

# Healthy throughout Life

– the targets and strategies for public health policy of the Government of Denmark, 2002–2010

Government of Denmark

September 2002

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# Contents

Preface

1. Collective responsibility

2. Risk factors

3. Major preventable diseases and disorders

4. Target groups

5. Collective efforts

Annex: Indicator programme for Healthy throughout Life

## Preface

Through the health policy Healthy throughout Life, the Government of Denmark calls for broad cooperation on improving health for everyone in Denmark.

There are many future challenges. The Government has formulated the important collective challenges in Healthy throughout Life. This policy deliberately uses the expression “collective challenges”. The tasks are precisely collective and so is the responsibility. No one can carry out the task of improving health alone.

Improving health requires that we all recognize our responsibility and take on our share of the tasks: individuals, families and local social networks; the voluntary sector; child-care centres, educational institutions, the health care system and the like; workplaces; private and public companies; and the municipalities, counties and state.

To illustrate this, Healthy throughout Life includes numerous examples of what each individual can do, what communities can do collectively and what the public sector can do.

The Government views partnerships as becoming a key aspect of the efforts to prevent disease and promote health in the coming years. Partnership is cooperation between equal partners to solve collective tasks. Partnerships are already a familiar sight in many fields related to health promotion.

Healthy throughout Life is a comprehensive health policy. It follows the line established with the Health Promotion Programme of the Government of Denmark (the Government at that time comprising the Liberal Party, the Conservative Party and the Social Liberals) from 1989 – Denmark’s first overall health promotion programme.

Healthy throughout Life retains important targets from the Government Programme on Public Health and Health Promotion, 1999–2008. These include the overall targets of increasing life expectancy, improving the quality of life and reducing social inequality in health, the targets for several risk factors, the target groups and efforts to promote health in child-care centres, schools, workplaces and the health care system.

Nevertheless, Healthy throughout Life, in contrast to the Government Programme on Public Health and Health Promotion, 1999–2008, is

establishing a special focus on efforts to reduce the major preventable diseases and disorders. The quality of life of many people can be improved considerably through more systematic efforts in counselling, support, rehabilitation and other measures in relation to patients. One key aspect is giving individuals the necessary knowledge and tools to carry out their own efforts to promote health and care for themselves.

A catalogue of indicators has been developed in connection with Healthy throughout Life. The purpose is to ensure regular monitoring and documentation of the trends in the population's health status and health behaviour and efforts to promote health and prevent disease. The indicator programme will be developed continually.

The targets are ambitious and the challenges are great. Collective efforts are required – with respect for individuals and individual choices.

Lars Løkke Rasmussen

Minister for the Interior and Health

September 2002

# 1. Collective responsibility

## **Continuity in public health work**

In 1989, the Government at that time (composed of the Liberal Party, the Conservative Party and the Social Liberals) presented the Health Promotion Programme of the Government of Denmark, Denmark's first comprehensive health promotion programme. The Programme focused on preventing accidents, cancer, cardiovascular diseases, musculoskeletal disorders and mental disorders. In addition, the Programme presented policies on nutrition, tobacco and alcohol. With this Programme, health promotion had moved from ad hoc to coherent, systematic efforts for the long term.

The Programme was based on the viewpoint that the health of the population is not solely a matter for individuals, family and friends and the health care sector but that other sectors of society (such as the labour market, the housing sector, the educational sector and the social sector) are very important for public health. Intersectoral cooperation to promote health has been on the agenda since then in the efforts to prevent disease and promote health.

In the 1990s, Denmark focused on life expectancy. This had stagnated since the 1970s, so that relative life expectancy declined from being nearly the highest among similar countries to the lowest. Thus, in 1992 this situation was investigated extensively under the Committee on Life Expectancy of the Ministry of Health. The Committee's main conclusion was that smoking was the main reason for this negative trend.

Changing the trends in life expectancy was one of the overall targets of the Government Programme on Public Health and Health Promotion, 1999–2008. The Programme included 17 targets relating to public health and health promotion. Two were overall targets on life expectancy, the quality of life and equity in health, and the other 15 were on risk factors (such as tobacco and alcohol), target groups (such as children and young people) and settings for promoting health (primary and lower secondary schools, workplaces, local communities and health services). All the parties represented in the Folketing (parliament) agreed in principle with the priorities established for these targets or efforts when the Folketing debated the Programme in January 2000.

A 2001 status report on public health work that is being presented simultaneously with Healthy throughