in health care settings is accepted in different ways among health professionals (10).

One finding of the WHO “Missing Voices” project is that older people perceive abuse mainly as neglect, violation and deprivation. “Missing Voices” is a project co-ordinated by the International Network for the Prevention of Elder Abuse (INPEA) and explores the knowledge and experience of two target groups: health-care professionals and older people themselves. A global strategy developed to combat violence against older people includes recommendations for prevention:

*Fall-related injuries are among the most serious and most common medical problems experienced by older people.*

- awareness and educational programmes for the general public through media and schools on how to perceive older adults as positive contributors to society,
- awareness and educational programmes for older people to help them to know their rights,
- inter-generational relationships to minimise older people's social isolation,
- training for professionals in health care, social services and law,
- empowerment of older people to act for themselves and on their own behalf,
- role of media: to change the negative image of older people,
- structural solution: need for strong protective law, improved health care plans and similar structural issues, and
- research to obtain more information and evidence on violence against older people.

While “Missing Voices” (10) was research-oriented, the Toronto Declaration on the Global Prevention of Elder Abuse calls for action aimed at the prevention of elder abuse (11). The following points were stated for consideration:

- legal frameworks missing,
- many sectors of society must be involved,
- primary-health-care workers have a particularly important role,
- education and dissemination of information both in formal sectors (professional education) and through media (combating stigma, de-stereotyping older people, tackling taboos etc.),
- cultural context mandatory for fully understanding elder abuse,

- some population subgroups particularly vulnerable to elder abuse: the very old, those with limited functional capacity, women and the poor,
- intergenerational solidarity and the promotion of a culture rejecting violence are critical for preventing elder abuse, and
- all countries should develop structures and services (health, social, legal protection, police referral, etc.) that appropriately respond to and prevent the problem.

## EFFECTIVENESS OF INTERVENTIONS

Two systematic reviews with meta-analyses, two systematic reviews, one literature review, one review of reviews and two reviews of community interventions are reported in this chapter.

### Multi-factorial fall risk assessment and management

A systematic review and meta-analysis of forty randomised controlled trials among older people aged 60 and over was conducted by Chang et al. (12). The purpose was to assess the effectiveness of multi-factorial risk assessment and management as an intervention in reducing the risk of falling. Four types of intervention were compared: multifactor fall risk assessment and management, exercise programmes, environmental modification and education.

Multi-factorial fall risk assessment and management was the most effective. Exercise programmes also had a beneficial effect on the risk of falling.

*The results suggest that health promotion policy for investing in community fall-prevention programmes is effective in reducing falls and fall-related injuries in older people.*

Gillespie et al., (2) in their systematic review of 62 randomised trials designed to minimise the effect of, or exposure to, risk factors for falling in older people, found that multidisciplinary interventions targeting multiple risk factors are effective in reducing the incidence of falls. Home-hazard assessment and modification by a health professional may reduce falls, especially among those with a history of falls.

See also Chapter 7, Nutrition.

#### Physical activity in relation to injuries/falls

Nine observational epidemiological studies and 12 randomised controlled trials (RCTs) of exercise programmes were examined by Gregg et al. (13). Physical activity (defined as bodily movement produced by skeletal muscles that results in energy expenditure) was associated with a 20–40 per cent reduction in the risk of hip fracture among sedentary individuals. Epidemiological studies suggest that a higher level of physical leisure activity prevents hip fracture. Results from RCTs suggest that certain exercise programmes may reduce the risk of falls.

Sherrington et al. (14) analysed systematic reviews and three randomised controlled trials of the effectiveness of various physical-activity or exercise-intervention strategies for the prevention of unintentional falls among older people. The authors suggest that a targeted, supervised home exercise programme concentrating on strength and balance, exercise and walking practice can prevent falls among older people living in their own homes. Sherrington et al.

(14) found that Tai Chi or other exercises which exercise balance were also effective. Muscle strengthening combined with balance retraining, individually prescribed at home by trained health professionals, and 15 weeks of Tai Chi courses, were effective.

#### Community interventions against falls

Marks and Allegrante (1) investigated the effectiveness of community fall-prevention programmes in reducing the incidence of falls and fall-related injuries. In their review of reviews, they point out that one in three people over 65 years annually in the US will experience a fall, and that this will result in significant fall-related injuries that constitute an important and costly public health problem. The review included nine meta-analyses on interventions for preventing falls in older people and 23 published reports on community-based interventions to reduce the risk of falls using multi-factorial approaches. Of the 23 reports, 15 were conducted in countries other than the U.S, such as Australia, Canada, France, Holland, New Zealand, Scotland, Spain and the United Kingdom.

However, the authors made suggestions for health promotion policies:

- 1) To provide support for community-wide implementation, by well-trained personnel, of specific evaluative and screening programmes for identifying individuals at risk;
- 2) To give high priority to individuals at high risk of falls, for example those who are sedentary, physically compromised, or those who have recently experienced important life events.

Marks and Allegrante also argue that systematic efforts to implement risk-assessment and intervention strategies that combine various intervention elements for preventing falls and fall-related injuries offer important social and economic gains. They suggest that such efforts are likely to reduce morbidity and mortality rates attributable to falls among community-dwelling older people at high risk of falling, and can lead to more efficient use of limited social resources to improve both individual health and community environmental change.

McClure et al. (5) reviewed 23 population-based studies on interventions for the prevention of fall-related injuries in older people. The studies were too heterogeneous to permit meta-analysis. Participants aged 65 years and over. The unit of analysis for these prospective controlled trials was the entire community. The review made two comparisons for each study included:

- pre- versus post-intervention medically-treated fall-related injury incidence in the intervention community,
- change in incidence of fall-related injury reported as having been treated by a medical practitioner in the intervention community versus the control community.

Despite the methodological limitations of the evaluated studies reviewed, the consistency of reported reductions in fall-related injuries across all programmes supports the preliminary claim that the population-based approach to the prevention of fall-related injury is effective and can form the basis of public health practice.

See also Chapter 6, Environment.

***Epidemiological studies suggest that a higher level of physical leisure activity prevents hip fracture.***

### Withdrawal of psychotropic drugs

A systematic review and meta-analysis by Leipzig et al. (15) examined the effectiveness of sedative/ hypnotics, antidepressants, or neuroleptics use in falls among people aged 60 and over. Forty epidemiological studies were analysed (none was a randomised controlled trial). Several risk factors for falls in older people were identified, but none was as potentially preventable or reversible as medication use. Psychotropic medications are often prescribed inappropriately to older people. There was small but consistent association between use of most classes of psychotropic drug and falls. Gillespie et al. (2) in their systematic review suggest that withdrawal of psychotropic medication decreases risk of falling among older people.

### Preventive medical devices

A Cochrane systematic review of 14 randomised or quasi-randomised controlled trials compared users of hip protectors with a control group to assess the effectiveness of protectors in preventing hip fractures in older people (16).

There was no significant reduction in hip-fracture incidence among older people living in their homes. For those in institutional care with a high background incidence of hip fracture, hip protectors appear to reduce the incidence of hip fracture. No important adverse effects of the hip protectors were reported but compliance, particularly in the long term, was poor.

Acceptability by users of the protectors remains a problem, due to discomfort and practicality. The authors concluded that hip protectors may only help prevent hip fracture in those people at very high risk of fracture living in institutional care.

## Summary of findings

There is evidence to suggest that:

- home-hazard assessment and modification by a health professional may reduce falls, especially in those with a history of falling (2),
- a multi-factorial fall-risk assessment and management intervention is effective in reducing the risk of falling among older people aged 60 and over (12),
- a higher level of physical leisure activity prevents hip fracture and certain exercise programmes may reduce the risk of falls (13),
- Tai Chi courses and other ways of exercising balance and strengthening muscles, individually prescribed at home by trained health professionals, are effective in reducing falls in older people (14),
- community fall-prevention interventions are effective in reducing falls and falls-related injuries in older people (1, 5),
- careful prescription or withdrawal of psychotropic drugs decreases the risk of falling among older people (15), and
- hip protectors help prevent hip fracture in older people at very high risk of fracture and living in institutional care; but there is a lack of evidence for older people living in their own homes (16).

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CHAPTER 10

# Substance use/misuse

*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Promote smoking cessation and the reduction of harmful alcohol consumption among older people.*

# Substance use/misuse

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

## TOBACCO

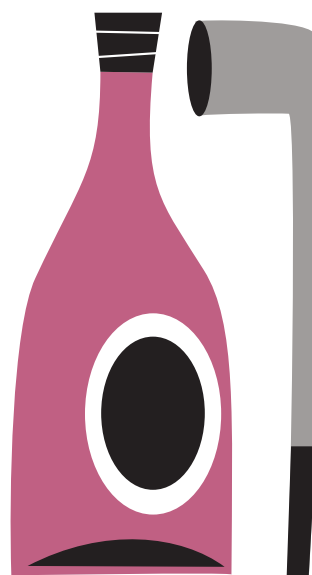
With almost 1.3 billion smokers world-wide and with smoking acknowledged as a leading cause of death in both developed and developing countries, tobacco use is to be regarded as one of society’s biggest ill-health issues for all ages (1).

Cigarette-smoking begins in adolescence but causes death and disability predominantly at older ages. The mortality rate caused by smoking increases steadily with advancing age (2).

### Health effects

Smoking is associated with increased risk, in some cases 10–20 times greater, of contracting 40 or more different diseases. Smoking causes cancers, chronic obstructive pulmonary disease (COPD), pulmonary diseases, vascular diseases, gastrointestinal diseases and osteoporosis among other disorders.

The association between smoking and various health issues is described e.g. in numerous review papers such as bone fracture risk (3, 4), peripheral arterial disease (5), cancer (6), accidents (7), impotence (8) and eye disease (9).



### Oral smokeless tobacco

Oral smokeless tobacco and Swedish snuff are carcinogenic and increase the risk of mortality from cardiovascular disease including myocardial infarction (10).

### The benefits of stopping smoking

Every second smoker dies prematurely and those who do lose an average of 13 years in healthy life expectancy. Epidemiological studies have shown that smokers who stop when they are 65–70 years old halve the excess risk of premature death (11).

## EFFECTIVENESS OF INTERVENTIONS

Two systematic reviews and one literature review are reported in this chapter.

D. M. Burns (2) reviewed smoking control, presenting selected data from epidemiological and behavioural literature that describes and quantifies smoking among older people and their disease consequences. The review shows that the absolute rate of disease incidence and mortality due to smoking increases steadily with increasing age and the duration of smoking.

Cardiovascular disease is the most common cause of excess mortality among younger smokers; lung cancer is most common at ages over 60 years and at older ages the excess death rate from chronic obstructive pulmonary disease equals that for cardiovascular disease. Older smokers are less likely to attempt to quit smoking but are more successful than younger smokers if they do attempt quitting. The benefits of cessation are proportionately somewhat less among older people and manifest themselves more slowly than among younger smokers, but cessation remains the most effective way of altering smoking-induced disease risks at all ages, including the over-sixties (2).

Countries are implementing healthy-ageing policies to improve the quality of older people's lives. To broaden the evidence base for such policy development, focusing on those who age well, Peel et al. (12) conducted a systematic review to present the existing evidence regarding behavioural determinants of healthy ageing. The review included longitudinal studies

analysing the association of behavioural factors with maintenance of health in older populations. The findings indicate that behavioural determinants for which there was evidence of an association with healthy ageing included not smoking, being physical active, maintaining weight within moderate ranges and moderate alcohol consumption.

Combining positive health behaviour, high physical activity and not smoking increased the chances of healthy ageing. Ex-smokers and never-smokers with a high level of physical activity were two-and-a-half times more likely to age successfully than their sedentary counterparts. A lower consumption rate also predicted healthy aging (12).

Ketola et al. (13) undertook a systematic review of randomised controlled trials of lifestyle interventions (diet, exercise, smoking cessation, reduction of alcohol intake) in working-age adults followed-up for one year or longer. The purpose was to assess the effectiveness of lifestyle interventions in reducing cardiovascular disease risk factors, morbidity and mortality. However, people aged over 65 were excluded. Twenty-one single-factor and 21 multi-factor interventions were analysed by outcome. The study found 18 studies on smoking cessation that were analysed and four of them were effective: one in 4–14 targeted participants stopped smoking.

In secondary prevention, both single and multi-factorial lifestyle interventions reduced morbidity and mortality, and multi-factorial approaches reduced cholesterol levels. Primary (original) prevention reduced risk factors efficiently, especially when the intervention was

*Older smokers are less likely to attempt to quit smoking but are more successful than younger smokers if they do attempt quitting.*

multi-factorial. The authors concluded that interventions should optimally be multi-factorial and should target high-risk patients with multiple risk factors for cardiovascular disease.

### Summary of findings

There is evidence to suggest that:

- smoking cessation remains the most effective method of altering the smoking-induced disease risk at all ages, including those over the age of 60 years (2), and
- non-smoking is associated with healthy ageing and ex-smokers and never-smokers with a high level of physical activity are two-and-a-half times more likely to age successfully than their sedentary counterparts who are past and never-smokers with a low level of physical activity (12).

## ALCOHOL

Substance misuse has become a growing problem among older adults as well as young people. Media attention and public health initiatives related to alcohol-use disorders tend to focus on younger age groups.

However, alcohol-misuse disorders are common among older people and are associated with notable health problems. Further, in older people they are often under-detected and misdiagnosed, as screening instruments and diagnostic criteria are geared to younger people.

There are two compelling reasons to study alcohol consumption and alcohol-related problems among older people. The first is demo-

graphic as older people are the fastest-growing segment of the population. The second is that older people differ biologically, psychologically and socially from younger (14).

In general, alcohol problems among older people can be divided into three categories (15):

- some seniors have used alcohol excessively throughout most of their lives,
- others drink at low levels but are inadvertently mixing alcohol with other drugs in ways that are harmful,
- some people begin to use alcohol excessively for the first time in their later years.

Drinking per se is not physically or medically harmful, even among older adults. In fact, light-to-moderate alcohol consumption (for example an average of one drink per day) among healthy older adults can have health benefits, especially with regard to heart health and longevity (16). Alcohol in moderate amounts may also promote relaxation and reduce social anxiety. However, alcohol misuse is associated with numerous negative health effects, especially among older adults. Alcohol misuse can cause serious

*Alcohol misuse can cause serious illness, worsen other medical conditions, interfere with prescribed medications, and greatly decrease overall quality of life.*

illness, worsen other medical conditions, interfere with prescribed medications, and greatly decrease overall quality of life.

In a global perspective, there is no country where the positive health effects of alcohol outweigh the negative effects. The ECAS

study (17) showed increased mortality when alcohol-consumption increased and decreased mortality when consumption decreased. This applied to all diagnoses except mortality from

heart-coronary diseases (no effect) and suicide (a relationship only in the Nordic countries). See also chapter 2, Statistics.

## EFFECTIVENESS OF INTERVENTIONS

One meta-analysis and two systematic reviews are reported in this chapter.

### Risk of coronary heart disease

The association between consumption of beer, wine, and spirits and the risk of coronary heart disease was investigated by Rimm et al. (16) in a systematic review of 12 ecological studies, three case-control studies, and ten separate prospective cohort studies. The 12 ecological studies examined the association between per capita consumption of specific alcoholic drinks and mortality from heart disease across countries in men and women aged from 55 to 64 in ten studies and 35 to 64 and 35 to 75 in the other two. These studies showed a strong inverse association between consumption of wine and mortality from heart disease. The association for spirits and beer was weaker or non-existent. Wine was therefore more effective in reducing the risk of mortality than beer or spirits. The prospective cohort studies found the same association between risk of heart disease and moderate wine, beer and spirits consumption. The results conflict, case control studies finding no one type of drink more cardio-protective than the others.

*The conclusion from this recent work is to beware of drawing far-reaching conclusions regarding the protective effects of moderate drinking.*

### Falls/fall injuries, functional and cognitive impairment

A systematic review by Reid et al. (18) examined potential relationship(s) between alcohol consumption and:

- 1) falls or fall injuries,
- 2) functional impairment,
- 3) cognitive impairment, and
- 4) all-causes.

The criteria for selecting the studies were:

- 1) enrolled participants 60 years of age and older; or
- 2) included a broader age range of participants (e.g., 50–80 years of age) and reported stratum-specific results for older sub-groups (i.e., 60 years); or
- 3) enrolled predominantly older participants i.e. mean age 65 years and above.

Twenty per cent of the 84 studies demonstrated harm associated with increased alcohol exposure, 70 per cent found no association between increased alcohol use and any of the selected outcomes, and 10 per cent reported benefit from greater alcohol use. Formal meta-analyses could not be performed due to large variations in the measurement of both exposure and outcome variables.

The results of the study by Reid et al. indicate that the magnitude of risk posed by alcohol use for falls or fall injuries, functional impairment, cognitive impairment, and all-cause mortality among older adults remains uncertain. Although a substantial minority (20 per cent) of studies demonstrated harm, most studies (80 per cent) found no association or benefit associated with increased alcohol exposure.

## Injuries and health benefits

A meta-analysis by Smith et al. (19) investigated the involvement of alcohol in non-traffic injuries among older adults. They selected 65 medical-examiner studies reporting non-traffic-injury fatalities. Alcohol was also present in 47 per cent of homicides and 29 per cent of suicide deaths.

The main finding indicated that light or moderate alcohol consumption (e.g. an average of one drink per day) among healthy older adults can have health benefits, especially with regard to heart health and longevity; but the co-morbidity of alcohol and medication was not considered in the studies

Recent reviews of epidemiological studies in the alcohol field have raised a number of methodological concerns. These primarily address problems related to confounding (20) and to misclassification (21). The conclusion from this recent work is to beware of drawing far-reaching conclusions regarding the protective effects of moderate drinking.

## Summary of findings

There is inconclusive evidence:

- for the effectiveness of wine consumption in reducing the risk of mortality compared with that of beer or spirits (16),
- about the magnitude of risk posed by alcohol use for falls or fall injuries, functional impairment, cognitive impairment, and all-cause mortality among older adults (18), and
- for the effectiveness of light-to-moderate alcohol consumption among healthy older adults in improving heart health and increasing longevity (19), due to the recent controversy on this issue reported in studies (20, 21).

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CHAPTER 11

# Use of medication and associated problems

*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Problems associated with the use of medications can be avoided by the systematic use of quality indicators for drug use and better co-ordination among care providers. Surveys of therapies and the inclusion of older people in clinical trials will also help.*

# Use of medication and associated problems

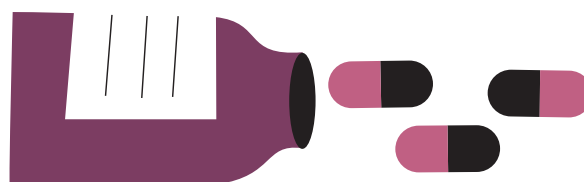
► For search strategy, inclusion criteria etc. see appendix 5 Literature Review on Healthy Ageing.

The literature on the use of medication and associated problems is extensive. The World Health Organisation (WHO) has in its publication *Priority Medicines for Europe and the World* (1) summarized the recent literature on the size and nature of the disease burden of a number of geriatric diseases and of drug-related problems in the elderly. These include adverse drug reactions and under-use of medicines.

The drug-related problems can be categorized as follows:

- medication error/non-compliance,
- inappropriate prescribing,
- interactions,
- adverse reactions,
- use of drugs carrying risks,
- others, for example under-use due to lack of accessibility to doctors, pharmacies, difficulties in opening drug packages,
- interactions with other treatments – herbal medicines.

The lack of an overview of all therapies a patient is undergoing is an important explanation of the drug problems an older patient might meet.



In addition to these problems, some medicines used today by older people have not been tested in this age group. It is obviously necessary to test new medications in the group who will use them most.

## Medication error or non-compliance

Many patients do not adhere to their prescribed drug regimen. Among symptom-free patients on long-term treatment doses are sometimes missed, while among those using several different medications, errors in drug intake also occur such as duplication and intake of wrong dosage. Many attempts have been made to diminish medication errors and improve compliance. So far, no ideal solution to these problems has been found.

### Inappropriate prescribing

Many older people are prescribed drugs because of their symptoms and not on the basis of a diagnosis. The consequence might lead to inappropriate therapy. This has been shown for benzodiazepines and NSAIDs<sup>28</sup> and other preparations. Another example of inappropriate prescribing is when the prescriber has not taken into account the patient's renal function or weight.

### Interactions

Studies of the importance of drug-disease interactions are contradictory, but there is evidence that the most common potential drug-disease interactions involve calcium-channel blockers in patients with heart failure; aspirin in those with peptic ulcer disease, and beta-blockers in those with diabetes mellitus, peripheral vascular disease/Raynaud's disease, or chronic obstructive pulmonary disease.

The author(s) argue that drug-drug interactions such as the combination of antibiotics and warfarin, or NSAIDs and warfarin, constitute a problem; but a smaller one than drug-disease interactions and problems linked to the duration of drug use.

Interactions between drugs and herbal medicines have recently attracted much interest. Thus extracts from St. John's wort (*Hypericum perforatum*) interact with digoxin and antidepressants (2, 3) and ginseng with warfarin in healthy subjects (4).

### Adverse drug reactions

The risk of adverse drug reactions (ADR) increases with the number of individual drugs patients are using. The percentage of hospital

admissions due to ADR varies from around four per cent in young people to 16 per cent and even more in older people. A meta-analysis suggests that ADR rank between the fourth and sixth cause of death in hospitalised patients. The percentage of preventable ADR in the elderly ranges between 28 and 51. In addition to human suffering, the costs of ADR are considerable.

### Other drug-related problems

Under-use of medication is an under-estimated problem but occurs frequently among older patients. It can be explained in several ways:

- 1) There are older patients who do not contact a physician for their health problems;
- 2) There is under-prescribing by physicians;
- 3) There are economic barriers; and
- 4) There are unsuitable formulations and other practical obstacles.

### How to improve the quality of medication use

To improve the quality of medication use in older people, quality indicators for drug use by such people have been developed. Hanlon et al (5) list the quality indicators that can be of use during routine therapeutic auditing of the care of older persons:

- drugs to avoid, for example long half-life benzodiazepines,
- drug-disease interactions, for example beta-blockers in patients with chronic obstructive pulmonary disease (COPD), NSAIDs in patients with heart failure, NSAIDs and steroids in patients with peptic ulcer diseases,

28. Non-steroidal anti-inflammatory drugs

*Many older people are prescribed drugs because of their symptoms and not on the basis of a diagnosis. The consequence might lead to inappropriate therapy.*

- drug-drug interactions, for example antibiotics and warfarin, NSAIDs and warfarin,
- drug duplication, for example more than two NSAIDs, and
- required monitoring, for example International Normalized Ratio, INR, for warfarin, thyroid function tests in patient taking levothyroxine, electrolytes in patients taking ACE inhibitors.

The value of using these indicators is now being tested in a number of countries.

Other measures to be taken according to Willems et al (1) are:

- *Inclusion of older people in clinical trials*  
Some medicines used today by older people have not been tested in this age group. It is obviously necessary to test new medications in the group who will use them most. The inclusion of older people in clinical trials may provide important information about dosage, efficacy, long-term effects, dosage regimes and safety of drugs.
- *Survey of therapies*  
The lack of an overview of all the therapies a patient is involved with is an important explanation of the drug problems an older patient might meet. For this reason all medical professionals involved in a patient's treatment should agree on all the therapies involved. Advanced information technology is a resource to address this problem. Electronic records can alert to, and thereby prevent, medication errors. This can result in better prescribing, fewer adverse drug

reactions and fewer unnecessary laboratory costs. Through the use of the above-mentioned quality indicators, drug problems in the elderly might be avoided.

There comes a day when frailty and diseases (including co-morbidities) become a reality, leading in turn to extensive drug use. Therefore the rational use of drugs, and patient safety, become key public health issues which should be a high priority issue in the promotion of good health and quality of life among older people.

### Conclusions

There is evidence that drug-related problems:

- are the consequence of medication error or non-compliance, inappropriate prescribing and interactions, and
- can be avoided by the use of quality indicators for drug use, therapy survey and the inclusion of older people in clinical trials.

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CHAPTER 12

# Preventive health services



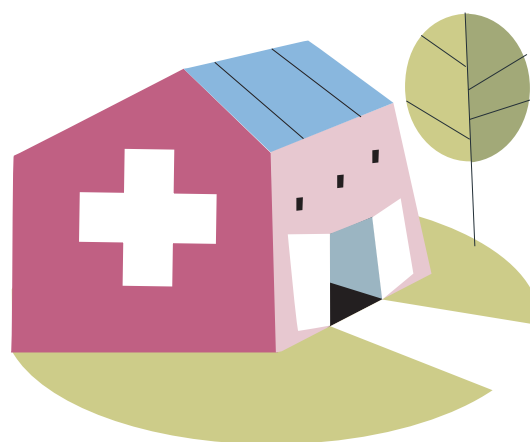
*The Healthy Ageing project suggests that policymakers, NGOs and practitioners consider the following priorities for action when working with older people:*

*Make preventive health services such as vaccination accessible to older people, paying special attention to frail older people. Consider preventive home visits under certain conditions. Take health literacy into account when working with older people.*

# Preventive health services

► The findings in the “Effectiveness of interventions” section are based on assessments made by the authors of the original papers. For search strategy, inclusion criteria etc. see Appendix 5, Literature Review on Healthy Ageing.

It is important to enable older people to continue to live independently in their own homes. Health promotion and preventative measures are necessary for delaying the onset of illness and dependency that eventually lead older people to need long-term care. Older people should receive appropriate support and should also be encouraged to make adequate use of preventive health services. One example of promoting health and delivering preventive care to older people is through regular home visiting (1). The proven effectiveness of home visiting is not unambiguous, as the result of the literature review in this chapter shows. But there is evidence of good results from this intervention. A home visit project in Nordmaling in the north of Sweden shows for example a reduced mortality rate and improved health-related quality of life in the group of older people (see chapter 14, Health promotion for older people is cost-effective). In Denmark people over the age of 75 are legally entitled to home visits (2). A similar law exists in Australia, also valid for inhabitants over 75 years old, with the exception of members of the Aboriginal people who are entitled to regular home visits from the age of 55 (3).



Older people can experience various barriers when accessing preventive health services. Older people with low socioeconomic status or from ethnic minority groups, for example, have poorer cancer outcomes, which is also partly due to lower rates of screening (4). Older patients may have to wait longer or are less likely to receive appropriate treatment. In addition, the barriers may be financial (high advance payments, out-of-pocket payments), administrative (complicated regulations), and physical (no public transport), cultural (language, religion) or psychological and social (lack of social support to seek medical care). Measures to reduce age discrimination and to enhance access to preventive health services should therefore be further investigated and addressed in healthy ageing strategies.

## Health literacy

Primarily used in health care to help patients' understanding of health care information, the concept of health literacy is increasingly becoming an issue in health promotion. Health literacy can be defined as "the capacity to obtain, interpret and understand basic health information and services and the competence to use such information and services to enhance health" (5). The concept of health literacy is therefore closely related to the concept of empowerment.

Survey results (6–8) indicate that health literacy is lower among older age groups. This has enormous importance because of this group's high prevalence of chronic disease. A relationship is found between health literacy and knowledge of chronic disease (9). Older people with inadequate health literacy know significantly less about their chronic disease than those with adequate literacy. Health promotion and patient education need to consider health literacy skills. Even in well-educated older people, communication methods should be adapted to a poorer comprehension of written health care information (7).

Older people with inadequate health literacy are more likely to report failure to receive vaccinations and cancer screening (8). The level of education was not a significant predictor of use of preventive services. It appears that health literacy, rather than level of education, is a more meaningful predictive factor for older people in their use of preventative services (8).

This has important implications for the design of interventions to increase the use of preventative health care. If older people with low literacy skills are less likely to receive vaccinations or cancer screening, then strategies such as reminder systems and low-literacy

educational tools can be used. Jacobson et al (10), for example, showed that a simple, inexpensive, low-literacy educational leaflet significantly increased both pneumococcal vaccination rates and discussions with the health care provider about the vaccine in an elderly, low-literate, minority population.

## EFFECTIVENESS OF INTERVENTIONS

One meta-analysis, one meta-analysis with meta-regression analysis, one systematic review with meta-analysis, one systematic review and one review of community interventions are reported in this chapter.

### Vaccination

Influenza can cause serious illness and death among individuals aged 65 and above (11). Vaccination against influenza is associated with reductions in hospitalisation for heart disease, cerebrovascular disease, pneumonia, influenza and the risk of death. Strategies to increase vaccination levels include reminder systems; mass mailing reminders encourage people aged 50+ to receive an influenza vaccination, and they are cost-saving (11).

### Home visits

Reviews on the effectiveness of home visiting programmes for older people have produced discrepancies in findings due to different methodological approaches; therefore reviews have reported both inconsistent and consistent evidence of effectiveness for some outcome measures (12).

The systematic review by van Haastregt et al. (13) investigated the effectiveness of home visiting in improving the health of people aged

65 and over living in the community for a wide range of outcomes. Of the 15 trials identified in this review, six were carried out on populations aged 75 or over, and the remainder covered those aged over 65. In nine trials, the interventions lasted more than two years and in seven they consisted of at least two visits a year. Outcome measures included the following five categories: psychosocial functioning, physical function, falls, admission to institutions and mortality.

None of the trials reviewed reported any negative effects of intervention. The observed effects of home visits appeared to be modest and inconsistent between trials. The authors report that the trials generally failed to provide details on the intervention, including its mode of delivery, population selection and compliance. In addition, they comment that the wide range and multi-dimensional nature of intervention types may have further weakened the strength of the review's findings. The reason for the failure of van Haastregt et al. to find any consistent evidence of effectiveness for any outcome measure is their methodological approach. This did not allow for any combination with the results of e.g. Elkan et al. (1) and Stuck et al. (14) on meta-analyses and meta-regression analyses.

The systematic review and meta-analysis of 15 studies by Elkan et al. (1) assessed the effectiveness of home visits to people aged 65 years and above. Home visiting was effective in

reducing mortality and admission to long-term institutional care. However, the meta-regression analysis by Stuck et al. (14) only found such effectiveness after nine visits. Elkan et al. (1) found no significant reduction in the number of admissions to hospital, which could be explained by increased admission of older people whose need for hospital care might otherwise have been neglected.

Regarding home care interventions that extend beyond home visits, Hughes et al. (15) have suggested that home care has a significant impact on acute hospital use and significantly reduces hospital readmission days, with small-to-moderate effect sizes. Hughes et al. (15) meta-analysed 22 studies on home care selected from

an initial 412 references. Home-care interventions may include, besides visits, installation of emergency alarm systems, adult day care or foster care.

Stuck et al. (14) conducted a meta-analysis and meta-regression analysis of 18 European and North American trials to evaluate the effect of preventive home visits on nursing-home admissions, mortality and functional status in older people. Meta-analysis showed no overall significant reduction in nursing-home admissions but meta-regression analysis suggested that in trials with more than nine visits, there *was* a significant reduction. Overall, meta-analysis showed that preventive visits had little effect on functional status.

***Reviews on the effectiveness of home visiting programmes for older people have produced discrepancies in findings due to different methodological approaches; therefore reviews have reported both inconsistent and consistent evidence of effectiveness for some outcome measures.***

## Summary of findings

There is evidence to suggest that:

- vaccination against influenza is effective in reducing hospitalisation for heart disease, cerebrovascular disease, pneumonia, influenza and the risk of death (11),
- home-care interventions for older people, extending beyond home visits, are effective in reducing the number of days spent in hospital readmissions (15),
- home visits can have modest effects in reducing mortality, and the evidence is stronger for younger populations aged 73–78 years; but not for older populations aged 80 and above (13, 14), and
- home visits are effective in reducing admission to long-term institutional care/nursing homes for older people (14), and the evidence is stronger when older people are followed up with more than nine visits.

There is inconclusive evidence for:

- the effectiveness of preventive home visits in improving the psychosocial functioning of older people (1, 13, 14),
- the effectiveness of home visits in improving physical functioning or reducing physical decline in older people (1, 13, 14). However, in trials including multidimensional assessment and follow-up visits, meta-regression analysis has shown reduced functional decline, but not in other trials (14).

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CHAPTER 13

# Good practice





# Good practice

**G**ood practice in health promotion is based on evidence: statistics, research and experience from projects, programmes etc. This chapter seeks to show good practice from EU Member States.

The range of factors affecting health means action is required across all policy areas, involving most sectors, and operating at all levels of society. People making changes in their daily lives is a vital component, but their ability to make these choices is often determined by issues that are harder for an individual to influence, such as access to work, quality of housing and the environment, community facilities and education. See also Framework page 22.

NGOs play an important role, as the many examples in this field show. The European Older People's Platform (AGE), which aims to voice and promote the interests of older people in the European Union, presents several projects on the Healthy Ageing website.

The Healthy Ageing project has collected sixteen examples of good practice using a questionnaire sent to the project partners. The result is presented below (see also [www.healthyageing.nu](http://www.healthyageing.nu)).

Sustainability when working with public health is of great importance. Many of the examples of good practice are intended to be

transformed into programmes or integrated with continuing operations. One example is the description of the Scottish Mental Health and Well-being in Later Life programme.

## EXAMPLES OF GOOD PRACTICE

The examples of good practice serve as illustrations of interventions that are successful, transferable and sustainable ways of promoting healthy ageing. The aim is not a complete overview of good practice. The examples demonstrate much know-how and new ideas on how to cope with the ageing process in an active and positive way.

The sixteen projects address the promotion of healthy ageing in later stages of life (50+). They reflect creative solutions to at least one major problem and inequality in health.

Nine of the projects target all older people in the community. Six are scientifically designed with an intervention group and a control group. One includes all residents of three homes for older people. Two projects are nationwide and one is connected with a trade union.

Staff working with the direct target group are mostly volunteers and public-health professionals, health visitors and professional carers of older people, but other professional groups may also be involved. Researchers are

responsible for the planning and implementation of projects. The projects are mainly funded locally, regionally or nationally with budgets for two-to-three years.

The present Report describes the aims and the outcomes of the sixteen examples of good practice. A full description of the examples, and the questionnaire, are published at [www.healthyageing.nu](http://www.healthyageing.nu).

#### *The most common major topics*

Most projects cover several major topics/health determinants. The most common are “social capital” and “physical activity”. Most of the projects where social capital is a major topic use physical activities such as walking for solving problems related to loneliness and coping physically with ageing. Three projects focus on social capital and mental health. One aim is to alleviate loneliness by creating psycho-social groups for rehabilitation. Another is to empower older people to participate in health programmes and activities.

Two projects focus solely on physical activities. The Norwegian project seeks to prove scientifically the importance of correct training for physical strength, fitness and balance and at identifying appropriate testing equipment for measuring its results. The Dutch project, using earlier scientific research, is disseminating results to all regions. Seven projects focus on injury prevention in connection with physical activity. They regard injuries and falls as mostly connected to individuals rather than to the environment. One project has a municipal technical department as a collaborator.

From an equity point of view a project such as Bozorgan Day Centre is interesting as it aims to promote health and well-being for older Iranian women, and their integration

into Swedish society and to show methods to maintain control and psychological well-being. The Hambleton Strollers Working for Health is another example of equity, as it aims to encourage sedentary, disadvantaged and older individuals to take up walking.

#### *Some examples from the projects*

- older people act as peer counsellors for fellow citizens,
- art, exercise and therapeutic writing are used in group psychotherapy to empower and socially activate older people,
- health visits to elderly immigrants, 60 + and to older people 75 +,
- day centre for elderly immigrants,
- self-reflection and self-perception as an integrated project part,
- local telephone help lines for older people,
- “Third Age Popular Universities” for training and education,
- turning local circumstances (winter, snow, ice) into a resource by opening a privately-owned heated football stadium for walking during icy winter months,
- arranging transport to sports or cultural activities,
- engaging e.g. local shopkeepers to inform on exercise and nutrition at the local supermarket,
- organised walks and “walk packs”,
- production of "map walk" leaflets for independent walks.

### *Innovative perspective*

The variety of activities offered in the projects promoting healthy ageing demonstrates the efforts to take up the challenges involved in activating older people physically and stimulating them socially.

### *Inequalities*

Six projects give special attention to gender and inequality. Though not gender-sensitive as such, one project addresses inequalities in health for older people, including migrant seniors, with low socioeconomic status. People often need and want different kinds of activity, need differing encouragement to participate or require more effort. People with a disability must also be given special consideration.

### *Quality management assurance*

Nine projects did not answer the question on quality management assurance. The rest referred to systematic teamwork, supervision, process evaluation, external evaluation, documentation, continuous monitoring, reflection and definition of quality standards. Reference was also made to the project's scientific approach with randomised controlled trial and review by an ethics board. A systematic application of sophisticated quality management/assurance methods could probably increase project quality.

Collaboration and shared responsibility between a municipality, local health care and a special group for discussions, project progress reports and suggestions for improvement seem to benefit the management of activities.

### *Cost benefit*

In eight of the projects no cost-benefit analyses were carried out. The Keep Walking project concluded that physical activity in older people

reduces the need for specialised home-care services and institutional care. It is cost effective and benefits quality of life. The health-economic analysis of the Braveheart project indicates savings in hospital beds through implementation of the project. The cost-analysis of preventive home visits in Sweden showed savings in home care, in-patient care and emergency visits to general practitioners.

### *Evaluation and outcomes*

A careful description of a project, its aims, objectives and activities, gives a fair basis for exchange of experience and is a prerequisite for transparency, quality assurance and evaluation. Quantitative and qualitative methods, in combination or alone, are most often used in the projects. Measuring before and after intervention was done in four projects and two had external final evaluations. Questionnaires, health-profile interviews and cost-utility analyses were used.

Older people participating in the projects exemplified consumed less health care whether the project focused on physical, educational or social activities. There was also a decrease in mortality in groups offered home visits by health care visitors.

Projects aimed at alleviating loneliness may lead to cognitive improvement and improved psychological well-being, especially for older immigrants with severe cultural and language barriers. Integration demands new efforts from the community, and empowerment may influence health positively and reduce the consumption of social and health services. Programmes focusing on "health literacy" have resulted in improved eating habits and an increase in physical activity.

### *Transparency and documentation*

The analysis of transparency and documentation is positive. The original grant application submitted by the programme/project(s) sets out the aims and objectives. The results – as far as they are available, depending on how far the project has progressed – are presented in reports and /or as scientific papers. Not all the documentation is in English.

### *Potential for replication and transfer*

The examples of good practice have been piloted locally, and in some cases similar projects are being implemented in other parts of the country. Most of the projects are considered suitable for replication and transfer to other European countries, account taken of cultural and other environments. Detailed project descriptions, transparency, scientific approach and links to international networks such as the WHO Healthy Cities project increase the potential for replication and transferability.

### **Experience from good practice**

#### *How to involve the least motivated*

One crucial question for health promotion is how to motivate people to change their behaviour. This is especially so for those who for cultural, social and/or economic reasons lack motivation. Most of the healthy-ageing projects seem sensitive to this issue, involving volunteers or people from the target group in their planning.

Awareness has increased about how to motivate passive and sedentary older people to adopt a healthier lifestyle. Many examples of good practice focus on walking, but their aim is not only to improve physical health but also to alleviate loneliness and create “social capital”

by getting people to know their surroundings. “Walking” is then also about finding suitable paths and interesting places away from traffic and providing self-help information. Walking programmes may improve both physical and mental health and can lead to new friends, but invitations have to be active or they will reach only the already enlightened. Safety during outdoor wintertime activities requires special efforts when the target group is older people with decreased functional capacity.

It may take a long time and hard work to involve the least motivated people – often also the most needy – in activities. “Open” programmes with focal points such as “women’s get-togethers”, “men’s breakfasts” and “regulars’ tables” (for men and women caring for someone at home) may prove successful in this respect but need to be combined with actively inviting those who do not attend.

The gender perspective demands special attention. Women and men have different health needs and different ways of dealing with health issues. More must be learned of how men relate to health promotion and what issues they judge are the most important. Women are usually more interested in taking part in health promoting activities and special consideration must be taken in programme design so as to make men feel at home.

### *Collaboration for health promotion*

Affiliation with international organisations such as the European Commission, European NGOs and the WHO seems to give projects a higher status and a better chance of being recognised at national, regional and local levels. A city's successful application to the WHO for healthy-city status could prompt commitment to the development and implementation of a healthy-ageing agenda. A politically strong and supportive management group, sharing the responsibility between the municipality and the local health care district, encourages partnership action, and the possibility of long-term financing increases. A special project group may be needed for reporting and discussions about progress.

Many of the projects were set up in collaboration with voluntary organisations, and volunteers interacted with the target group of older people. The voluntary organisations felt that when public organisations gave priority to the project, this then also stimulated them to participate, which in turn attracted many older people as volunteers and participants. Volunteers committed to the programme, dedicated staff members and target-group participation were of crucial importance for the success of the projects. Some project groups even continued to meet when the actual project was finished.

Collaboration between professional staff and trained volunteers benefits both parties: the volunteers gain new knowledge and the assurance that their knowledge and arguments are well-founded. An important task for professional staff is to point out target groups at risk or with special needs. They may also ensure that knowledge is evidence-based and that ethical, cultural, scientific and technical

issues are considered. For professionals and politicians, cooperation with trained volunteers is an inexpensive way of disseminating messages: the collaboration affords valuable know-how about the target group and the way messages are best disseminated.

Partners for healthy-ageing projects can be organisations for the retired, trade unions, study organisations, sports associations, churches, Lions Clubs, etc.

### *How to disseminate the messages*

The more effort that is invested in the dissemination of knowledge about the project, the more likely it is to reach the general public and get support from opinion leaders and the media. Publication of articles in the local press, public discussions and lectures and other events are ways of making the messages known among politicians, organisations and older people, who then may act as pressure groups on their own behalf.

Training manuals, teaching materials for staff and volunteers, pamphlets and the Internet can be used to transfer professional knowledge to non-professionals and interest them in the programme. Develop resource lists for the topics, advertise activities in the local press and get the project "branded" so that people can recognise and identify with it. And "translate" research papers into messages understood by ordinary people.

### *Problems to overcome*

Lack of money and weak support from politicians and decision-makers were the most usual problems mentioned in the project questionnaires. It is important to work strategically and involve politicians and decision-makers early in the process of defining and planning

for a project. Referring to successful projects in other areas or countries or membership of an international network may help to create more status for the project – and for those deciding to set it up. Difficulties related to project management and collaboration with other institutions may be alleviated by careful planning and clear division of responsibilities. “Project fatigue” is not unusual in municipal departments and health care: it is important to fit the project into the normal forms of activity. This may also ensure a life beyond the time frame of the project.

A problem that can only be dealt with through information and education is the length of time needed for behaviour change, and that change requires multi-level collaboration. One example is how attitudes to smoking have changed during the past twenty years. Results of health promotion also take a long time to prove, and are difficult to prove statistically. Increased well-being affects the development of disease and thus has consequences for the economy of health care. Many diseases that can be prevented by a healthier life style take a long time to develop, so decreases perhaps cannot be seen in statistics until after many years.

Health promotion is – and should be – an ongoing activity: new target groups will always appear, outside the current aims of the activity and the age of the target group. It is important to involve older people in the planning and implementation of projects and to rely on their knowledge and experience when designing activities. One challenge of the Healthy Ageing projects is the issue of empowerment: how powerful older people are allowed to be when dealing with their own health and well-being.

## Conclusions

The 16 projects presented indicate the importance of sustainability in public health work. The possibility of transforming projects into programmes should be included in the planning. Collaboration at several levels is needed for effective health promotion. Most of the projects are viewed as replicable in other countries.

The most common major topics in the projects were *social capital* and *physical activity*, often in combination. They may lead both to improvement of physical health and alleviation of loneliness. When evaluating projects targeting physical activity, it may be important to look outside the direct goals and measure how people interact and make friends, thus contributing to “social capital”.

The key issue is how to motivate people to change habits, especially those who for cultural, social and/or economic reasons are least motivated. Older people may be very sensitive to suggestions for lifestyle changes from younger people. Gender, too: men are more difficult to motivate to participate. The projects suggest that involving people from the target group in the planning and implementation phases may activate the less motivated and encourage their participation.

Cost-benefit analyses of programmes activating older people indicate that they benefit quality of life and reduce the consumption of health care.

## List of good practice examples

For more information, see [www.healthyageing.nu](http://www.healthyageing.nu)

### Austria

*Promoting healthy ageing in a community setting*

The aims are

- to develop and test initiatives to promote healthy ageing in a community setting through participation of target groups, gender equity also considered, and
- to create a healthy environment by sustaining the programmes developed.

Outcome

The project is still in progress but some expected outcomes are:

- that the target groups participate in work groups and in the programmes,
- that target group members participate in training and qualifying activities, and
- that health promotion for the elderly has become a hot topic in political discussions and in local and provincial government planning.

### England

*Hambleton Strollers Walking for Health*

The aim is

- to encourage sedentary, disadvantaged and older individuals to take up walking.

Outcome

According to the Health Walk Questionnaire:

- two-thirds of the participants reported a health condition which could improve through exercise,
- fifty-five per cent of the walkers have increased their frequency of walking since joining the scheme,
- "socialising" was a significant reason for joining the scheme. The walkers have learned where to walk and with whom. Walk packs will help with this, but no assessment has yet been carried out.

### The Czech Republic

*The Healthy Region of North Bohemia – Add Years to Life and Life to Years*

The aim is

- to improve life expectancy, health and quality of life for the elderly by improving their health literacy, changing their behaviour from passive survival to active control and enabling them to participate in social activities.

Outcome

- improved food intake in homes for older people in the North Bohemia Region. Active participation and great interest of residents and staff in project activities. Regional Conference on Older People's Health,
- lifestyle information in newsletter for homes for older people and in regional media.



## Finland

*Research and development project for geriatric rehabilitation/Loneliness of the elderly*

The aim is

- to alleviate loneliness among the elderly and to improve their quality of life.

Outcome

- loneliness was alleviated among elderly persons in the intervention groups,
- intervention group members showed more improvements in health, cognition, psychological well-being and number of new friends than controls did, and
- the group continued to meet after the direct intervention.

### *Keep Walking*

The aim was

- to improve functional capacity, quality of life and autonomy among frail 75 + people living at home by increasing their opportunities to walk and move outside their homes.

Outcome

- the aims of this action research project have been well achieved,
- outdoor mobility among the target group remained constant or improved,
- services were developed for the target group, outdoor mobility environments produced new ideas (benches for resting, slower traffic lights, accessibility), social support models were improved (outdoor and shopping companions were established and trained), and
- outdoor mobility was included in home care planning and could be ordered in the same way as meal services.

## Italy

*AUSER RisorsAnziani – ONLUS self-management of services and action*

The aims are

- to develop social promotion and solidarity activities, especially for the elderly and between generations,
- to improve quality of life and relationships with other people,
- to maintain and develop active cognitive skills,
- to create, in collaboration with public institutions, structures for social networks and family support services in the neighbourhood, and
- to promote active citizenship with responsible participation of citizens in order to defend human rights.

Outcome

The project has not yet been evaluated.

### *Older people as resources for the community*

The aim is

- to shift attention from the elderly person as a service and intervention beneficiary to a person with experience, skills, competence, practical and theoretical abilities, history and wisdom – a resource for the area, the town and the whole community.

Outcome

The project has not yet been evaluated.

## Netherlands

### *Groningen Active Living Model (GALM)*

The aim is

- to get non-active or insufficiently active seniors (55–65 years) to become and stay active. Orientation towards healthy seniors as well as those suffering from a chronic disease and/or physical handicap.

Outcome

- the pilot studies proved that the GALM Strategy encourages sedentary seniors to be more active physically, and
- the project had positive effects on endurance, fitness, leg-power, dynamic balance, litheness in shoulders, BMI and nutrition.

### *Periodic Preventive*

#### *Senior Health Screening*

The aims were

- for older persons to get insight into their own health and how to age healthily using early and periodic screening, health education and, if necessary, referral to relevant health professionals, and
- as sub-aims, individual and joint health profit; increase in client's self management; possible shifting of use of home-care provision; staying healthy as long as possible; social participation.

Outcome

- most advice was given on high blood pressure, cholesterol, weight, fluid intake and physical activity. The proportion of participants who followed up on the advice given was 74–91 per cent,
- when advice was given on high blood pressure, blood pressure became lower,

- referrals were mostly to a general practitioner, dietician, optician, audiologist or elder care consultant,
- experienced health did not change after the intervention,
- loneliness decreased,
- younger seniors were more likely to change their health behaviour than older seniors, and
- evidence of early diagnosis of health problems and growing self-reliance.

### *In Anticipation of the Golden Years*

The aim was

- to improve pro-active competencies and stimulate investment in a (personal) future and prepare for aging.

Outcome, process evaluation

- attendance rate was satisfactory and the applicability of the techniques used was shown.

Outcome, effect evaluation

- participants' pro-active coping competencies and approach to preparing for aging improved significantly. Results remained stable three months after completion of the intervention, and
- no negative side-effects in terms of worrying or negative mood, nor generalised effects on self-efficacy.

## Norway

*Study A: Effects of a multi-factorial training programme on physical fitness and physical function in a group of older people*

The aim was

- to determine the possible effects of a multi-factorial training programme on physical fitness and physical function for a group of older persons  $\geq 65$  years living at home.

*Study B: Comparison of the effects of high-power-machine strength training and functional strength + balance training on functional and traditional muscular strength in a group of older individuals ( $\geq 65$  years).*

The aim was

- to determine the possible effects of high-power-machine strength training and functional strength + balance training on functional and traditional muscular strength in a group of older individuals ( $>65$  years).

Outcome

Study A – preliminary results:

- the training group achieved significant ( $P < 0.05$ ) increases in walking speed, aerobic endurance and muscle strength, and
- the training group also reported increased ADL function and decreased pain experience.

Study B – Analysis under way.

## Scotland

*Braveheart*

The aims are

- to increase participants' awareness of their illness and help them achieve a healthy lifestyle,

- to increase the information and guidance available to help participants make lifestyle changes to improve well-being,
- to enable participants to make more informed choices,
- to increase independence and improve the well-being of participants in community life, and
- to reduce the likelihood of hospital admission.

Outcome

- the aims are being achieved for those joining the programme. Behaviour changes include increased physical activity and improved dietary habits, and
- greater awareness and understanding of diagnosis and medication; benefits from the social element of meeting others with similar health issues.

*Stirling Healthy Ageing Project*

The aim was

- to maximise the current and future health and well-being of people over 50 years in the Stirling area through involvement of local citizens, local and national organisations and partner members of the WHO Healthy Cities (WHO HC) Network.

Outcome

- the aim of creating a partnership approach between agencies and the WHO HC project, together with the involvement of older people has been achieved, and
- improvement in health and well-being will be assessed once action areas have been developed and implemented.

## Sweden

### *The Bozorgan day centre*

The aims were

- to promote health and well-being for older Iranian women, and their integration into Swedish society, and
- to show methods and opportunities during these women's life in Sweden to prolong health, sustain the desire to live, enhance feelings of security and maintain control and psychological well-being.

Outcome

- the aims have been achieved and there are clear changes in the behaviour of the target group,
- there are social changes as well.

### *Cost-utility analysis of preventive home visits in Nordmaling*

The aim was

- to show how a health-economic analysis can be carried out with a focus on older people and to test the economic feasibility of preventive home visits to persons above 75 years.

Two visits per year were made during two years. Two professionals (one district nurse and one social worker) made the visits.

Outcome

- anxiety gradually decreased, especially among the women,
- the numbers reporting frequent or constant pain decreased,
- the percentage vaccinated against influenza increased,
- reduced inpatient care at hospital and nursing homes as well as home care,

- the percentage of emergency visits to GPs was three times as high in the control group as in the intervention group,
- deaths were half the expected number compared to those with no intervention. During a follow-up three years post-project, no effect remained in either group. (See also Chapter 14, Health promotion for older people is cost effective).

### *Well-being for older persons in Kristianstad*

The aims are

- to develop supporting environments for older people to facilitate the development of social networks,
- to develop co-operation between the municipality, health care district, adult educational associations, voluntary organisations, etc to foster supportive environments for older people to help reduce health inequalities,
- to increase existing and soon-to-be pensioners' awareness of the importance of a lifestyle with both new and old social networks, involving participation and influence on their lives to promote health, and
- to broaden the competence of care staff to include systematic efforts to promote health and prevent illness.

Outcome

- environmental or social changes have been noted as the social networks have grown; people have got to know each other and learned from each other – social capital has grown.

## MENTAL HEALTH WELL-BEING IN LATER LIFE PROGRAMME, SCOTLAND

Sustainability is of great importance in public health work. A good example of a health-promotion programme targeting older people is the Scottish Mental Health Well-being in Later Life Programme.

The Mental Health and Well-being in Later Life Programme by the Scottish Executive is informed by research (1, 2) as well as consultation (3), with older people, practitioners, academics and policy makers at both national and local levels.

The programme aims to improve the health and well-being of older people across Scotland by bringing together evidence of effective promotion of mental health, disseminating the evidence and acting as a catalyst to assist changes in practice and policy.

### Three interlocking strands

The programme has three main interlocking strands, which have been overseen by a multi-agency national steering group, meeting three times annually. Sub-groups have been developed to support the three key areas of the programme:

#### “Getting involved was the best thing I ever did”

“Sixteen years ago when I retired, I suffered badly from depression. I had worked all my life since I was fourteen and now, suddenly, I had nothing to do. The first few months were wonderful – lots of ‘free time’ to go on bus trips, go swimming and take long walks. But there was something missing. After a while, all that ‘free time’ became my prison. I began to dread every day. It got to the stage where I couldn’t answer the phone and didn’t want to go out. I had lost my way, and the more I said ‘I can’t cope’, the more I believed it.

My doctor could see what I couldn’t. I needed something to do – to be part of the community again. I took the doctor’s advice, and the struggle to regain control of my life started. It wasn’t easy and, like all of us, I still have my moments, but I now have my life back.

When I was informed that the workshop was going to take place, I couldn’t have been more pleased. Mental health has been the poor relation for too long, and the notion of well-being – two simple words that mean such a lot – is vital for older people. But the thing that excited me most was that the workshop was giving older people like me the chance to talk about our hopes, our fears, our worries and our dreams. It is those views and experiences that have shaped the action plan that developed from the workshop, and it is those views and experiences that should now determine how the action plan is brought to life.”

*Nell McFadden, participant in a course to promote older people’s participation (1).*

- gathering the evidence and supporting the knowledge transfer of evidence and good practice,
- capacity-building (Health in Later Life Regional Interest Groups; Small Project Award Scheme; Education for Participation Courses), and
- resource development.

The programme is working in partnership with older people, policy makers, practitioners, voluntary organisations and academics.

One part of the capacity-building efforts is Education for Participation courses. The aim is to maximise older people's contribution to partnership-working to ensure that the older person's voice is heard and is effective, to encourage confidence, participation and feeling of community belonging.

Another example of capacity-building is Health in Later Life Regional Interest Groups. Three such groups have been established across Scotland.

A third example is support to interesting and innovative work through a Small Projects Award Scheme. The projects have been funded on the basis that they involve older people, tackle health inequalities and ensure partnership working; and are committed to evaluation. The programme is providing support, information and training to the projects, including planning, monitoring, evaluation and data collection, and communication.

The programme aims to develop the existing portfolio of resources and ensure that older people are appropriately represented in all relevant publications.

### Family and friends – a key issue

The key aim of the “Mental Health and Well-being in later life – older people's perception” research was to help older people highlight the issues that affect mental health and well-being in later years. The key issues were:

- family and friends,
- positive attitude,
- keeping active,
- maintaining capability and independence, and
- negotiating transitions – including financial security.

The most effective initiatives were ones in which older people themselves had some input. The evidence points to the positive influence of spirituality and religious belief on mental health in later life. The importance of individual and social support, sense of purpose and the ability to let go of one's worries and responsibilities were also important (4).

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# Health promotion for older people is cost-effective





# Health promotion for older people is cost-effective

There will soon be millions of hundred-year-olds, a shortage of medical professionals and, possibly, limited growth of resources. Serious consideration of this scenario requires that the cost-effectiveness of measures for promoting health and preventing illness among older people to be better understood.

## WHAT IS COST-EFFECTIVENESS?

Cost-effectiveness analysis (CEA) is often considered to be a simple and straightforward tool for resource allocation. Most common is a societal perspective that is based on welfare economics rooted in utilitarian philosophy. The goal of society is assumed to be the maximisation of utility. Following this view in the evaluation of health care programmes means that all health effects, costs and savings should be counted irrespectively of who the beneficiary and the payer are. In the context of health care and public health, welfare maximisation is replaced by health maximisation. One description of this process runs (1):

“Most often, CEA is applied from a societal viewpoint or from the viewpoint of a national health care system. In this formulation, the implied decision-maker is an agent of society at large, and the objective is to achieve the

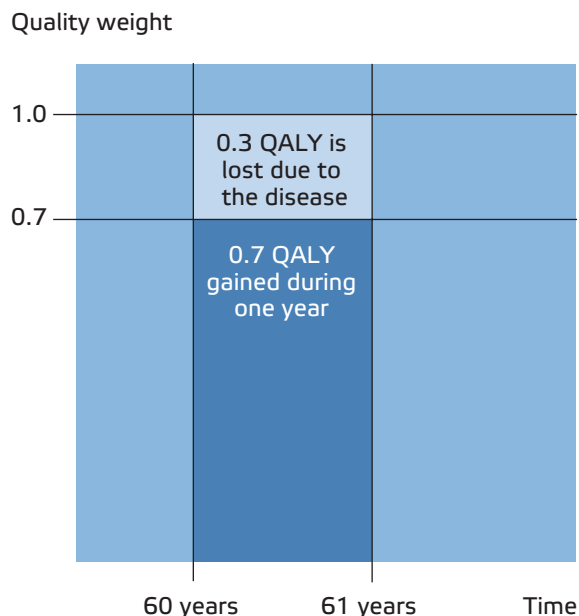


Figure 24. The construction of QALY. SOURCE: LINDHOLM AND SAHLÉN, 2006.

maximum possible health benefit, for example life years, or quality-adjusted life years (QALYs) subject to overall limits on health-care resources”.

QALY is nowadays a common measure of health gains. It is a composite measure combining length of life and quality of life into one single scale (figure 24). The vertical axis repre-

sents health-related quality of life. Time free from disease is weighted 1, dead is 0 and time of disease is below 1. The QALYs lived during a given period are the product of the weighting and the length of the period. If an individual during one year suffers a disease weighted 0.7, the QALY =  $0.7 \times 1 \text{ years} = 0.7 \text{ QALY}$ .

Cost-effectiveness is usually reported as a ratio, the cost per health unit (QALY, gained life year etc.). The lower the cost, the better the cost-effectiveness of the intervention.

## EXAMPLES OF COST-EFFECTIVENESS IN PROGRAMMES FOR OLDER PEOPLE

This section illustrates important features in measures that have been shown to be cost-effective. The first example is five studies aimed at increasing physical activity among older people, analysed in a published review (2). The second example is home visits among persons older than 75 years in Nordmaling, Sweden (3); the third is a programme for preventing hip fractures in Västra Götaland, Sweden (4).

### Physical activity

Several studies have investigated physical activity among older people. Munro compares two hypothetical cohorts aged 65 and older (2). One did aerobics twice a week led by qualified instructors; the other had no intervention. The calculated cost per life year gained was £330. Robertson reports a randomised controlled trial with 240 adults aged 75 years and older (5). Individual home-based exercise was prescribed and five home visits were made by a nurse over six months. For people older than 80 years, the savings in health care were higher

than the costs. In a second, similar study reported by Robertson (6), the cost was £ 121 per prevented fall.

Wilson reports a study where Yang-style tai chi classes were given twice a week to nursing home residents. Two hypothetical cohorts were compared and savings in health-care costs were larger than costs (7). Monro also reports a clustered, randomised community intervention to promote physical activity for people aged 65 and over. The intervention cost was about € 17 000 per QALY gained (8).

### Preventive home visits

The Nordmaling study (3) was a randomised controlled trial with 200 healthy pensioners. After two years and four preventive home visits they were compared with 350 controls. Mortality and, in some respects, use of health care decreased in the intervention group. A cost-utility analysis showed a moderate cost per QALY, € 18 500. The analysis was made with a societal perspective and a life time span.

### Hip-fracture prevention

Analysis of the hip-fracture prevention programme “A safe and secure municipality” in Västra Götaland indicates that a comprehensive information package can be cost-effective (4). The costs of taking care of the prevented-hip-fracture patients would have been larger than the actual costs of the intervention. Transferring the reduction in hip fractures the whole Västra Götaland region, would reduce the costs for hip fractures from €60 million to € 45 million.

The studies reported here apply different health-economic models, but they all claim that the interventions studied are cost-effective. This seems reasonable. The next section presents some general observations.

## ARE OLDER PEOPLE'S PROGRAMMES COST-EFFECTIVE?

In health care it is crucial to match interventions and target groups. An intervention proven to be cost-effective in one target group may not necessarily work well in all others. Thus it would be wrong to state generally that prevention among older people is cost-effective. But there are some conditions that distinguish older people (say 65 and older) from the middle-aged people. These conditions indicate lower costs and better effects in the older group:

- the risk of illness is high,
- the incentives for participation in health promoting activities may be significant,
- the time cost is low.

Most diseases correlate with age; the risk of disease increases with age as do the consequences. The incidence of heart diseases, diabetes, cancer etc. increases with age. At the same time, biological resistance decreases with age: a hip fracture, for instance, is more severe the older the victim is. Thus the potential health gains of a prevention programme are greater in the older population. Drug treatment of hypertension is a well-known example of this – the older the patient is, the more cost-effective the treatment.

Given the general awareness of this age-disease pattern, older people are more likely to comply with advice or other measures. Reasons for a rapid change to a more healthy lifestyle become more obvious when people see their own generation being hit by strokes and cancer.

Older people have more control of their own time and set their priorities according to their own values. In the Västerbotten Intervention

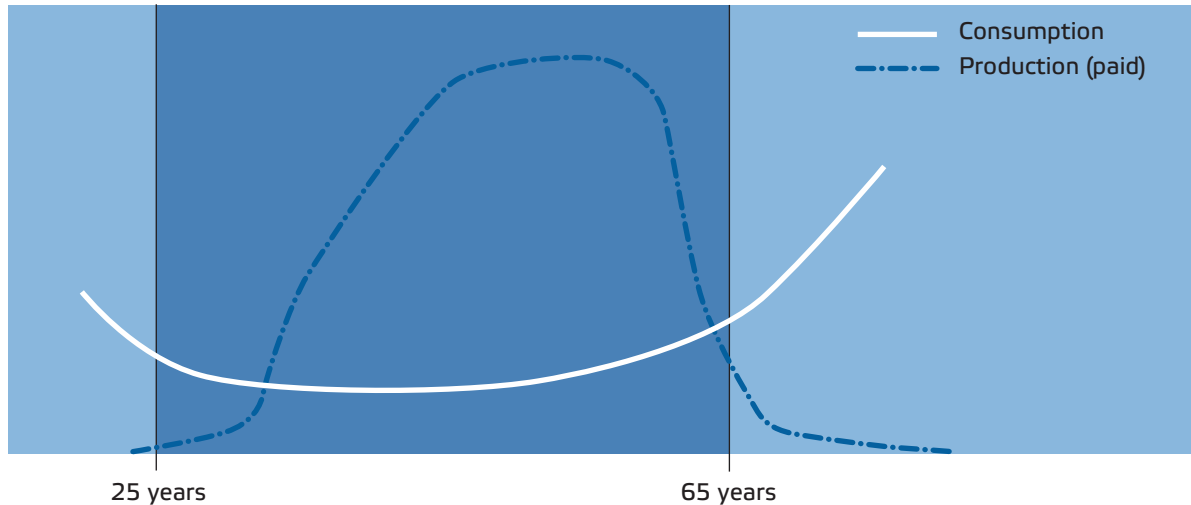
Project the youngest age group (30 years) had a significantly lower participation rate than the older ones (9) and was later excluded from the intervention.

Finally, is it reasonable to presume that retired people, on average, have a lower opportunity cost for time devoted to exercise or other health-creating activities. Work in the informal sector, taking care of grandchildren and helping other older people are of course strong competitors for their time.

## ARE THERE PROBLEMS WHEN APPLYING COST-EFFECTIVENESS TO OLDER PEOPLE?

When trying to understand the principles of cost-effectiveness analysis one starting point is the typical life-time pattern of consumption and production (figure 25). In western societies, most people enter the labour market at around age 20–25 and retire around age 60–65. Illness in a worker causes a production loss, hence health is a prerequisite for production. So if people can stay healthy or quickly return to health after illness, production will be greater. A socioeconomic analysis takes this consequence into account, meaning that the cost of treatment is counterbalanced by increased production capacity, usually measured as the individual's gross income plus employer-paid benefits.

As stated earlier, the societal perspective is recommended by most economists. However, the main argument against this view is that it is unfair to include personal income as a savings factor in the calculations because doing so will discriminate against people with low incomes, for example women, pensioners, ethnic groups and immigrants.



**Figure 25.** Production / consumption pattern during a lifetime.  
SOURCE: LINDHOLM AND SAHLÉN, 2006.

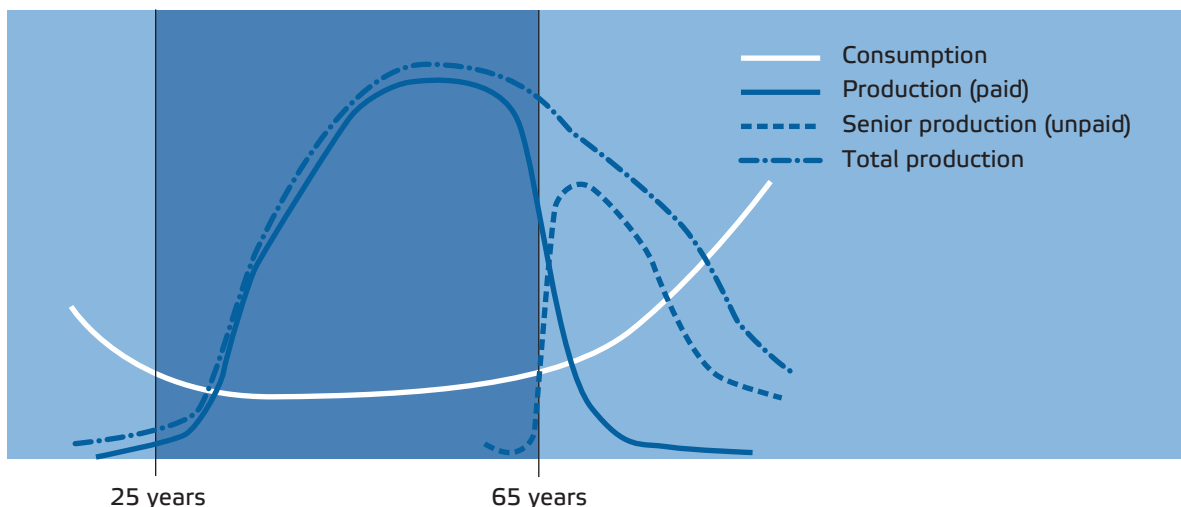
To some extent it also seems reasonable to include consumption in the analysis, and this pattern is completely different from the production pattern (figure 25). There is an obvious increase in the consumption of health and social care after retirement. Children also consume significant resources, mainly child-care and education. So production and consumption patterns do not follow each other, rather the opposite, in that typical individuals consume at the highest levels when their contribution to production is at its lowest levels. Thus, if the individual's total contribution to production plus total consumption is included, most older people would be regarded as net consumers while most people of working ages would be regarded as net producers.

It is arguably unfair to regard production as non-existent when the target group is older, as production is included in other age groups. Older people do much of social importance. The fact that we do not usually include this unpaid senior production in economic analysis does not make it less important.

In figure 26, unpaid senior production has been added to traditional paid production. The sum represents the age-specific values that could be used in a health-economic evaluation. Even if we quantify and use this senior production, however, the entire production ability of older people will not equal that of their youngsters. Bearing this in mind, it can be wise to make health-economic evaluations in two steps: first without production in the calculations and then with production.

Including senior production (taking care of grandchildren, informal work in associations etc.) just like other age groups' production, can make a difference in health-economic analysis. The concept of senior production can also be viewed from a gender perspective. A large part of senior production is carried out by women, since women live longer and take greater responsibility for the care of spouses and children.

Figures 25 and 26 illustrate one more important phenomenon. If gained health is measured in life-years or in quality-adjusted life-years, the potential gain depends heavily on the age



**Figure 26:** Total production and its components.  
 SOURCE: LINDHOLM AND SAHLÉN, 2006.

of the target group. The older the group, the less potential to gain. One way to handle these potential risks of unfairness when designing the economic analysis is to consider the purpose of the analysis. The authors see health economic analysis as an aid to decision-making, mainly in the public sector. Resources for health care are collected through taxes or insurance premiums, and they should be distributed according to widespread views of fairness. If health-economic analyses fail to meet these fairness criteria, decision-makers may disregard them.

Discussions lead in many countries to the use of policy documents as guidance. In Sweden for instance, the Health Care Act gives general rules for setting priorities in health care. The most prominent rule is that universal human dignity gives the same right to health care. This has not been interpreted in this way, as prioritising is not allowed; but some criteria are acceptable and others not: need is acceptable while income is not. The authors interpretation is that health-economic analysis as a measure of need should try to estimate the severity of a condition plus

the change that can be achieved by treatment. Cost (resources used in health care) should be taken into account but not production gains. A life-saving intervention will draw on resources during added life years. Sometimes these costs are included in health-economic analysis, sometimes not. Their relevance to decision-making is still unclear in Sweden.

The Swedish Health Care Act, including its preparatory works, does not consider that life years gained or quality-adjusted life years gained conflict with the principles of human dignity and need. However, some international literature has claimed that they do.

The use of time measures can be defended with several arguments. One is the view that pain and suffering have a time dimension: the longer pain lasts the worse it is. Imagine a chronic disease that can begin either in childhood or in old age. The consequences are identical for child and adult apart from the age at onset. Most people would judge the condition as more severe for the child, since the time of pain is longer. A measure without a time

dimension would consequently be unfair against the young. On the other hand a measure lacking any scale of severity would be unfair to people with serious conditions. Since serious conditions are more common amongst older people it would be unfair to them to exclude the dimension of severity.

A second argument stresses that life itself is valuable and that people in general strive for as long a life as possible. Older people are thus lucky in that they have already lived a long life, while young people have not yet had the same amount of the good “life”, and cannot be sure of ever achieving it either. This way of reasoning indicates that the value of a prevented death depends on age.

In the context of older people, the cost-effectiveness analyst can expect to meet several ethical dilemmas. One person can convincingly defend the use of a time-dependent measure but another can credibly criticize its use. A possible compromise can be the use of a “time window”. Here the follow-up time is reduced from life-long to, say, around five years. Within this window, all costs except production gained are counted, as well as life years gained. After the window, nothing is counted. Thus the maximal potential health gain is five years, even if a young life is saved. The window keeps a time dimension in health but restricts possible variation to five years.

This idea resembles discounting, an established technique in economics with the purpose of scaling down the weight of events in the future. Discounting allows a continuous ‘weight reduction’ in future events – the more distant, the less value. A window is more radical in that all events up to our ‘five years’ have full and equal weight, while all subsequent events have zero weight.

A further argument for such a window is based on uncertainty. In general, the more distant in the future an event is, the less reliable are data predictions. Thus a window attaches all importance to more immediate and certain data and ignores distant and uncertain data.

## CONCLUSIONS

- There are very few cost-effectiveness studies of public health interventions with older people as the main target group.
- However, some examples prove that programmes for older people can be very cost-effective.
- The authors of this chapter believe there are some basic biological (risk of illness), psychological (risk-awareness) and social (lower-opportunity-cost-of-time) conditions that distinguish older people (say 65 and older) from the middle-aged. These conditions point towards lower costs and better effects in the older group when public-health interventions are undertaken.
- There exists no consensus about the cost-effectiveness model. Some variants of cost-effective analysis are unfair towards older people, for instance if production gains are counted for people of working ages. The authors suggest as a matter of principle a model that tallies with widespread views on fairness in health care use. This may result in different cost-effectiveness models in different countries.

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CHAPTER 15

# International policies



# International policies

## WHO AND UN POLICIES

International healthy-ageing policies trace their origins to the ‘pillars’ of health promotion, including the 1978 Declaration of Alma-Ata (1) which first affirmed that health is a fundamental human right and called for multi-sectoral action to protect and promote “health for all”; and the 1986 Ottawa Charter for Health Promotion (2) which articulated a framework for action to promote health. This vision and framework has progressed since the mid-1980s, yet, as the Bangkok Charter for Health Promotion in a Globalised World (3) affirms, health promotion remains the accepted health policy approach now and for the foreseeable future.

Mounting evidence regarding the potentialities and challenges of ageing led to local, national and international application of the health-promotion model to policy on ageing, including the WHO Health 21 agenda for Europe and the Healthy Cities programme. At the start of the twenty-first century, during which the “longevity revolution” will drive social and health agendas universally, the WHO and the UN have proposed comprehensive and flexible policy frameworks to guide both developed and developing nations to secure the health and well-being of older persons.

The enduring principles of health promotion (2) that underpin all current healthy-ageing policy approaches are that:

- health is a positive concept that encompasses social and personal resources as well as physical capacities,
- health promotion goes beyond health care and requires “upstream” investments to maintain and improve health and prevent disease,
- health promotion focuses on reducing disparities in health status and enabling all people to achieve their fullest health potential,
- a range of political, economic, social, cultural, environmental, behavioural and biological factors determine health, requiring decision-makers in all sectors to consider the health consequences of their decisions,
- co-ordinated action is required on the part of governments, communities, civil society and the corporate sector to achieve a healthier world,
- promoting health involves building healthy public policy, creating supportive environments, strengthening local community actions, developing personal skills and re-orienting health services.

## Health 21 – Health for all in the twenty-first century

In 1998, the 51st World Health Assembly enjoined WHO member nations to implement the “Health-for-All Policy for the 21st Century” through relevant regional and national policies and strategies. The countries of the WHO EURO region responded by embracing a common policy framework for health development. Based on thorough analysis of regional health problems, the policy (4) set 21 targets for improvement and outlined strategies to implement change for the period 1998–2005. “Healthy ageing” was Target 5.

Overall, it was recommended that European health policies should prepare people for healthy ageing by means of systematically planned health-promotion efforts and protection of their health throughout life. The specific strategies proposed were:

- the provision of social, educational and occupational opportunities, as well as physical activities,
- innovative programmes to maintain physical strength and to correct sensory and motor impairments at an early stage,
- outreaching by community health and social services to support older people in their everyday lives,
- consideration of older persons' needs and preferences in relation to housing, income and other policy sectors to enhance their autonomy and social productivity.

### Healthy Cities

Since its inception about 20 years ago and development by the WHO EURO region, the Healthy Cities movement has spread to 1,000 cities worldwide (5). This approach engages

local governments wishing to join the movement and call their city a “Healthy City” in political commitment, institutional change, capacity-building, partnership-based planning and innovative projects to improve health (6).

In the WHO EURO region, the programme has evolved over four five-year phases. In response to the Health 21 agenda, healthy ageing became a core theme of the Phase IV (2003–2007) Healthy Cities Network.

The overall goal of the healthy ageing theme is to generate strong political commitment locally and to introduce policies and planning to ensure a holistic and well-balanced approach to the health and care needs of older people. Becoming a “healthy-ageing city” involves acknowledging the right of people of all ages to live a healthy, safe and socially inclusive lifestyle and to enjoy equality of opportunity and treatment in all aspects. Strategies to attain a healthy city for all ages involve:

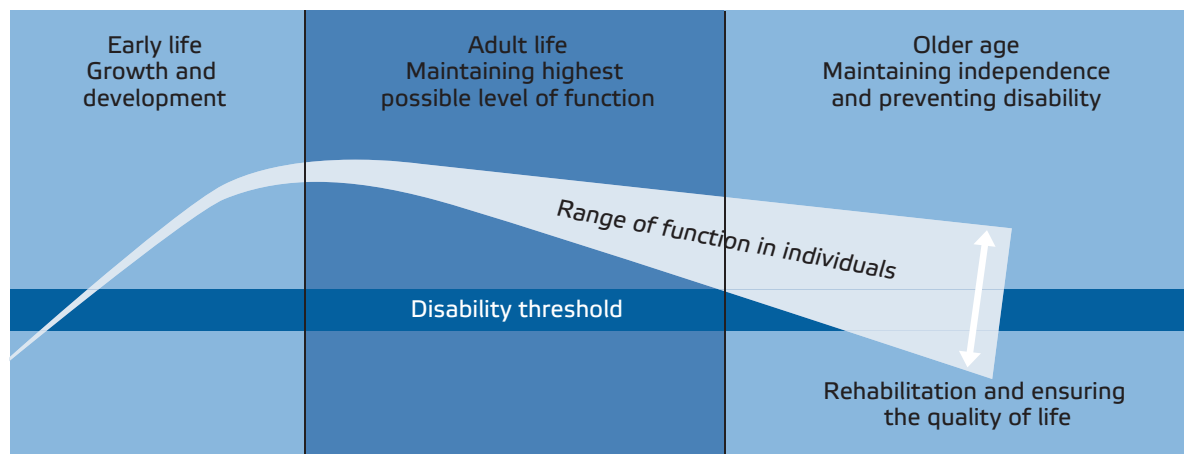
- fostering a positive attitude to growing old throughout life and combating stereotypes and negative attitudes to ageing,
- promoting greater understanding between generations,
- adopting a life-course perspective that recognises the influence of earlier life experience on health in later life.

The cities involved in Phase IV are currently developing local profiles of the health of older people for strategies to help them achieve the above goal.

### WHO active-ageing policy framework

WHO’s contribution to the 2002 Second World Assembly on Ageing, the Active Ageing framework (7) articulates a comprehensive health-promotion-based approach to ageing

Functional capacity



**Figure 27:** A life-course approach to active ageing.  
SOURCE: KALACHE AND KICKBUSCH, 1997.

policy. Building on the UN Principles for Older Persons – independence, participation, dignity, care and self-fulfilment – the WHO defines active ageing as the process of optimising opportunities for health, participation and security so as to enhance quality of life as people age.

The term “active ageing” is preferred because it conveys a more inclusive message than healthy ageing – it encompasses participation in social, economic, cultural, spiritual and civic affairs, not just physical activity and paid work. Active ageing implies a “society for all ages”, supporting flexible social roles regardless of age and viewing *all* older people as active contributors to and beneficiaries of development. Consistent with the WHO “Health-for-All Policy for the 21st century”, the Active Ageing framework emphasises equity, solidarity and social justice, with a strong gender perspective on health development strategies.

Central to the WHO model is the life-course approach (see figure 27). This recognises that older people are not one homogeneous group and that individual diversity increases

with age. It takes into account the interplay between individual and external factors in determining functional capacity from early life to old age. The approach acknowledges the multiple and life-long determinants of health when framing integrated inter-sectoral policy strategies. Considering the diversity of experience and ability among the older people, the life course approach proposes a range of action: maintaining independence and preventing disability for healthy older persons, reversing functional decline through rehabilitation following mild-to-moderate impairments, and ensuring quality of life for people irreversibly disabled or at the end of life.

In May 2005, the World Health Assembly reaffirmed its endorsement of the Active Ageing framework, calling upon Member States to develop, implement and evaluate policies and programmes to promote healthy and active ageing and directing the WHO to strengthen its ageing programme activities to support the policy vision.

## The UN Madrid International Plan of Action on Ageing

Emerging from the World Assembly on Ageing in 2002, the Madrid International Plan of Action on Ageing (MIPAA) avoids the terms “healthy” or “active” ageing. Rather, it states that a “positive view of ageing” is an integral aspect of the plan: “the aim... is to ensure that persons everywhere are able to age with security and dignity and to continue to participate in their community as citizens with full rights” (8). Like the WHO Active Ageing framework, the MIPAA advocates an age-integrated society where older people contribute to, and benefit from, all aspects of social and economic development. This vision of positive ageing is to be achieved by inter-sectoral action to realize specific targets in three priorities: securing the inclusion of older persons in the process and benefits of development, advancing health and well-being into old age, and ensuring enabling and supportive environments.

The MIPAA identifies the central themes present in the 113 specific objectives. These include:

- full realization of all human rights and individual rights of all older persons,
- achievement of secure ageing, implying the eradication of poverty in old age,
- empowerment of older persons to fully and effectively participate in all aspects of societal life,
- the provision of opportunities for individual development, self-fulfilment and well-being throughout life,
- ensuring the full enjoyment of all rights and the elimination of violence and discrimination against older persons
- commitment to gender equality,
- recognition of the vital importance of families, intergenerational interdependence, solidarity and reciprocity for social development,
- provision of full health care, support and social protection for older persons,
- recognition of the situation of ageing indigenous persons and the need to give them an effective voice in decisions affecting them,
- the harnessing of scientific research and expertise and realizing the potential of technology to contribute to MIPAA goals.

In sum, there is broad international consensus regarding the policy goals and strategies for advancing the health and well-being of older persons. The comprehensiveness and flexibility of these policy models, as well as their foundation in best-practice health promotion, make them widely useful. The aim now is to ensure their global implementation and the best possible health for older persons for as long as possible.

## Conclusion

International ageing policy frameworks vary in their scope and emphasis, but all are founded on the basic and enduring principles of health promotion. The strategies articulated by the WHO EURO Health 21 framework focus on a life-course approach to promoting health for older age, as does the WHO Headquarters “Active Ageing” policy framework. Both the WHO Active Ageing model and the UN Madrid International Plan of Action on Ageing propose comprehensive, multi-sectoral frameworks to ensure full social integration, participation, health and security for older persons and, particularly, the inclusion of ageing in a global development agenda. A more concrete

and settings-specific approach is emerging in the WHO EURO Healthy Cities movement, where a sub-network of cities is developing settings-based strategies to promote healthy ageing. These accepted and consistent strategic approaches must now be implemented worldwide to achieve the goal of healthy ageing.

## EU STRATEGIES AND PROCESSES IN RELATION TO HEALTHY AGEING

The European Union responds to the complexity of an ageing population with strategies based on its legal mandate and with respect for the principle of subsidiarity. The ‘Lisbon strategy’ embraces many of the relevant areas such as employment and the social agenda. Important action is also taken by EU institutions via the action and research programmes of the Commission Directorates-General (DGs). This chapter will further outline more important initiatives and programmes relevant to healthy ageing.

### Legal mandate of the European Union

The respect for human dignity, freedom, democracy, equality, the rule of law and respect for human rights is one of the European Union’s foundations. The right to good health is a basic human right and also a prerequisite for economic growth and social inclusion. This makes caring for older people and promoting healthy ageing an important area for the EU.

The extended public-health mandate of the European Union, based on the provisions of article 152 of the Amsterdam Treaty states that:

“A high level of human health protection shall be ensured in the definition and implementation of all Community policies and activities. Community action, which shall complement national policies, shall be directed towards improving public health, preventing human illness and diseases, and obviating sources of danger to human health...”

In health and ageing, legislative competence belongs to Member States, but the European Union can support their policies through stimulating innovative action and exchange of experience and good practice.

To develop and formulate recommendations on healthy ageing and make them relevant for European policy makers, it is important to understand how some of the European strategies and processes relate to healthy ageing.

### The ‘Lisbon process’

All EU Member States have similar challenges with respect to economic growth and social progress. In Lisbon in 2000, European governments committed themselves to a strategy to “improve economic performance and generate jobs in a way that maintains social cohesion until 2010”. Since the European Union lacks the competence to develop legislation in this field, European leaders agreed to apply the Open Method of Coordination (OMC). This method exists in the following parts of the Lisbon strategy:

- the Broad Economic Policy Guidelines, the main instrument for coordinating the Member States’ economic policies. The guidelines for long-term sustainability of public



finances are aimed at reducing public debt ratios to provide for the ageing of the population and designing and effectively implementing pension system reforms, for example by encouraging people to work longer,

- the European Employment Strategy (EES), for promoting active ageing and delaying exit from the labour market. The EU supports Member States' measures and ensures the promotion of active ageing by coordinating national policies, financial support and the exchange of experience. Every Member State prepares a national reform programme, which is both a reporting and planning document. It describes how the employment guidelines are being implemented nationally and presents both progress achieved in the Member State over the previous twelve months and measures planned for the coming twelve months.

Social Protection, the main concern of a Social Protection Committee (SPC) established in 2000 and responsible for monitoring the social situation and the development of Member States' social-protection policies. Social protection covers:

- promoting social inclusion, using an Open Method of Coordination (OMC) in combating social exclusion and poverty. Facilitated by the Commission, this OMC addresses common problems, developing and exchanging policy responses across Europe. Its fundamental component is national action plans (NAPs),
- making pensions safe and sustainable,
- ensuring high-quality health and long-term care. The Commission body responsible for this is the social protection committee in collaboration with the high-level group on health services and medical care.

Since 2005 the Broad Economic Policy Guidelines and European Employment Strategy have been merged. The OMC for social protection is maintained as a separate process. The OMC on pensions, inclusion and health and long-term care have separate national action plans. However, they will be combined in a European Commission Joint Report once every three years.

The European Council has adopted (9) a new framework for social protection with a new set of common objectives for social inclusion, pensions and health and long-term care. With respect to health and long-term care the objectives are as follows:

- to guarantee access for all to adequate care and ensure that the need for care does not lead to poverty; to address inequalities in access to care and in health outcomes,
- to promote the quality of care and adapt care to changing social needs,
- to ensure that care remains affordable and sustainable by promoting healthy and active lifestyles, good human resources, good governance and coordination between care systems.

### EU institutions

In developing European policies for healthy ageing, several levels of action involve European Commission officials, members of the European Parliament (MEPs) and the European Council (national ministries).

In the European Parliament, besides the political parties and regular committees such as the Committee of the Environment, Public Health and Food Safety, there are intergroups, which gather MEPs from different parties around one specific issue of concern. One such group is the intergroup on ageing, coordinated by the

European Older People's Platform (AGE). The group meets several times per year, providing MEPs with the opportunity to exchange views with other organisations to raise awareness of older people's interests. Another group, the Intergroup on Health is coordinated by the European Public Health Alliance (EPHA).

The European Commission is represented by 24 Commissioners – cabinets, President and Directors-General and, as mentioned above, can act as a catalyst, facilitator and communicator in promoting exchange of knowledge and experience on ageing. For this reason the Commission's activities merit a more detailed description. Several Commission directorates-general (DGs) are relevant to healthy ageing, DG Health and Consumer Protection (DG SANCO), DG Employment and Social Affairs (DG EMPL) and DG Research, Development, Technology and Innovation (DG RTD).

### DG Health and Consumer Protection

DG Health and Consumer Protection (DG SANCO) implements the Public Health Action Programme (2003-2008) (10) for improving health information, responding rapidly to health threats and addressing health determinants. DG SANCO has co-funded several healthy ageing projects:

- *Ageing and Nutrition* is a comparative analysis of existing data on nutrition and lifestyle of the ageing population in Europe, especially concentrating on the new EU Member States,
- *Healthy work in an ageing Europe's* main objectives are to improve workplace health and the well-being of the ageing workforce, to increase awareness among stakeholders of the needs of an ageing workforce, and to respond to their effects on workplace health and well-being,

- *EPIC* is an elderly network on ageing and health. The project objectives are to expand an existing databank on European older people, to assess their health status and to investigate the associations of available environmental data with morbidity and mortality in different age groups of elderly,
- *healthPROelderly*. The overall aim of the healthPROelderly-project is to promote health promotion for older people through producing evidence based guidelines with recommendations – on EU, national and local levels – for potential actors in this field. It began on April 1, 2006 and runs until December 31, 2008.

Active Ageing is proposed as a cross-cutting theme in the new proposed Community Health Programme (2007-2013) (11).

In 2005, DG SANCO launched two consultations of relevance to healthy ageing. One is a Green Paper "Promoting mental health, towards a strategy on mental health for the European Union" (12). This is an incentive striving for good mental health and equal opportunities for the growing group of older people.

Another Green Paper concerns the promotion of healthy diets and physical activity (13). Although very focused on preventing obesity among young people; the Green Paper's discussion of physical activity and nutrition clearly link to important elements of healthy ageing too.

### Social affairs and equal opportunities

DG Employment (DG EMPL) proposed to launch PROGRESS, an integrated action programme for employment and social solidarity (14). Covering 2007–2013 the programme will address social inclusion, gender equality and non-discrimination. Its five sections each correspond to one of the following themes:

- European employment strategy,
- open method of coordination in social protection and inclusion,
- working conditions,
- anti-discrimination and diversity, and
- gender equality.

In October 2006, European Commission published a Communication entitled “The demographic future of Europe – from challenge to opportunity” (15). It sets out the following five steps to prepare for the consequences of the European demographic transformation:

- promotion of demographic renewal by giving more support to families and potential parents,
- ‘active ageing’ and longer working lives. Disease prevention is mentioned as an important measure for increasing productivity at work and reducing health care costs,
- higher productivity and adaptation to the changing needs of an ageing society,
- welcoming and integrating migrants into the European labour market and civil society, and
- sustainable public finances.

DG EMPL also stresses that the challenge of Europe’s ageing population needs to be integrated in all policies.

DG Research (DG RTD) reports to the Research Framework Programme (FP6) (16) that supports several projects associated with ageing and health. Most focus on clinical research into diseases affecting the very old and their effect on health care systems. There are also studies on demographic and health-related data:

- SHARE, the Survey of Health, Ageing and Retirement in Europe encompasses 22,000 people older than 50 across Europe. This survey includes health data, psychological and economic variables and social support data,
- FELICIE is an acronym for Future Elderly Living Conditions in Europe, a project running in nine European countries for people older than 75. It gathers data on health, family and socioeconomic conditions and aims to estimate the future needs of old-age populations,
- AGIR, Ageing, Health and Retirement in Europe, is a systematic collection of existing national data and estimation for the future development of health-care and pension costs, and
- The MERI research project concerns the circumstances of older women in Europe.

A proposal for a new Research Framework Programme (FP7) for 2007–2013 (11) has been adopted. The new programme will consist of several operationally autonomous sub-programmes allowing for joint and cross-thematic approaches to research subjects. The nine themes include health and socioeconomic sciences. One aim of the social sciences theme is to understand and assess the implications of key trends in European society, such as changes in the related aspects of lifestyles, families, health and quality of life, and demographic change including ageing, birth and migration.

Healthy ageing as a cross-cutting issue is also related to other European Union policy areas, each of which may include potentially relevant structures or processes. Some examples:

- *internal market* and free movement of patients and health professionals,
- *agriculture* and food policy,
- *social policy* and pensions, age discrimination, employment directive,
- *information* and e-health, technology and ageing,
- *enterprise* and pharmaceutical markets,
- *environment* and health action plan,
- *culture/education* and physical activity, life-long learning, and
- *regional policy* and regional development, reform of structural funds where ageing and health should have priority.

### EU policies on age discrimination

Age discrimination is a particularly relevant issue in healthy-ageing strategies. Few EU policies specifically target age discrimination: measures to combat age discrimination are more general in the context of wider anti-discrimination policy. However, certain specific references can be found.

#### Article 13

Article 13 of the Treaty of Amsterdam granted the Community new powers to combat discrimination on the grounds of age as well as gender, racial or ethnic origin, religion or belief, disability or sexual orientation.

#### Employment Directive

EC law has since been enacted in the area of anti-discrimination against age (among other criteria) in the form of the Employment Equality Directive, 2000/78/EC. This Directive establishes a general framework for equal treatment in employment and occupation and

defines principles that offer everyone in the EU a common minimum level of legal protection against discrimination. A legal-expert network is responsible for monitoring and analysing the implementation of this directive in the Member States and includes a co-ordinator specifically for age.

#### Consultation

A Green Paper on Equality and Non-Discrimination in an enlarged European Union (17) sets out the European Commission's analysis of progress made in tackling discrimination, including discrimination on the grounds of age.

#### Reports

More specifically, in July 2005 a report was published on Age Discrimination and European Law (18).

#### Community Action Programme

Under the Community Action Programme to combat discrimination (19), the European Commission funds four European NGO umbrella networks representing and defending the rights of people exposed to discrimination – which include AGE (The European Older People's Platform).

The Commission's anti-discrimination unit, jointly with the European Platform of Social NGOs, organises biannual meetings where NGOs are invited to discuss Community matters. NGOs are enabled to comment on ongoing issues and the Commission uses these occasions to announce new initiatives. The Commission's anti-discrimination unit in DG Employment also organises ad hoc meetings. Age falls within their sphere.

## Conclusion

Healthy-ageing policies and practice are being encouraged across EU policy domains, such as in life-long learning, working longer, retiring more gradually and living actively after retirement, and acting to sustain and improve health. Awareness is increasing that a healthy and active society will be a key determinant of economic growth and sustainable productivity in an ageing Europe. However, healthy ageing has not yet achieved sufficient and comprehensive attention in European policies. Instead of being considered as long-term investment in human capital, both 'health' and 'older people' are still being viewed as a cost. Concrete recommendations are needed to include the issue of healthy ageing in policies related to growth and prosperity in the European Union.

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CHAPTER 16

# Policies in European countries





# Policies in European countries

One part of the Healthy Ageing project is to elucidate the policies and strategies in European countries that promote health in older age.

The 2002 WHO document “Active Ageing” provides a framework for governments and clarifies how policies and programmes should be based on the rights, needs, preferences and capacities of older people, embracing a life-course perspective that recognises the important influence of life experience on how individuals age. (See Chapter 15, International

policies). This WHO document has inspired the formulation of policies and strategies.

## QUESTIONNAIRE FOR HEALTHY-AGEING POLICY

The Healthy Ageing project sent out a questionnaire to elicit what policies and strategies in European countries meet the challenge of ageing populations.

The focus in the questionnaire was on public health and promoting healthy ageing rather

“The benefit of having a policy is that it identifies older people as a group to be included in development. If older people are not identified they tend to become invisible or neglected.”, says **Dr Louise Plouffe**, senior Technical Officer at the World Health Organization, WHO, in Geneva.

She identified some features that are important for good policies for health promotion for older people:

- a good policy for health promotion in later life needs to be comprehensive; it has to include health in other policies besides health,

- it must have a coherent policy framework where partners and sectors work together in an integrated approach,
- it should have inter-sector coordination,
- it should be based on scientific evidence, and
- good policies for health promotion for older people need also to have clear, realistic objectives and specific actions to reach these objectives. They need realistic and sustained resources and an evaluation process to measure outcomes.

than on health care or care of older people. It was answered by 23 countries with information on 22 policies (Scotland sent information on three policies, Finland and Spain on two each). All but five of the countries have policies for healthy ageing, separately or included in general public-health policy or national health policy.

Ministries and governments are in general responsible for implementing the policies; programmes are usually funded by central government.

The time frames for the policies vary from ‘a couple of years’ to 2010 or 2030. The majority have been endorsed by the respective national boards or departments of public health. Policy aims vary too. One country has an evaluable long-term goal: “increasing life expectancy, improving quality of life and reducing social inequality in health”. Others mention “physical activity” or “health promotion”. Other principles mentioned are “active involvement”, “maintenance of autonomy”, “equality for all generations” and “social integration”. One policy has a broad and general aim: “give citizens the opportunity to live as healthily as possible”.

The primary target group for the policies is decision-makers and politicians, non-governmental organisations, health staff and researchers. Older people are another target group. The definition of older people varies from 50+ to 65+ years, possibly depending on countries’ social structures, economy, pension age and ways of viewing older people.

One question was whether the policy targeted any special “setting” (urban/rural area, workplace, transport, home). Many policies have no special setting, others mention old-age care, older people living at home, the local community, transport; or are as broad as “no special settings but all sectors of society...”.

## SUMMARY OF POLICIES

For more information,  
see [www.healthyageing.nu](http://www.healthyageing.nu)

### The Czech Republic

#### *Projects for healthy ageing*

**Main theme:** Active involvement

The main aim of the funding programme is to support NGOs, cities, municipalities, organisations and agencies in their work for ageing people and their families by financial support (grants may be applied for once in a year from 2003). The project covers all topics, for example increasing health, independency and socialising ageing people.

**Time frame:** Calls for application have been declared every year since 2003.

### Denmark

#### *Healthy Throughout Life*

**Main theme:** Increasing life expectancy, improving quality of life and reducing social inequality in health.

Healthy Throughout Life has a special focus on the major preventable diseases and disorders. The quality of life of many people can be improved substantially by more systematic efforts in counselling, supporting and rehabilitating patients. In addition, Healthy Throughout Life establishes targets for several risk factors, target groups and efforts in the major settings for health promotion. One target group is older people.

**Time frame:** 2002–2010

## England

*The National service framework for older people*

**Main theme:** Improve health and social care.

The programme plans:

- to tackle age discrimination and ensure that older persons are treated with respect and dignity,
- to ensure that older persons are supported by integrated services with a well co-ordinated, coherent and cohesive approach to assessing individuals' needs and circumstances and for the commission and provision of services for them,
- to specifically address conditions which are particularly significant for older people – stroke, falls and mental health problems associated with older age and
- to promote the health and well-being of older people through co-ordinated action by the National Health Service and local councils.

The eight national standards of the National Service Framework are as follows:

1. rooting out age discrimination,
2. person-centred care,
3. intermediate care,
4. general hospital care,
5. stroke,
6. falls,
7. mental health in older people,
8. promotion of health and active life in older age.

**Time frame:** 10-year programme

## Finland

*1. Quality recommendations for guided health-enhancing physical activity for older people*

**Main theme:** Physical activity

The quality recommendations are based on the latest research and proved practice. They define a target level for the quality of guided health-enhancing physical activity for older people. They are based on cooperation, information sharing, coordination of activities and training of instructors. Clients should give feedback to the municipality, the service provider and the instructor in order to improve the supply, targeting and location of services.

*2. Government resolution on the Health 2015 public-health programme*

**Main theme:** Health promotion

The concepts “settings of everyday life” and “life course” play key roles in the programme. The strategy presents eight targets for public health, focusing on problems requiring concerted action:

- ageing people must be ensured opportunities to function actively in society, to develop their knowledge and skills and their ability to care for themselves,
- ageing people should have the possibility to live an independent life of good quality with an adequate income,
- residential and local services and transport must be developed for ageing population groups to safeguard an independent life even when ageing people's capabilities deteriorate, and

### Finland (cont.)

- a programme for developing services needed for daily life and long-term care for older people should be worked out. It should involve municipalities, informal care-givers, voluntary organisations and commercial services. It should use modern technology.

Time frame: 2004–2015

### France

#### *The Elderly*

**Main theme:** Maintain autonomy, preserve quality of life of the elderly.

“The Elderly” programme at the National Institute for Prevention and Health Education (INPES) is set forth in the national “Healthy Ageing” plan. The INPES is also in charge of the communication and health promotion aspects of the “Healthy Ageing” programme.

The policy plan has four strategic directions:

- to favour the acquisition of individual capabilities for health,
- to develop the prevention of incapacities,
- to develop the competence of health- and sociomedical professionals in health promotion and health education,
- to favour the implementation of family health education and health promotion in the elderly professional environment.

Time frame: 2005–2007

### Germany

*Work Group 3 “Healthy Ageing” of the German Forum on Disease Prevention and Health Promotion (DFGP)*

**Main theme:** To present concrete and accepted recommendations, to present creative contributions and solutions to the further development of the social health system.

Disease prevention and health promotion for ageing people are important tasks for a society. Fulfilling these tasks in a federal system such as the Federal Republic of Germany requires the involvement of all important organisations and interest groups. The main task of the DFGP is this integration. Work Group 3 integrates organisations concerned with “healthy ageing”. Focus points are:

- to agree on aims of disease prevention,
- to develop effective and comprehensive concepts for implementing these aims,
- to stimulate scientific projects – whenever necessary,
- to present strategies for integrating activities at national, rural and urban levels, and
- to run national campaigns and conferences on special issues of prevention.

Time frame: Since 2003

## Hungary

*Improving the health of the elderly*

**Main theme:** Give Hungarian citizens the opportunity to live as healthily as possible.

The Hungarian government is seeking to decrease the significant difference between life expectancy at birth between the EU average and Hungary. The basic methodology of the public-health programme is prevention:

- promotion of healthy lifestyles and environment,
- prevention of and decrease in the most frequent chronic diseases,
- involvement in healthy-setting programmes,
- development of human resources in public health, monitoring and communication of the public-health programme, and
- prevention of diseases such as AIDS.

The goal of the sub-programme is to improve the quality of life for an ageing population that is continuously growing in number. This involves somatic and mental issues. Different forms of support for active ageing, (University for Elderly, sports, voluntary work, etc) have to be made available to the public.

**Time frame:** 2003–2010

## Italy

*National health plan – Health protection of vulnerable people*

**Main theme:** Give citizens the opportunity to live as healthily as possible.

To tackle the problem of an ageing population, the Ministry of Health has developed an inter-sectoral collaboration policy. This includes promotion of healthy lifestyles and environments, prevention and decrease of the burden of most frequent chronic diseases (cardiovascular diseases, tumours, mental and locomotor diseases). Different forms of support for active ageing have to be made available to the public.

**Time frame:** 1998–2000 at national level. The regions have adapted their plans to the national framework.

## Lithuania

*National strategy for the impact of ageing on the population*

**Main theme:** Social integration

The strategy promotes healthy ageing and social equality. The aim of activities for “Health and Social Services” is:

- to promote better health for ageing people, and
- to provide high-quality health care and social services for the elderly by coordinated action between health and social services.

**Time frame:** From 2005

## The Netherlands

### *Policy for older persons in the perspective of an ageing population*

#### **Main theme:** Stimulate participation

The programme objectives are:

- to remain fit and healthy for as long as possible.

Long-term policy choices relate to the problem of unhealthy lifestyles. Factors such as obesity and lack of physical activity are well on their way to displacing smoking as the major health problem. Prevention policy was and remains the answer here since citizens neglect their personal responsibility. The government favours sport and physical activity and is committed to combating lack of exercise,

- to make an active contribution to society.

Given the vastly improved state of health of older people, it is reasonable to ask them to make a productive contribution to society for longer. The labour participation rate amongst older people must be increased, age discrimination must be eliminated, possible obstacles to anyone wishing to work after 65 must be removed and there should be incentives for doing volunteer work,

- to ensure sufficient financial resources.

A social minimum will be guaranteed by income support.

- to ensure adequate housing facilities and living environment.

In the long term, the need for adequate housing can be met only by a combination of new developments and alterations to existing

housing. Central government sees itself as a supervisor rather than an initiator. Attention must be paid to the living environment:

- the accessibility of public transport and the availability and proximity of facilities,
- to ensure adequate and high-quality care provision.

The demand for both curative care and nursing and treatment will continue to rise. Inevitably we will find ourselves balancing between individual and collective responsibility. Specific attention should be paid to improving the quality of care of older people. The scope of the care can be narrowed, but its quality must improve,

- to ensure the right to die with dignity.

The right to die with dignity is the last target of the Netherlands government policy for older people. The government believes we should act with care and sensitivity in all matters relating to the end of life, consistent with the views in society.

**Time frame:** Until 2030

## Norway

*Working together for physical activity:  
The action plan on physical activity  
2005–2009*

**Main theme:** Physical activity.

Physical activity prevents a number of diseases and is a source of joy, an expression of life and a manifestation of positive self-affirmative experience. Parliament White Paper no. 16 (2002–2003) “Prescription for a healthier Norway” emphasises the importance of physical activity for health and well-being. The plan aims at increasing and strengthening factors that promote physical activity and reducing factors leading to physical inactivity. An increased level of physical activity will be attained through a total strategy that includes measures in work, transport, local environment and leisure. The initiative requires co-operation between sectors and levels of administration, and eight ministries are collaborating in the development and the follow-up of this plan.

**Time frame:** 2006–2009

**Website:** [www.shdir.no](http://www.shdir.no)

## Poland

*National Health Programme*

**Main theme:** Reduce social and regional differences.

The National Health Programme is a long-term health policy project in Poland (2006–2015) addressing all the population with special attention to mother-and-child protection, young adults and older and disabled people. Improvement of the health status and quality of life of the Polish population is the main strategy. The three main directions are:

- to reduce differences in access to health services,
- to support healthy lifestyle choices, and
- to create a healthy environment (for example workplace, educational setting).

**Time frame:** 2006–2015

## Portugal

*National plan for the health  
of the elderly*

**Main theme:** Active ageing – promote active life and autonomy of the elderly.

The plan aims at promoting active ageing, the autonomy and independence of older people, their empowerment and the creation of stimulating environments through an inter-sectoral approach. The policy gives special attention to those older people who are vulnerable and fragile.

The strategy involves partners such as the mass media, the city council departments, all the social partners, sectors of government, teachers at all levels (to promote in younger people a different view of older people).

**Time frame:** 2004–2010



## Scotland

### 1. *Delivering for Health*

Delivering for Health, launched by the Scottish Health Minister in 2005, outlines a fundamental shift in how the National Health Service (NHS) works in Scotland, with a strong commitment to tackling the causes of ill-health and promoting the anticipatory mode in which the NHS should work to deliver health improvement.

The Kerr Report sets out an action plan which, amongst other key health service changes, emphasises “a wider effort on improving health and well-being through preventive medicine, through support for self-care and through greater targeting of resources on those at greatest risk.”

**Time frame:** From 2006 to 2009

(<http://www.scotland.gov.uk/Publications/2005/11/02102635/26356>)

### 2. *Opportunity age: Meeting the challenges of ageing in the 21st century*

**Main theme:** Promote healthy ageing – different themes.

A key theme is to prepare effectively for the age shift which will gather pace between now and the middle of the century and to help meet everyone’s aspirations for better later lives for themselves and their families.

**Time frame:** Ongoing

### 3. *Improving health in Scotland: The challenge*

**Main theme:** Narrowing the health gap.

Key themes are:

- to pull together many existing strategies and targets rather than starting new ones,

- to increase integration relating specifically to health improvement priorities, and
- to provide a strategic framework to support the processes required for faster health improvement in Scotland.

**Time frame:** Ongoing (latest target date 2022)

## Slovak Republic

*For older people to live healthier and more valuable lives*

**Main theme:** Improve quality of life.

The plans are, for example

- to arrange health prevention and health education for older people to support the social environment of the target group,
- to develop concepts, and then edit and disseminate leaflets and brochures to implement educational activities for target group – pilot seminars in Bratislava,
- to develop and edit method manuals/guidelines to spread educational activities throughout the country (teaching by way of seminars for the regional public health authorities of the Slovak Republic), and
- to implement educational activities for target group – seminars, regional discussions in the Slovak Republic to control the quality of community information distributed to elderly people – “Observation” to monitor target group health status and health awareness and behaviour after two years.

**Time frame:** Since 2005

## Spain

*Action plan for older persons  
2003–2007*

**Main theme:** To improve the conditions of life for older people, putting a wide net of resources at their disposal.

The Ministry of Work and Social Affairs action plan takes as indicators demographic data, economy, housing, ways of coexistence, level of education, main activities of old people and social services for old people. The Ministry is collaborating with the Ministries of Health, Economy Science and Technology, Education, Culture, Leisure and Sports, the Interior and Finance. Suggestions have also been given by the National Adult Council, regional social services, the Spanish Municipalities and Provinces Federation, city councils, NGOs, the Scientific Society of Gerontology and Geriatrics, universities, trade unions, employer organisations and experts.

The aim is to improve the life conditions of older people by providing them with a wide range of resources. The plan has four action areas, each with its own objectives with strategies, measures, collaborating organizations and timetable:

- equality of opportunity,
- cooperation,
- training,
- information and investigation.

**Time frame:** 2003–2007

*2. Health plan of the Canary Islands,  
Programme for older people*

**Main theme:** Social integration.

Target groups are the primary health care sector and older people above the age of 65.

**Time frame:** Four years

## Sweden

*National action plan on policy  
for the elderly*

**Main themes:** Active living – secure, independent, respect, access to services.

Measures proposed:

- enlarged resources and better cooperation, governance and organisation,
- more reasonable fees,
- strengthened supervision, more effective control and quality assurance,
- more research, increased knowledge and competence,
- development and renewal,
- improved quality of life for relatives and older people,
- efforts against ill-health,
- health promotion for older people should be developed by preventive home visits by the home-help services and by general health promotion.

**Time frame:** From 1998

## Wales

### *The healthy ageing action plan for Wales*

**Main theme:** To contribute to the relevant strategic objectives and to the achievement of the health targets set up in the strategy for older people in Wales. To maintain existing programmes and develop new initiatives.

The purpose of the action plan is to:

- to bring together in one document existing and proposed health promotion initiatives for older people in respect of physical activity, healthy eating, smoking, alcohol, sexual health, emotional health and well-being and health protection and safety promotion,
- to provide guidance for use at local level on key evidence-based health-promotion interventions with older people, thus providing the major implementation tool for the “Promoting Health and Well-being Standard” of the National Service Framework for Older People in Wales,
- to outline responsibilities of the Welsh Assembly Government and its partners, and
- to introduce new Assembly-led initiatives as part of the Welsh Assembly’s response to Health Challenge Wales.

**Time frame:** Initially 2004–2007

## HEALTH DATA

Most of the policies contain no reference to health data.

Some countries state that their policy is based on statistics on health development in reports, mortality and morbidity data from the Central Statistics Office or on the latest research; as well as on policies put into practice and evaluated. Norway recommends a programme of physical activity as “only six per cent of older people (65 + years) are physically active on the level that is recommended by national authorities”. Portugal reflects on indicators for the evaluation of gains in health but “in this area we are less developed than other European countries”. The Welsh policy includes the latest data from the Welsh health survey regarding the health and health behaviour of older people, and also the current targets for older peoples’ health”.

## RESPONDENTS’ COMMENTS

Most of the respondents to the Healthy Ageing project questionnaire commented on policies/strategies/action plans for promoting healthy ageing. Many mentioned the need for the involvement of older people in planning, and the need to promote positive images of older people and not focus on chronological age:

- “...Need a response from older people, employers and voluntary bodies to change attitudes to ageing”,
- “...The ageing component of the national public-health strategy is much more about rhetoric and lip-service than real implementation”,

- “... For some regions healthy ageing is not a priority. In my opinion a network between the regions is needed”,
- “... Policies have to be translated into action so that people in this age group may reap the benefits and be able to enjoy a healthier, more fulfilling life”,
- ...“Include all elderly people, the heterogeneity of this group should not be seen as a problem, but as a challenge!”
- ...“Do not focus on chronological age (which is only figures!), but more on health status”,
- “...Have in mind prevention (it is NEVER too late) and rehabilitation”,
- “...The life-time perspective!”
- “...Include elderly people in the preparation of policies etc.”
- “...Have both short- and long-term goals”,
- “...Promote positive images of the elderly”,
- “...Sharing plans and any subsequent evaluation of them across the EU is most useful”.

## DOES A POLICY CONTRIBUTE TO HEALTH DEVELOPMENT?

The last questions in the questionnaire investigate how a policy/strategy may relate to health promotion, benefits and possible side effects of policies and whether the policy has led to action in the form of projects.

One cannot assess the quality of the policies from reading the questionnaire answers: it depends on how people define the terms used in the questions. The respondents’ varying knowledge of English and problems with short formulations added to the communication problem. Some respondents presented many different activities, not only those related

to older people and their health. There are also differences in the ways people understand terms such as health promotion, health education, health information and how they relate to illness prevention or treatment.

A policy is valuable only as long as it is being used – for lobbying, motivation, encouragement to act. It is a working tool for ministries, organisations and institutions with older people as their target group. Unfortunately, if a policy once endorsed is not communicated to the target groups, the chance to make it workable is missed. The questionnaire sometimes reflected wishful thinking about the benefits of a policy. It is not the policy as such that “reduces health differences among the elderly” but local application of the policy.

In some of the countries surveyed, health promotion for older people is included as part of national health policy. This most commonly focuses on health care and treatment rather than on health promotion and illness prevention. For example: the National Framework for Scotland “sets out a plan to develop health care in Scotland that is about delivering the best available care as close to the patient as possible”. But Scotland also has the Opportunity Project with a long list of issues for action: employment of older workers, age equality, extending learning opportunities for older people, home security, house building, transport etc.

The German policy proposes co-operation which in the longer term should lead to a wide range of benefits. This is good as it may give ministries and organisations an incentive to work together. The Netherlands has an ambitious system for monitoring their policy. It includes a follow-up of how older persons remain fit and healthy, physical activity, injury prevention, social, labour and voluntary

participation, financial resources, housing facilities, transport, insurance and the right to die with dignity.

Lithuania's action plan has been adopted for implementation. Indicators include life expectancy, number of older people receiving social services at home, guaranteed incomes for older people etc.

The Slovak Republic states that the policy will increase health behaviour and knowledge among older people.

Sweden answers that the policy has led to "increased awareness of the need for health promotion and intervention for older people"; that research on older people has increased and that special resources have been allocated for health promotion and prevention.

Positive side-effects of the policies include "promoting participation in issues concerning older people", "guidelines reducing prejudices and attitudes to age discrimination" and/or "encouraging people to work after 65". One respondent mentions that "elderly people will gain an increased interest in their own lives".

A negative side-effect mentioned is that there is no central theme for older people if the policy embraces the whole population. Financing activities outlined in a policy is also an important issue, but often there is no special allocation of money.

## CONCLUSION

Most European countries have policies for healthy ageing which are either separate from or included in general public health policy or national health policy. A negative side-effect of policies embracing the whole population is the lack of a central theme for policy regarding older people. Most policies do not refer to public-health data. This is an interesting and perhaps surprising finding of this compilation of health policies.

The respondents to the Healthy Ageing project questionnaire state the need for the involvement of older people in the planning and the need to promote positive images of ageing and not focus on chronological age.

Often no special allocation of money for health promotion is included in the policies. This may obstruct their realisation at local level.

Policies are valuable only when they are used – for lobbying, motivation, encouragement – action. A policy should be a working tool for ministries, organisations, institutions etc. which have older people as a target group for their activities. They need to be applied locally and thus should be published in a form that can be read and understood by the target group themselves. These readers may then act as a pressure group.

CHAPTER 17

# Reflections on work done



# Reflections on work done

Ageing and health promotion are a huge and challenging issue. The Healthy Ageing project relates to all groups of people in Europe aged 50 years and older. Areas covered include statistics, literature, good practice and policy. The project has a holistic approach, intending to give an overview and an understanding of ageing and health promotion. This project will hopefully be followed by further projects.

We have worked at a general level with a holistic approach and on the basis of the experience of the project participants, most often generalists. Although we did not start with a whole team of researchers, we conducted literature searches to identify relevant papers for review-level evidence and we consulted experts.

The over-fifties are a heterogeneous group and may be divided into different age groups, different socioeconomic groups, different cultural and ethnic groups living in different conditions and geographical areas. The project sought to take the heterogeneity into account, but we lacked basic data relating to older people, specially regarding heterogeneity.

The eastern and central European context differs from that in western Europe. Many older people in the new EU Member States are living in poverty and face different problems from those in the old Member States.

English has been the working language of the project. With publications, statistics, etc., more accessible in English there is a bias towards English in the basic data. For the same reason there is also a “western bias” in the context of the project.

The aim of the project is to promote healthy ageing in later life. We have therefore as far as possible excluded treatment from our basic data on statistics, papers, good practice and policy.

Knowledge of ageing, e.g. biological ageing, is extensive but with many limited perspectives, and there is a great need to increase the knowledge base. It is important however to disseminate and use the knowledge and experience we have gathered to date.

## Statistics

One problem of statistical data concerning older people is that it is difficult to compare countries, data being applied differently in each. Older people are defined differently with different age categories, sample sizes etc. This makes comparisons difficult. Further, when the data originates from different countries and different EU-related research projects the knowledge becomes quite diverse and scattered. An additional problem to be resolved is that some of the data is not free for use.



Drop-out frequency in questionnaires varies substantially amongst older people, which also makes statistical comparisons between European countries difficult.

At present, few countries have information about health determinants for the population aged 85 years and older. Experience from Sweden and elsewhere shows that it is possible to collect statistics about this age group.

### Literature

We compared the results of our literature searches and selection of papers (see matrices) with the list of references produced by Euro-link Age in the report “Proven Strategies to Improve Older People’s Health” (1). However, there was no duplication. The explanation of this is that the present report has focused on reviews and meta-analyses, whereas the Euro-link reference list includes mainly reports on single studies. Before 1999, very few reviews and meta-analyses were available in this area.

As the project has increased the knowledge base by focusing on reviews and meta-analyses in the literature searches, it was feared there might be a lack of new and innovative findings that had yet to be included in reviews and meta-analyses. In the major topics “Retirement and pre-retirement” and “Use of medication and associated problems”, there was a lack of papers on review-level evidence of the effectiveness of interventions. For this reason, these chapters consist only of one part.

The Project has not graded the evidence in the different papers, but has summarised and presented findings and assessments made by the authors of the reviews and meta-analyses.

Note that other papers might indicate conflicting results or suggest additional evidence: our literature searches may not have reflected all possible written material relating to the effectiveness of interventions targeting older people.

Since literature searches do not necessarily identify all possible relevant papers, therefore, we also sought expert opinion, as mentioned earlier, to find additional important papers and also the ‘grey’ literature relating to the topics.

The databases used were organised and indexed for the entire population and not just for the over-fifties. The papers often covered another, wider, age span. In some papers it was also difficult to understand which age group was being described; in such cases we contacted the authors of the papers for clarification.

The papers included in the literature review were predominantly in English, although other languages were also represented. Since most were systematic reviews or meta-analyses, the usual biases apply when interpreting the findings: publication bias, bias towards English literature, bias towards randomised and quasi-experimental designs, which might exclude studies following a more complex settings approach.

Many of the studies were conducted in the US rather than in EU countries, raising the question of transferability of the interventions. Further, as health care systems vary in different countries, comparisons of “usual care” in an intervention being investigated caused problems when reviewed studies had been carried out in many countries. This is a problem when assessing the effectiveness of home visits for older people.

In the papers identified in the literature searches and subsequently included in this Report, we found few studies on interventions specifically targeting vulnerable groups, women and low-income groups. Older people from ethnic minority groups can be particularly disadvantaged: they are for example more likely to suffer discrimination in accessing services. Differences in cultural and religious beliefs will need to be taken into account in prevention and health-improvement approaches.

In general, the aim of the studies was not to reduce inequalities among older people. There is also a lack of studies on the cost-effectiveness of interventions targeting older people.

### Good practice

Sixteen projects from nine countries were identified as examples of good practice. Several of the projects are still running. Project partners were asked to select two or three examples of ongoing interventions in their country that could serve as examples for other countries. The focus should be on promoting healthy ageing, which means focusing on good practice related to public health and not primarily to health care or care of older people. Partners selected the examples of good practice on the basis of six criteria. The example should address the promotion of healthy ageing in later life stages, should be relevant to the major topics in the project, should have been evaluated by process evaluation or outcome evaluation, should clearly describe the objectives and expected outcomes, should have a plan for sustainability, viability and continuity, and should be able to serve as a model for generating new projects and initiatives elsewhere.

If applicable, four additional criteria were important in the selection. The project ought to be sensitive to and/or address gender inequalities in health, be innovative in the promotion of healthy ageing in later life stages and include a method for quality management/assurance. The last optional criterion was whether the project achieved the desired results with the most cost-efficient use of resources.

In most countries, many examples that were considered good practice were available. Here further selection was necessary as only a limited number could be included in the Healthy Ageing project. Not all the criteria were always met in the examples of “good practice”. Thus there was often no evaluation of the interventions, sometimes due to the difficulty of measuring effects in this kind of real-life project. However it has to be stressed that the examples in this Report are illustrations and do not represent the status of practice in the different countries.

Of the sixteen projects, few have been transformed into permanent programmes. This is probably quite a common problem and underlines the importance of establishing measures for the sustainability and further development of projects. Collaboration between NGOs and experts is beneficial both because it encourages NGOs in their voluntary work and gives the experts access to new angles of approach to health problems occurring in later life. Exchange of experience and knowledge raises questions of structure and dissemination, such as ‘who should start a debate on engaging the staff, the experts and volunteers?’

Time appears to be crucial. Third parties – e.g. politicians and decision-makers – often demand rapidly successful outcomes and cost

effectiveness. Health promotion for older people is, however, a time-consuming business and the problems relating to an ageing population cannot be resolved overnight.

Motivating the least motivated is another crucial issue in promoting health. Among the least motivated are those who are disadvantaged for some reason, those with the least access to public services and last but not least the very old. The examples of good practice illustrate that a common database of good practice examples selected on the basis of specific criteria is workable and could aid further development of healthy-ageing interventions. Such work could build on ongoing national, regional and local projects, as well as on European-level projects that have considered means of measuring the quality and transferability of interventions.

### Policies

To review current policies and strategies for healthy ageing across Europe, a draft questionnaire was disseminated to the project partners with the intention of conducting a pilot study. Seven countries responded to this questionnaire. An improved questionnaire was sent out to all EU member states, accession states and members of the European Economic Area in March 2006. The pilot study countries received only the supplementary questions. Altogether, 23 countries completed the questionnaire – a good response. However, achieving this high response rate required reminders such as e-mails and extensive phone calls to non-responding countries.

The focus of the majority of the policies was health and promoting the health of older people. Some answers described policies embracing the whole population and not just older people.

There is a bias towards comprehensive national policies. This affects local ones. In many European countries, local and/or regional policymakers have major public health responsibilities, including the ageing population.

Finally, looking back to the results in the Euro-link Age report “Proven Strategies to Improve Older People’s Health” (1) from 1999, on four specific strategies for healthy ageing, it becomes obvious that European countries are now developing strategies and policies for health promotion among older people.

### Turning evidence into practice

Turning evidence into practice by translating evidence into advice and guidelines for public-health policy-makers and practitioners has recently drawn attention. Many national initiatives, such as NICE (England), the Norwegian Knowledge Centre for Health Services, the NIGZ Centre for Review in the Netherlands are trying to build the evidence base for public health and to ensure its implementation in their countries.

There are also several European-wide initiatives, in particular the WHO Health Evidence Network and the GEP ‘Getting Evidence into Practice’ consortium and Special Interest Group (consisting of national health agencies, IUHPE and EuroHealthNet). They have developed tools and methods such as review protocols, quality guidelines and evidence briefings to help transform knowledge of health promotion into practical steps.

Of relevance here is the suggestion by Kelly et al. (2) that evidence-into-practice is based on the integration of evidence, learning, local practitioners’ knowledge and local health-improvement needs.

However, transferring the evidence base into practice on a wide and comprehensive issue like healthy ageing, which pertains to lifestyle determinants and also wider socioeconomic determinants, is an enormous task. Correct and timely information to policy-makers and practitioners on effective interventions to promote healthy ageing, such as those described in this Report, is therefore a first important step forward.

## REFERENCES

1. Drury E, Walters R. Proven strategies to improve older people's health. London: Eurolink Age; 1999.
2. Kelly MP, Speller V, Meyrick J. Getting evidence into practice in public health. London: Health Development Agency; 2004.



CHAPTER 18

# Recommendations



# Recommendations

The increasing ageing-population trends projected up to 2050 pose a great challenge to and opportunity for Europe's economic and social development. Health promotion for the ageing population is an urgent and essential task for tackling this, and many countries have already started work in this field.

Responsibility for legislation and governance on health and ageing in the European Union belongs mainly to the Member States. In health promotion/public health, an extended mandate of the European Union based on the Amsterdam Treaty supports the policies through stimulating innovative action and the exchange of experience and good practice.

The Healthy Ageing project makes its recommendations to the EU institutions and Member States in the context of EU, UN and WHO policies related to healthy ageing, including:

- The EU "Lisbon process" of strategic priorities to 2010
- EU Treaty Article 152 on health protection for all citizens
- EU policies, inter alia on age discrimination and demographic change
- Health 21 – health for all in the 21st century and the Strategy to prevent and control non-communicable diseases in the WHO European region

- The WHO Active Ageing Policy Framework
- The United Nations Madrid International Plan of Action on Ageing

The Healthy Ageing project, co-funded by the European Commission, aims to promote healthy ageing in later life stages (50 years and older). The project has reviewed the literature, statistics, good practice and policies extending throughout Europe. The focus has been on cross-cutting themes:

- socioeconomic determinants,
- inequalities in health,
- gender,
- minorities.

and ten major topics:

- retirement and pre-retirement,
- social capital,
- mental health,
- environment,
- nutrition,
- physical activity,
- injury prevention,
- substance use/misuse,
- use of medication and associated problems,
- preventive health services.

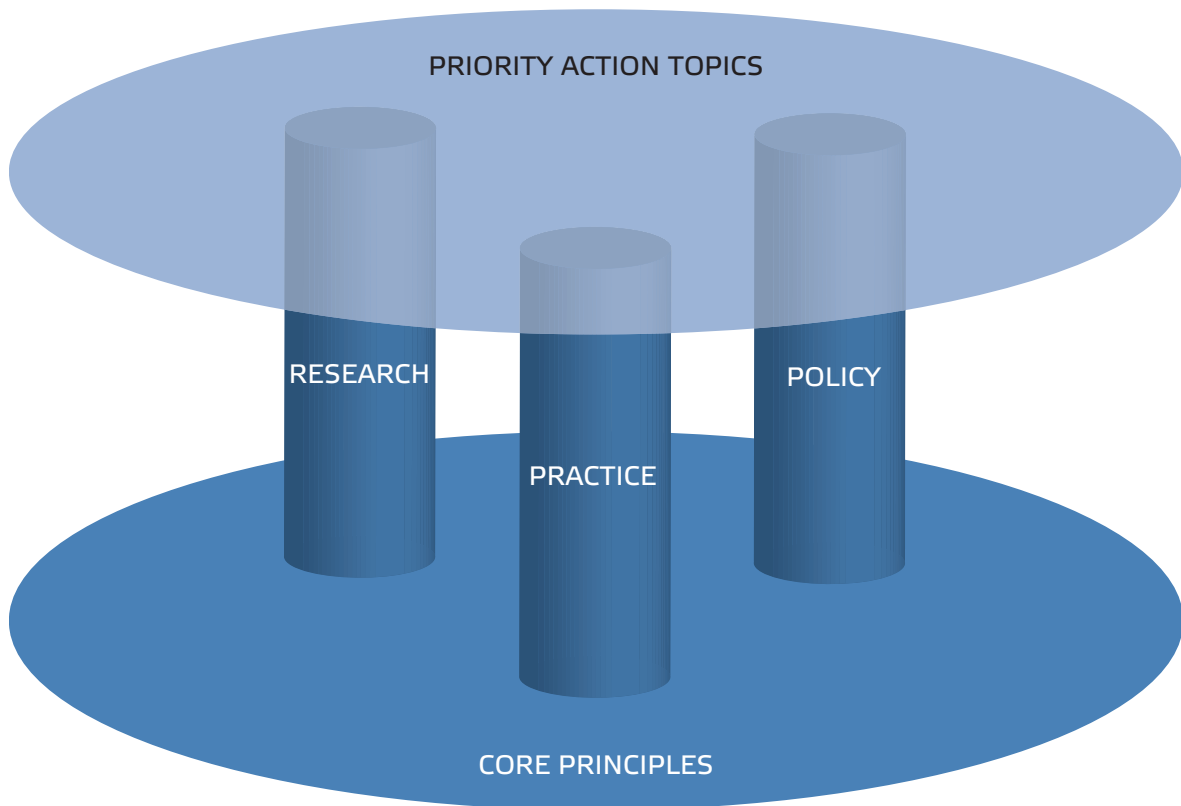


**THE HEALTHY AGEING PROJECT DEFINITION  
OF HEALTHY AGEING**

*Healthy ageing is the process of optimising opportunities for physical, social and mental health to enable older people to take an active part in society without discrimination and to enjoy an independent and good quality of life.*

To achieve the aims of this project and to take the work on healthy ageing forward, recommendations have been developed, for suggestion to the Commission and to Member States. The process has culminated in consensus. Significant in the process was the discussion, at a European Seminar in Helsinki in 2006, with high-level officials from ministries throughout Europe.

The core principles developed in this project are essential to healthy ageing and influence all the recommendations.



**Figur 28.** Recommendations of the Healthy Ageing project. The recommendations on policy, research and practice interrelate and are connected to the priority topics for action. They are all based on the core principles. ILLUSTRATION: TYPOFORM

## CORE PRINCIPLES OF HEALTHY AGEING

- *Older people are of intrinsic value to society*  
Many older people live a most meaningful life and are a resource for society. They contribute to society, work in a paid or unpaid capacity as volunteers, care for family members and friends, and carry out informal work in organisations and associations. Age discrimination is prohibited in certain EU legislation, but implementation and education are needed.
- *It is never too late to promote health*  
Evidence indicates that health promotion interventions can extend longevity and improve quality of life. Health promotion and prevention are possible even in groups of very high ages. Many preventive programmes and health promotion interventions exclude older people.
- *Equity in health*  
Tackling health inequalities in later life and improving the underlying socioeconomic determinants for older people should be at the core of any healthy-ageing strategy and health-promotion activity. Equity in health for older people explicitly includes non-discrimination of older people.
- *Autonomy and personal control*  
Autonomy and personal control are essential for human dignity and integrity throughout life. All individuals must have the opportunity for self-development and should take part in making decisions that concern them.
- *Heterogeneity*  
Heterogeneity among older people must be taken into account. It includes differences in gender, culture and ethnicity, sexual orienta-

tion, and variations in health, disability and socioeconomic status. The generation gaps among older people must also be taken into account. There are several generations between people aged 50 and those aged 100+.

Recommendations for policy, research and practice are presented below.

## POLICY

*The Healthy Ageing project suggests that the European Commission and the Member States:*

- develop sustainable policies, health programmes and financial frameworks, specific and/or integrated in other policies, programmes and frameworks, for health promotion and prevention of ill-health for older people at European, national, regional and local levels.
- integrate the significance of health and health promotion for older people in all policy areas such as economy, housing, transport and the environment.
- develop indicators for healthy ageing, and incorporate these in relevant statistical systems at European and national levels.

*The Healthy Ageing project suggests that the Member States:*

- develop action plans for implementing health-promotion and disease-prevention programmes, with the participation of older people, at all levels and specifically at local levels.
- strengthen health promotion in basic and continuing education in gerontology and geriatrics for all relevant professional groups.

## RESEARCH

*The Healthy Ageing project suggests that the European Commission and the Member States:*

- develop research to assess the effectiveness and the cost-effectiveness of health-promoting interventions and interventions for the prevention of disease or ill-health throughout the life course and especially in later life.
- strengthen research to find ways of motivating and changing the lifestyles of older people, especially the “hard-to-reach” groups, paying special attention to environmental and cultural aspects.
- strengthen research to develop indicators of healthy ageing, and to include data on the very old in health-monitoring statistics and research.
- disseminate research findings and promote their practical applications among all stakeholders.

## PRACTICE

*The Healthy Ageing project suggests that the European Commission and the Member States:*

- stimulate exchange of knowledge and experience of healthy-ageing interventions.

*The Healthy Ageing project suggests that local authorities, practitioners, officials and NGOs:*

- design, implement and review projects and programmes involving older people, paying special attention to “hard-to-reach” groups.
- encourage a partnership approach in health promotion strategies by involving older people, policy-makers, academics and practitioners.

- rely on scientific data and evidence-based health promotion when designing and implementing projects and programmes.
- inform a wide range of audiences about health promotion and effective health interventions targeting older people, using a variety of information and dissemination methods and channels.
- create the conditions and opportunities for older people to have regular physical activity, healthy eating habits, social relations and meaningful occupations.

## PRIORITY TOPICS FOR ACTION

Policymakers, NGOs and practitioners should consider the following priorities for action when working with older people:

### *Retirement and pre-retirement*

Increase the participation of older workers and the quality of their working lives using new management concepts. Keep a balance between personal resources and work demands and do not tolerate age discrimination. Prevent illness in the workplace, promote healthy lifestyles and a supportive and stress-free transition from work to retirement.

### *Social capital*

Encourage the participation of older people in the community. Increase educational and social activity group interventions targeting older people to prevent loneliness and isolation. Provide opportunities for voluntary work by older volunteers.

***Mental health***

Address the wider determinants, such as social relationships, poverty, discrimination, that have an impact on mental health and well-being in later life. Raise awareness of mental issues relevant to older people, such as depression and dementia. Increase the provision of psychotherapeutic and psychosocial interventions for older people.

***Environment***

Improve access to safe and stimulating indoor and outdoor environments for older people. Access to technology should be considered as well as the impact of climate change, excessive heat/cold and storms.

***Nutrition***

Promote healthy food and eating habits among older people, with an emphasis on low intake of saturated fats and high consumption of fibre-rich foods, green vegetables and fruits.

***Physical activity***

Increase the level of physical activity among older people in order to reach the international recommendations of 30 minutes or more of, at least, moderate-intensity physical activity on most, preferably all, days of the week.

***Injury prevention***

Initiate safety promotion and injury prevention, including programmes against violence and suicide, at all relevant policy levels. The individual approach should include physical and nutritional aspects, careful prescription of psychotropic drugs, and safe housing.

***Substance use/misuse***

Promote smoking cessation and the reduction of harmful alcohol consumption among older people.

***Medication and associated problems***

Problems associated with the use of medications can be avoided by the systematic use of quality indicators for drug use and better co-ordination among care providers. Surveys of therapies and the inclusion of older people in clinical trials will also help.

***Preventive health services***

Make preventive health services such as vaccinations accessible to older people, paying special attention to frail older people. Consider preventive home visits under certain conditions. Take health literacy into account when working with older people.



# Contributions

## CONTRIBUTIONS

The Report has been completed in close cooperation between the Project Group and the Steering Group.

### *Participants in the project*

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**Steering group members:** Fiona Borrowman, Caroline Costongs, Seta Waller, Nina Waaler Loland and Gerard H. van der Zanden.

The report has also been discussed and developed at European seminars. Public Health Institutes throughout Europe have contributed to the texts. The Recommendations have been discussed and developed by high officials at ministries responsible for public health in the European countries.

Various texts in the report have been commented on by experts. Chapters 3 “Retirement and pre-retirement” to 12 “Preventive health services” have been reviewed independently by Dr Betsy Thom, Head of the Social Policy and Research Centre at Middlesex University, England. The whole Report has been reviewed by Mårten Lagergren, Assistant Professor at the Stockholm Gerontology Research Centre and project evaluator. Support and comments are made by Sven Andreasson, Mats Bjurvald Sven Bremberg, Gudrun Eriksson, Karin Eriksson, Margareta Haglund, Paul Nordgren, Bosse Pettersson, Sarah Wamala at SNIPH, Yvonne Forsell at the Karolinska Institute, Gudrun Persson and Magnus Stenbeck at the National Board of Health and Welfare, Sweden.

The steering group has commented and contributed to the whole report.

### *Executive Summary*

Marianne Enge Swartz

### *Chapter 1. Introduction*

“Aspects of becoming older” and “Health promotion” – Eino Heikkinen, University of Jyväskylä, Finland

“Inequalities in health” – Caroline Costongs

”Gender and ageing” – Maj Sölvesdotter

### *Chapter 2. Statistics*

Chapter drafted – Maj Sölvesdotter

Chapter finalised – Hans ten Berg

The contribution of Göran Berleen is also acknowledged.

### *Chapter 3. Retirement and pre-retirement*

Gerard H. van der Zanden

### *Chapter 4. Social capital*

“Introduction” – Seta Waller and Petra Plunger

“Effectiveness of interventions” – Seta Waller

### *Chapter 5. Mental health*

“Introduction” – Michele Lee, Age Concern England, commissioned by

Fiona Borrowman

“Effectiveness of interventions” – Seta Waller, Michele Lee (commissioned by Fiona Borrowman), and Caroline Costongs

### *Chapter 6. Environment*

“Introduction” – Isabel Borges, Catherine Daurèle and Ida Knutsson, SNIPH

“Effectiveness of interventions”

– Isabel Borges and Catherine Daurèle

### *Chapter 7. Nutrition*

Taina Johansson, Carola Ray

and Susanna Strandback, Folkhälsan

Finland, and Anna Thille

### *Chapter 8. Physical activity*

Nina Waaler Loland

### *Chapter 9. Injury prevention*

Hana Janatova



**Chapter 10. Substance use/misuse**

“Tobacco” – Hans ten Berg  
and Pedro Ribeiro da Silva  
“Substance use/misuse, Alcohol”  
– Zahara Ismail

**Chapter 11. Use of medication  
and associated problems**

Barbro Westerholm

**Chapter 12. Preventive health services**

Caroline Costongs, Seta Waller  
and Michele Lee

**Chapters 3–12:**

Database searches were conducted by  
Gunilla Ripvall, librarian at SNIPH.  
Initial reviews and selection of papers, identified in the literature searches were conducted mainly by Marten Lagergren.  
Summaries of “Community interventions”  
Seta Waller.  
Sections on “Effectiveness of interventions”  
All edited by Seta Waller

**Chapter 13. Good practice**

The chapter “Examples of good practice” is based on a questionnaire to the project participants in summer 2005. Kerstin Tode analysed the answers and Marianne Enge Swartz wrote the text. Both are engaged by the WHO and the lead city of the healthy ageing theme in the Healthy Cities project.  
Mental Health and Well-being in Later Life Programme Scotland – Fiona Borrowman, Nuala Healy and Gudrun Winfridsson.

**Chapter 14. Health promotion for older people is cost-effective**

Lars Lindholm and Klas-Göran Sahlén, Umeå University, Sweden

**Chapter 15. International policies**

“WHO and UN policies” – Louise Plouffe, WHO  
“EU strategies and processes in relation to healthy ageing” – Caroline Costongs and Nina Bergman, SNIPH  
“EU policies on age discrimination”  
– Isabel Borges and Rachel Buchanan

**Chapter 16. Policies in European countries**

Chapter based on analysis by Claes Sjöstedt of a questionnaire to the European countries. Text by Marianne Enge Swartz. Both are engaged by the WHO and the lead city of the healthy ageing theme in the Healthy Cities project.

**Editors of the Report**

Karin Berensson, Project Manager, Healthy Ageing project  
Gudrun Winfridsson and Martina Junström, Information Officers, Healthy Ageing project.

# Appendices

## APPENDIX 1.

## LIFE EXPECTANCY IN EU/EFTA/EEA COUNTRIES

*Healthy Ageing EU-funded project 2004–2007*

Data selected and processed by Göran Berleen, Healthy Ageing project (Dec. 2005).

All data below are from Eurostat and refer to 2003 or earlier.

Country (In order of GDP per inhabitant)	Percentage of population			Average life expectancy (years)					
	50–64	65–79	80+	50		65		80	
				Males	Fem	Males	Fem	Males	Fem
Luxembourg	16.5	11.0	3.1	27.7	33.1	15.3	19.9	7.1	9.0
Norway	17.6	10.2	4.6	28.8	32.9	16.2	19.7	6.8	8.6
Ireland	15.2	8.5	2.6	27.7	31.9	15.3	18.6	6.3	7.9
Denmark	19.6	10.9	4.0	27.4	31.1	15.4	18.3	6.7	8.6
Iceland (2000)	15.0	8.8	3.0	ca 30.8	32.6	18.1	19.6	8.4	8.8
Sweden	19.5	11.9	5.3	29.6	33.4	16.9	20.0	7.2	8.8
Netherlands	18.4	10.4	3.4	28.1	32.4	15.6	19.3	6.5	8.4
Austria	18.1	11.4	4.1	28.4	33.1	16.3	19.7	7.1	8.5
United Kingdom (2000)	17.7	11.7	4.3	27.9	31.9	15.7	18.9	6.9	8.6
Finland	20.4	11.8	3.7	27.7	33.0	15.8	19.6	6.8	8.2
Belgium	17.5	13.0	4.1	27.9	32.8	15.8	19.7	6.8	8.4
Germany (2001)	18.7	13.8	4.2	28.0	32.8	16.0	19.6	7.2	8.6
France (2001)	17.4	12.0	4.4	28.7	34.7	16.9	21.3	7.7	9.7
Italy (2000)	18.4	14.4	4.8	29.0	33.9	16.5	20.4	7.3	9.0
Spain (2000)	16.2	12.7	4.2	28.6	34.1	16.5	20.4	7.3	8.8
Cyprus	16.2	9.3	2.6	---	---	---	---	---	---
Portugal	17.4	13.1	3.7	27.6	32.4	15.6	19.0	6.6	7.9
Slovenia	18.4	12.2	2.9	25.8	32.0	14.6	18.9	6.5	8.1
Malta	19.2	10.3	2.7	ca 27.8	32.4	14.9	19.0	5.9	8.6
Czech Republic	20.4	11.1	2.9	25.1	30.3	14.0	17.4	6.1	7.2
Hungary	19.1	12.3	3.2	22.7	29.2	13.1	17.0	6.2	7.3
Estonia	17.7	13.2	3.0	21.7	29.6	12.7	17.3	6.2	7.3

Country (In order of GDP per inhabitant)	Percentage of population			Average life expectancy (years)					
	50-64	65-79	80+	50	65	80			
				Males	Fem	Males	Fem	Males	Fem
Croatia (2000)	18.1	13.8	2.5	24.1	29.7	12.9	16.6	7.0	7.6
Slovakia	16.8	9.3	2.3	23.6	29.8	13.3	17.0	6.2	7.2
Lithuania	16.1	12.2	2.8	22.5	30.1	13.3	17.7	6.4	7.7
Poland	17.0	10.6	2.4	24.4	30.7	14.0	17.9	6.6	7.7
Latvia	17.7	13.3	2.9	21.4	29.0	12.5	16.9	6.1	7.2
Turkey	9.7	5.0	0.7	-	-	-	-	-	-
Romania	16.8	12.2	2.2	23.0	28.1	13.1	15.8	6.3	6.6
Bulgaria	19.7	14.2	2.9	23.3	28.3	13.0	15.7	5.7	6.2
Liechtenstein <sup>1</sup>	18.7	8.1	2.7	ca 30	ca 35	ca 18	ca 20	ca 8-9	ca 8
Switzerland <sup>2</sup>	18.4	11.4	4.3	30.1	34.5	17.4	21.0	7.6	9.3

29. No GDP is stated.

30. Switzerland is not an EU/EFTA/EEA country.

## APPENDIX 2.

### RELATION OF GROSS DOMESTIC PRODUCT (GDP) TO AVERAGE LIFE EXPECTANCY IN EU/EFTA/EEA COUNTRIES

*Healthy Ageing EU-funded project 2004–2007*

Data selected and processed by Göran Berleen, Healthy Ageing project (Dec. 2005).

All the data presented below are from 2004 (GDP) or earlier and published by Eurostat and OECD.

Country	GDP per inhabitant (€)	Total population (million)	% 65 years and older	% 80 years and older	Average life expectancy		
					Total	Males	Females
Luxembourg	56 500	0.5	14.1	3.1	78.2 (2002)	Ca 74.9	Ca 81.5
Norway	43 900	4.6	14.8	4.6	79.5	77.0	81.9
Ireland	36 600	4.0	11.1	2.6	77.8 (2002)	75.2	80.3
Denmark	36 300	5.4	15.0	4.0	77.2	74.9	79.5
Iceland	33 700	0.3	11.8	3.0	Ca 80.6	Ca 78.7	Ca 82.5
Sweden	31 000	9.0	17.3	5.3	80.2	77.9	82.4
Netherlands	30 000	16.3	13.8	3.4	78.4 (2002)	76.0	80.7
Austria	29 000	8.1	15.5	4.1	78.8 (2002)	75.8	81.7
United Kingdom	28 700	59.7	16.0	4.3	78.2 (2002)	75.9	80.5
Finland	28 600	5.2	15.5	3.7	78.2 (2002)	74.9	81.5
Belgium	27 200	10.4	17.1	4.1	78.1 (2002)	75.1	81.1
Germany	26 900	82.5	18.0	4.2	78.3 (2002)	75.4	81.2
France	26 500	59.9	16.4	4.4	79.4	75.8	82.9
Italy	23 300	57.9	19.2	4.8	79.6 (2000)	76.6	82.5
Spain	19 600	41.0	17.0	4.2	79.6	76.1	83.0
Cyprus	16 800	0.7	11.9	2.6	77.9 (1999)	Ca 75.3	Ca 80.4
Portugal	13 600	10.5	16.8	3.7	77.2 (2002)	73.8	80.5
Slovenia	13 100	2.0	15.1	2.9	76.6 (2002)	72.7	80.5
Malta	10 700	0.4	13.0	2.7	Ca 78.7 (2002)	Ca 75.9	Ca 81.0
Czech Republic	8 500	10.2	14.0	2.9	75.3	72.0	78.5
Hungary	8 000	10.1	15.5	3.2	72.6 (2002)	68.4	76.7
Estonia	6 700	1.4	16.2	3.0	71.2 (2002)	65.3	77.1
Croatia	6 200	4.4	16.3	2.5	74.8 (2002)	71.2	78.3
Slovakia	6 200	5.4	11.6	2.3	73.9 (2002)	69.9	77.8
Lithuania	5 200	3.5	15.0	2.8	71.9 (2002)	66.3	77.5
Poland	5 100	38.2	13.0	2.4	74.7	70.5	78.9
Latvia	4 800	2.3	16.2	2.9	70.3 (2002)	64.8	76.0
Turkey	3 400	71.3	5.7	0.7	68.7	66.4	71.0
Romania	2 700	21.7	14.4	2.2	71.2 (2002)	67.5	74.8
Bulgaria	2 500	7.8	17.1	2.9	72.3 (2002)	68.9	75.6
Liechtenstein <sup>31</sup>		0.03	10.8	2.7	Ca 80.5 (2002)	Ca 79	Ca 82
Switzerland <sup>32</sup>	38 900	7.4	15.7	4.3	80.4 (2002)	77.8	83.0

31. No GDP is stated.

32. Switzerland is not an EU/EFTA/EEA country.

### APPENDIX 3. HEALTHY LIFE EXPECTANCY (HALE) IN EU/EFTA/EEA COUNTRIES

*Healthy Ageing EU-funded project 2004–2007*

Data selected and processed by Göran Berleen, Healthy Ageing project (Dec. 2005).

Healthy life expectancy (HALE) in years at the age of 60 for males and females. Data computed by the WHO to assure compatibility between countries (see comments below).

Countries (In order of GDP per inhabitant)	Males	Uncertainty interval <sup>33</sup>	Females	Uncertainty interval
Luxembourg	16.0	15.7–16.3	19.2	18.9–19.6
Norway	16.2	15.7–16.6	18.9	18.5–19.1
Ireland	14.8	14.4–15.2	17.5	17.2–17.8
Denmark	15.2	15.0–15.4	17.2	16.9–17.4
Iceland	17.5	17.1–17.9	18.7	18.2–18.9
Sweden	17.1	16.8–17.4	19.6	19.3–19.9
Netherlands	15.5	15.2–15.8	18.4	18.1–18.7
Austria	16.2	16.0–16.5	19.3	19.0–19.6
United Kingdom	15.7	15.4–16.1	18.1	17.7–18.4
Finland	15.7	15.4–15.9	18.9	18.5–19.1
Belgium	15.7	15.4–15.9	19.1	18.9–19.4
Germany	15.9	15.6–16.2	19.0	18.8–19.3
France	16.6	16.3–16.9	20.4	20.1–20.7
Italy	16.4	16.0–16.7	19.4	19.1–19.8
Spain	16.4	16.1–16.8	19.9	19.6–20.2
Cyprus	14.2	13.8–14.6	15.0	14.1–16.0
Portugal	14.9	14.7–15.2	17.7	17.4–17.9
Slovenia	14.3	14.0–14.5	18.1	17.8–18.3
Malta	15.4	15.0–15.9	18.2	17.7–18.7
Czech Republic	13.5	13.3–13.7	16.8	16.5–17.1
Hungary	12.1	12.0–12.3	16.0	15.8–16.2
Estonia	11.9	11.4–12.2	16.5	16.3–16.9
Croatia	12.5	12.4–12.9	16.1	15.5–16.2
Slovakia	12.3	12.1–12.5	16.1	15.9–16.4
Lithuania	12.0	11.8–12.3	16.2	15.9–16.5
Poland	12.8	12.6–13.0	16.1	15.8–16.3
Latvia	11.3	10.9–11.7	15.7	15.5–16.1
Turkey	12.8	12.5–13.0	14.2	13.8–14.6
Romania	12.3	12.1–12.6	14.6	14.2–15.0
Bulgaria	12.5	12.2–12.7	15.0	14.8–15.3
Liechtenstein <sup>34</sup>	–	–	–	–
Switzerland <sup>35</sup>	17.1	16.7–17.5	20.4	20.1–20.7

33. The table above shows healthy life expectancy (HALE) at 60 years with 95 per cent uncertainty intervals (within a certainty of 95 per cent, true value within this interval). Small intervals indicate large survey samples.

34. Data missing.

35. Switzerland is not an EU/EFTA/EEA country.

### Comments on the HALE method

HALE is based on life expectancy but includes adjustment for time spent in poor health. It is most easily understood as the equivalent number of years in full health that a person who has reached 60 years can expect to live based on current rates of ill-health and mortality. The WHO published these data for 2002 in the 2004 World Health Report. Only HALEs at birth and at 60 years were published.

The methods used by the WHO to calculate HALE were developed to maximise comparability across populations. The WHO analysed over 50 national health surveys for the calculation of healthy life expectancy. It identified severe limitations in the comparability of self-reported health status data from different populations, even when identical survey instruments and methods were used. These comparability problems are a result of unmeasured differences in expectations and norms for health, so that the meaning that different populations attach to the labels used for response categories in self-reported questions (e.g. mild, moderate or severe) can vary greatly.

An extensive description of the method is given in the WHO report mentioned above.

## APPENDIX 4. EMPLOYMENT RATE IN EU/EFTA/EEA COUNTRIES

### *Healthy Ageing EU-funded project 2004–2007*

Data selected and processed by Göran Berleen, Healthy Ageing project (Dec. 2005).

Employment rate (%) of those working full-time (%) in the 50–64 age group and average exit age from the labour market. Data from Eurostat and the European Commission.

Country (In order of GDP per inhabitant)	Employment 2004		Working full time 2004		Average exit age in years 2003	
	Males	Fem.	Males	Fem.	Males	Females
Luxembourg	59.3	33.6	100 (u) <sup>36</sup>	58	–	–
Norway	76.3	67.4	89	55	62.8	62.8
Ireland	71.7	43.1	93	57	62.0 (2002)	62.8 (2002)
Denmark	72.9	61.4	92	69	62.3	62.0
Iceland	92.7	82.2	95	61	–	–
Sweden	75.3	72.2	88	65	63.5	62.8
Netherlands	67.9	45.9	78	19	61.0	59.9
Austria	54.6	36.6	93	63	59.4	58.2
United Kingdom	72.5	56.5	88	52	64.2	61.9
Finland	61.6	61.6	88	83	60.7	60.0
Belgium	53.6	32.6	89	53	58.6	58.7
Germany	60.3	45.5	94	53	61.9	61.4
France	57.6	49.1	94	70	59.7	59.6
Italy	57.4	30.8	95	82	60.9	61.0
Spain	68.0	32.7	98	82	61.6	61.3
Cyprus	78.0	42.9	93	85	–	–
Portugal	68.1	51.6	92	76	63.7	60.6
Slovenia	56.4	34.8	92	88	–	–
Malta	65.2	17.2		83 (u)	–	–
Czech Republic	68.2	47.3	96	90	61.2	59.0
Hungary	51.5	41.3	94	91	60.9	62.1
Estonia	66.7	58.6	94	91	–	–
Croatia	53.4	33.1	93	83	–	–
Slovakia	58.6	35.7	98	93	60.0	55.9
Lithuania	66.2	51.9	91	86	–	–
Poland	47.2	32.9	89	81	59.8	56.4
Latvia	61.2	54.0	90	86	–	–
Turkey	–	–	–	–	–	–
Romania	56.2	41.9	91	87	62.6	62.9
Bulgaria	52.0	37.8	91 (u)	93	60.1	57.5
Liechtenstein <sup>37</sup>	–	–	–	–	–	–
Switzerland <sup>38</sup>	81.8	61.8	89	32	–	–

36. u=unreliable data.

37. Data is missing.

38. Switzerland is not an EU/EFTA/EEA country.



## APPENDIX 5. LITERATURE REVIEW ON HEALTHY AGEING

*Healthy Ageing EU-funded project 2004–2007*

Mårten Lagergren, Gunilla Ripvall and Seta Waller

The chapters on the major topics have two parts: introduction and effectiveness of interventions. These are based on literature searches and summaries of the findings by the authors of the chapters. The descriptive papers identified are summarised in each introduction, which presents an overall view of the topic. The authors have added papers not identified in the literature searches, based on their own, colleagues' or other experts' opinions. The parts on the effectiveness of interventions include papers selected for the evidence they provide.

The papers are reviewed and the chapters written mainly by the Healthy Ageing project members.

The evidence is presented by nature of intervention, methods used, conclusions and evidence statements.

We have used the term 'older people' throughout this report except when reporting from a paper which uses another term such as 'elderly people'.

We aimed to:

- adopt a systematic approach,
- describe the methods used to identify evidence-based papers in the literature, and
- summarise the findings from the database searches in chapters on the major topics.

### *Search strategy*

A wide range of databases were searched to identify the relevant literature on interventions targeting people aged  $\geq 50$ . The searches focused

mainly on systematic reviews, meta-analyses and literature reviews on health promotion.

The searches were conducted on major topics relevant to older people. Details of the search strategy can be found at [www.healthyageing.nu](http://www.healthyageing.nu).

The following databases were searched. The number of references/abstracts identified is given below:

Database	Number of references/ abstracts
Cochrane database	66
PubMed database (Medline)	1,242
PsychInfo	85
CRD (HTA, NHS, EED)	383
Total	1,776

### *Selecting references*

From the gross list of 1,776 references, 189 papers were selected for further examination. Each was rated from 0–3 regarding the degree of relevance to interventions on health promotion for older people. In the next step, 78 papers were chosen according to this rating. In addition a second list of 14 papers describing intervention projects was drawn up, based on an expert's opinion, so as to shift the total balance in favour of papers on intervention. These 14 papers have a lower relevance rating, but the addition was made because of the project's focus on intervention. A few papers were added by the project steering group, as being relevant, based on their expert opinion.

The guiding principle for both steps of the selection was relevance to evidence-based health promotion and disease prevention among older persons. Hence in the first place papers were chosen that:

- reported results from meta-analysis or reviews of issues regarding successful interventions and important health determinants for the older population,
- showed clear, generally valid effects or results,
- pertained to questions of significance and importance with regard to the health and quality of life of older people, and
- involved prioritised groups such as women, immigrants and different socioeconomic groups and vulnerable groups of older people.

Papers were generally excluded that

- did not pertain to the older population (50+),
- focused on treatment or management of disease rather than prevention (although sometimes the line between secondary or tertiary prevention and treatment can be hard to draw),
- referred only to a specific geographical area, or
- referred only to a specific drug or to a specific organ or system in the body.

Concerning four major topics – Preventive health services, Environment, Mental health and Retirement and pre-retirement – additional searches in many databases were needed to find a sufficient number of relevant papers.

The selected papers were included in two matrices (see [www.healthyageing.nu](http://www.healthyageing.nu)).

### *The review process*

The "Effectiveness of interventions" sections include papers selected for evidence, from the literature searches, which are reviewed and summarised in the report by the Healthy Ageing project members. The chapter authors also included papers not identified in the literature searches, as mentioned above. Two authors of reviewed papers were also contacted for clarification of the age-range of participants in their studies.

### *Inclusion criteria*

- include papers from the international literature published from January 1990 to June 2005,
- focus on systematic reviews, meta-analyses and other good reviews with clear methodology on health-promoting interventions and on ill-health prevention such as falls and heart disease. Primary and secondary prevention was considered, for example in the case of dementia and depression. Secondary prevention refers to prevention of relapse or prevention of a readmission to institutional care.

Note that papers identified through the literature searches and included in this Report are predominantly written in English.

### *Levels of evidence*

Organisations in Britain, such as the Cochrane Collaboration, the National Institute of Health and Clinical Excellence (NICE), and the York Centre for Reviews and Dissemination review evidence-based medicine. Each stratifies the level using different descriptive tools. The highest level of evidence is based on reviews of randomised controlled trials (RCTs) or

single RCTs. The Health Development Agency has published evidence briefings, reviews-of-reviews on public health topics, and has presented the evidence predominantly focusing on systematic reviews, meta-analyses and good-quality literature reviews of the effectiveness of public health interventions. Effectiveness is described, mostly quantitatively, in terms of outcomes; however, outcome measures vary and depend on the focus of the study (1).

The "Effectiveness of interventions" sections present review-level evidence on interventions targeting older people. The aim was to include a high level of evidence by reporting systematic reviews of randomised controlled trials (RCTs) and meta-analyses. In a few topic areas with few systematic reviews, we included good literature reviews and quasi-experimental, case-controlled, cohort or observational studies.

#### *Evidence categories*

Evidence statements based on the findings of the papers reviewed are given at the end of every chapter, in the following two categories:

*Evidence of effectiveness:* evidence derived from systematic reviews, meta-analyses and good-quality reviews of interventions with clear methodology including reviews-of-reviews.

*Inconclusive evidence of effectiveness:* inconsistency of methods and observed effects in studies included in systematic reviews, meta-analyses, and good quality reviews of interventions with clear methodology including reviews of reviews.

#### *References*

1. Hillsdon M, Foster C, Naidoo B, Crombie H. The effectiveness of public health interventions for increasing physical activity among adults: a review of reviews. London: Health Development Agency, NHS; 2004.

## APPENDIX 6.

### OFFICIAL STATISTICAL SOURCES ON OLDER PEOPLE AND HEALTH

*Healthy Ageing EU-funded project 2004–2007*

*Maj Sölvesdotter*

To gather statistics the Healthy Ageing project has charted statistical data on health and older people living in EU countries. During this work, a number of important sources of statistics were identified.

#### International level

The World Health Organization (WHO) and WHO/Europe provide statistics via the WHO Statistical Information System (WHOSIS) in different areas such as health-related information, health indicators and burden-of-disease statistics.

The WHO Programme on Health Statistics is an integrated WHO initiative to strengthen country, regional and global health statistics for better policymaking and programme implementation. The WHO European Health-for-All database (HFA-DB) contains about 600 health indicators (demographic and socioeconomic indicators, some lifestyle and environment-related indicators etc.) (Register of databases in the WHO Regional Office for Europe, 2003). The WHO has also implemented a survey programme and a World Health Survey to compile comprehensive baseline information on the health of populations and on the outcomes of investment in health systems. In addition, studies of special populations, such as the older population, are being continued in the WHO Study on Global Ageing and Adult Health (SAGE).

As a coordinator of the EUROHIS project, WHO Europe is involved in developing European Health Surveys. EUROHIS aims to

harmonise European health interview surveys and move towards the use of international multi-country surveys (1). WHO Europe is also highlighting issues of active ageing, for instance fostering policy advocacy, promoting healthy lifestyles, reducing health risks and increasing the quality of life. One framework element of the WHO Healthy Cities project is a project to create a model for profiling older people in cities (2).

The Organisation for Economic Co-operation and Development (OECD) provides comparable statistics on health, health systems, health indicators, a system of health accounts (SHA), ageing society etc., as well as an OECD data warehouse, the OECD OLIS. OECD OLIS will progressively become the single source of all OECD statistical datasets under one common system. One theme in the data warehouse is health and economic and demographic statistics. Based on the OECD health database, the OECD indicators can be used for example to provide evidence of large variations across countries in indicators such as health status and health risks.

OECD Health Data 2005 is an interactive database of comparable statistics comprising mainly demographic, economic and social data on key aspects of the health-care systems in the 30 OECD member countries. The key indicators in this database cover health status (life expectancy, causes of mortality etc., perceived health status and social expenditure on for example old age and survivors), health resources, utilisation and expenditure, pharmaceuticals

consumption and non-medical determinants of health. They also cover demographic and economic references, e.g. population age structure. Statistics on lifestyle and behaviour, etc., do not include data by age group.

The OECD Health Project measures and analyses the performance of health-care systems in member countries: factors affecting performance, long-term care of older people etc. Ageing society is one important issue for the OECD, largely because the ageing of OECD populations over the coming decades will require comprehensive reforms in the labour market, pension systems, social benefits and systems of health and long-term care, etc. The OECD analyses the challenges that ageing implies for member countries in these policy domains (see e.g. the OECD publications *Long-term care for Older People*, *Ageing and Employment Policies – “Live Longer, Work Longer”*, *Ageing and Employment Policies – Sweden*, *Ageing, Housing and Urban Development*).

The International Compendium of Health Indicators (ICHI) is a Web-based application containing a selection of the most relevant health indicators used by WHO Europe, OECD and Eurostat in their international databases. These are the Health-For-All database of the WHO, European region, the Health Data of the OECD, and the New Cronos database of Eurostat. The ICHI also includes the complete list of health indicators developed by the ECHI (European Community Health Indicators) project, see below.

### European level

#### *The European Health information System*

One objective of the 2003–2008 Public Health Programme is to develop comparable information on health covering: health-related behav-

our (lifestyles and other health determinants), disease and health systems (indicators of access to care, quality of care, human resources and financial viability of health-care systems). According to the European Commission the development of health information will be based on European health indicators with agreed definitions, method of collection and use. The work on indicators and data collection is co-ordinated among working parties that are creating a prototype for the future health-monitoring system (3).

The Health Monitoring Programme (HMP) aims at providing the European Commission with relevant and timely information about the health situation in each Member State. This health information system will be a mix of existing and new data collected through health surveys in various Member States. Problems here are the substantial variations between Member States in content and methods of conducting a survey, with inconsistency in health information as a result. These inconsistencies are a major problem when dealing with statistics in any form, and preclude comparability (4).

The Health and Consumer Protection Directorate-General (DG SANCO) is developing instruments for collecting necessary health information data in cooperation with Eurostat, DG Research, OECD (System of Health Accounts), the WHO (European Community Environment and Health Information System) and with its own DG SANCO resources and partners. A smaller set of health indicators at regional/sub-national level valid for 300 regions of the EU is also being developed through the support of the Health Indicators in the Regions of Europe, phases 1, 2 and 3 (ISARE) projects. DG SANCO's future objective is to develop a European System of Information on Health

and Knowledge fully accessible to all European experts and the general public. Its main output is the EU Health Portal, which provides easy access by citizens and professionals needing thematic information resources on EU-level public health.

The European Community Health Indicators (ECHI) project is further developing appropriate structures for health monitoring, with the aim of proposing a coherent set of European Community health indicators. The current objective, ECHI 2, is to continue the work on specific indicators so as to complete the health indicators list to serve as a basis for the European health information and knowledge system. ECHI 1 and ECHI 2 have developed a comprehensive list of approximately 400 items/indicators. ECHI 2 has begun selecting indicators for a “short list” of 40 items that are reasonably comparable. Where this is considered useful or appropriate, the indicators are stratified by gender and age. They are divided into demographic and socioeconomic factors, health status, and determinants of health and health interventions, i.e. health services (health systems and their subdivisions) (3).

Another important step in developing health information in the EU has been taken in the framework of the European Public Health Information, Knowledge & Data Management System (EUPHIX). EUPHIX aims to develop a prototype for a sustainable, Web-based health information system for the EU.

A similar initiative is European Community Health Indicators Monitoring (ECHIM), also an EU-funded project, aiming at improving information and knowledge for the development of public health. ECHIM is developing and co-ordinating work on Health Indicators and Monitoring (HIM). In another project, Euro-

REVES 2, the aim is to select a concise set of instruments from which a comprehensive set of health expectancies can be produced for the EU (health expectancies combine life expectancy with a health indicator).

### *The European Statistical System (ESS) and Eurostat*

Work is in progress at EU level on establishing the framework for all statistics in different areas, for instance public health, carried out by the European Statistical System (ESS). ESS seeks to provide comparable statistics at EU level. This was prompted by growing requests for health statistics at Community level as well as requirements for high-standard statistics for monitoring policies in different areas. Statistical data on e.g. health and its determinants is also needed for a variety of sets of indicators. Examples are in the ECHI programme and in the Open Method of Coordination (OMC) on health care and disability and social integration indicators. The ESS comprises Eurostat and the statistical offices, ministries, agencies and central banks that compile official statistics mainly in the EU Member States.

Eurostat is the Statistical Office of the European Communities. It provides the European Union with high-quality statistical information services.

The ESS functions as a network in which Eurostat is to lead the way in harmonising statistics in close cooperation with the national statistical authorities. ESS concentrates mainly on EU policy areas. However, with the extension of EU policies, harmonisation has been extended to nearly all statistical fields. There is also coordination between ESS and international organisations such as the OECD, the UN, the IMF and the World Bank. The Sta-

tistical Programme Committee (SPC) has an important role in ESS work. SPC is chaired by Eurostat and brings together the directors of the Member States' national statistical offices. SPC discusses the most important joint action and programmes for meeting EU information requirements.

Eurostat statistics on older people and health are presented first under the themes health, public health. The statistics on ageing are provided by age group concerning, for example, self-perceived health, diseases, disabilities, morbidity, causes of death, health care, health status, healthy-life-years expectancy (=disability-free life expectancy), health indicators from national health interview surveys (HIS) etc. Data on the ageing society theme concern old-age dependency ratios, pensions adequacy (relative median income ratio), the risk-of-poverty rate for persons aged 65 years and over, demographic changes (life expectancy at age 65 by gender etc.) and public finance stability (pensions expenditure, average exit age from the labour market by gender, expenditure on care for the elderly, total employment rate by age group, etc).

#### *The European Health Survey System (EHSS)*

The European Health Survey System (EHSS) consists of the European Health Interview Survey (EU-HIS) or the 18 HIS-item Eurostat Project, the European Community Household Panel Survey (ECHP), the Survey of Income and Living Conditions (EU-SILC), the DG Health and Consumer Protection's health Eurobarometers, DAFNE – the European food availability databank based on household budget surveys (food, socioeconomic and demographic data collected in household budget surveys (HBS) and the European Monitoring Centre for Drugs and Drug Addictions (EMCDDA) – general

population surveys of drug use. General-population drug use and related factors are presented in the EMCDDA representative sample surveys of the whole population.

Health interview surveys (HIS), health examination surveys (HES) and combinations of HIS/HES and other population surveys were used in EU Member States to collect information about the self-assessed health of the population, on health-related behaviour and the use of medical services. This information was collected and stored in the HIS/HES database by Eurostat. Under the ongoing 18 HIS-item project, internationally comparable data has been significantly improved (5). The 2002 data compilation indicated several topics for which existing national surveys could deliver sufficiently comparable data: self-perceived health, chronic conditions, smoking, body-mass index, doctor/dentist consultations and use of medicines. For some other items, national approaches still differ significantly although harmonisation seems possible.

The European Community Household Panel (ECHP) is a longitudinal, multi-subject survey covering many aspects of daily life, particularly employment and income, but also demographic aspects, environment, education and health. The health section of the ECHP contains questions on perceived health, chronic conditions hampering daily activities, temporary reduction of activity because of health problems and hospitalisation, medical consultations, smoking and Body Mass Index. The detailed interview results are stored at Eurostat and many statistics derived from the ECHP are available in Eurostat's database, New Cronos.

The European Community Household Panel (ECHP) project was replaced in 2005 by a new instrument, EU-SILC (Statistics on Income and Living Conditions). EU-SILC is a continuous

survey that covers statistics on income and living conditions for different types of household in European countries. The reason for the change was mainly to adapt the instrument to new political needs, above all priorities for the eradication of poverty and a better understanding of social exclusion, based on commonly agreed indicators. The main output of the project is that, for the first time, comparable data on income distribution and on poverty/social exclusion have been produced for the EU. Development is under way of different modules for a European Health Interview Survey (EHIS) containing several instruments in specific domains (health status, health determinants, use of medical services), collected at national level and co-ordinated by Eurostat (5).

DG SANCO also has a Health Eurobarometer. Standard Eurobarometers (EBs) are designed to gauge European public opinion on aspects of European integration and the activities of European institutions. These EBs are surveys of social or living conditions. Secondly, there are special EB modules based on in-depth thematic studies carried out for departments of the European Commission or other EU institutions. These are then integrated into the standard Eurobarometer polling waves. DG SANCO's special EBs on health are a consequence of this. In 2005, DG SANCO launched an inventory of 30 years of Eurobarometers on health so as to produce a publicly-available tool for analysis and consultation.

#### *Other European Surveys and Databases*

The European Social Survey (ESS) covers 20 nations and is jointly funded by the European Commission, the European Science Foundation and academic funding bodies in each participating country. The core module monitors change and continuity in numerous cultural, social

and economic variables, and the rotating modules contain questions formulated by selected research groups for specific research purposes. The system of rotating modules allows for flexibility and country-specific contextual data on e.g. employment rates, tax levels, social expenditure etc. There is currently no rotating module on ageing. Extensive research by the European Foundation for the Improvement of Living and Working Conditions (Eurofound) has focused on documenting and better understanding the situation in the new European Union. This led to Europe's first quality-of-life survey.

The European Quality of Life Survey (EQLS) was carried out by the Foundation in 28 countries in 2003. It examined issues such as education, household and family structures, housing, health care and employment. In 2004 the Foundation published an analysis of quality-of-life issues using data from the European Commission's Eurobarometer surveys in the EU and from the acceding and candidate countries. The data of the survey is, among other components, based on different age groups, which allows presentation of data on ageing. Eurofound's work on living conditions and quality of life in Europe also includes data from an interactive database of statistical quality-of-life indicators, EurLIFE. EurLIFE offers data from the Foundation's own surveys and from other published sources.

The EQUAL project (Successful practices in age management) is an initiative for new ideas for European employment strategy and the social inclusion process. It is funded through the European Social Fund to promote more inclusive working life by fighting discrimination and exclusion for reasons of sex, racial or ethnic origin, religion or beliefs, disability, age or sexual orientation. EQUAL also has a data-



base, the EQUAL Common Database (ECDB), which contains information on all the projects financed within the European Union. The data is intended for those involved with EQUAL, for networking and for trans-national activities, for specific observers (political, researchers, etc.) and for the public interested in employment issues, social integration, combating discrimination and inequality, innovation, etc.

#### *The European Commission's research programmes*

The Key Action 6 on the Ageing Population and their Disabilities is part of the Fifth Framework Programme for Research and Technological Development in the Quality-of-Life Programme. Key Action 6 was established to meet the challenges that society is facing in an ageing Europe. The research seeks to promote the global objective of healthy ageing with a Community-wide, cross-sectoral multidisciplinary approach. Key Action 6 is organised into five action lines and different sub-areas: age-related illnesses and health problems, basic processes of physiological ageing, demographic and social policy aspects of population ageing (for example HALE, SHARE and FELICIE projects), coping with functional limitations in old age, and health and social care services to older people (including health inequalities).

The aim of the Healthy Ageing: a Longitudinal Study in Europe (HALE) project is to study changes in and determinants of normal and healthy ageing in 13 European countries in terms of mortality and morbidity outcomes and of physical, psychological, cognitive and social functioning (6).

The Survey of Health, Ageing and Retirement in Europe (SHARE) project is seeking to

understand ageing and how it affects individuals in the diverse cultural settings of Europe, that is, to study how differences in cultures, living conditions and policy approaches shape the lives of Europeans just before and after retirement. Areas studied include data on physical and mental health, health care services, well-being, labour force participation, family and social networks, income and wealth (7).

The MERI project – mapping existing research and identifying knowledge gaps concerning the situation of older women in Europe – is another research programme under Key Action 6. MERI aims at identifying the specific situation of older women and corresponding research and publication gaps. Research areas include health, education and qualifications, ethnicity, labour market/paid and unpaid work, income, social inclusion, social benefits, violence, political participation/elections and interest representation (8).

The European Research Area in Ageing (ERA-AGE) under the Sixth Framework Research Programme, aims at facilitating the coordination of European research programmes and knowledge exploitation, promoting joint disciplinary research activities between countries and sharing good practice in the coordination and management of national ageing-research programmes. Another objective is to help break down barriers between ageing-research programme policy and practice so that the societal benefits of such research are realised as rapidly as possible. It is also important for the project to support the production of European priorities for ageing-research programmes and ensure that these are fed systematically into national/regional funding mechanisms.

The European Commission has recently adopted a proposal for a new Seventh Framework Programme for Research for the period 2007–2013. This research programme consists of many elements of continuity. Nine themes have been identified, including health, socioeconomic sciences and the humanities.

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## APPENDIX 7. ABBREVIATIONS

ACE	Angiotensin-converting enzyme	HFA-DB	European Health for all database (Developed by WHO)
ADL	Activities of Daily Living	HES	Health examination surveys
ADR	Adverse reactions	HIS	Health interview surveys
AGE	European Older People's Platform	HMP	The Health Monitoring Programme
AGIR	Ageing, Health and Retirement in Europe	IADL	Instrumental Activities of Daily Living
AMD	Age-related macular degeneration	ICHI	International Compendium of Health Indicators
BMI	Body Mass Index	INPEA	International Network for the Prevention of Elder Abuse (WHO)
CC3	Candidate Countries	INR	International Normalised Ratio
CEA	Cost-effectiveness analysis	ISARE	System of Regional Indicators in Health
CHD	Coronary heart disease	LGBT	Lesbian, Gay, Bisexual and Transgender persons
COPD	Chronic obstructive pulmonary disease	MEPs	Members of the European Parliament
DG	Directorate-General	MERI	Mapping Existing Research and Identifying knowledge gaps concerning the situation of older women in Europe
DG SANCO	Health and Consumer Protection Directorate-General	MIPAA	Madrid International Plan of Action on Ageing
ECHI	European Community Health Indicators (project)	NAOs	Europe and National Action Plans
ECHIM	European Community Health Indicators Monitoring	NIGZ	Nationaal Instituut voor Gezondheidsbevordering en Ziektepreventie in the Netherlands
ECHP	European Community Household Panel Survey	NGO	Non Governmental Organisations
ECOEHS	European Community Environment and Health Information System EES European Employment Strategy	NMS-10	New Member States
EHIS	European Health Interview Survey	NSAIDs	Non-steroidal anti-inflammatory drugs
EHSS	European Health Survey System	OECD	Organisation for Economic Co-operation and Development
EMCDDA	European Monitoring Centre for Drugs and Drug Addictions	OMC	Open Method of Coordination
EPHA	European Public Health Alliance	PAD	Peripheral arterial disease
EQLS	European Quality-of-Life Survey	QALY	Quality-adjusted life years
ERA-AGE	European Research Area in Ageing	RCTs	Randomised Controlled Trials
ESS	European Statistical System	SAGE	WHO Study on Global Ageing and Adult Health
EU-HIS	European Health Interview Survey	SHARE	Survey of Health, Ageing and Retirement in Europe
EUPHIX	European Public Health Information, Knowledge & Data Management System	SNIPH	The Swedish National Institute of Public Health
EU-SILC	Statistics on Income and Living Conditions	SPC	Social Protection Committee
Eurostat	Statistical Office of the European Communities	SPC	Statistical Programme Committee
FELICIE	Future Elderly Living Conditions in Europe	WHO	World Health Organization
GDP	Gross Domestic Product	WHO HC	WHO Healthy Cities
GP	General practitioner	WHOSIS	WHO Statistical Information System
HALE	Healthy life expectancy		
HALE	Healthy Ageing: a Longitudinal study in Europe (project)		

**BY 2025 ABOUT** one-third of Europe's population will be aged 60 years and over and there will be a particularly rapid increase in the number of people aged 80 years and older. The countries of Europe must develop strategies to meet this challenge. Promoting good health and active societal participation among the older citizens will be crucial in these strategies.

The *Healthy Ageing – a Challenge for Europe* report presents an overview of interventions on ageing and health. It includes suggested recommendations to decision makers, NGOs and practitioners on how to get into action to promote healthy ageing among the growing number of older people.

The report also presents different countries' policies/strategies for older people's health, summaries of reviews on the effectiveness of interventions for later life, and a number of examples on good practice projects promoting healthy ageing. Data about the health of older people is presented.

Co-funded by the European Commission, the three-year (2004–2007) Healthy Ageing project aims to promote healthy ageing among people aged 50 years and over. It involves ten countries, the World Health Organisation (WHO), the European Older People's Platform (AGE) and EuroHealthNet. The goal is exchange of knowledge and experience among the European Union Member States and EFTA-EEA countries. The main aims have been to review and analyse existing data on health and ageing, to produce a report with recommendations and to develop a comprehensive strategy for implementation of the report findings and the recommendations.



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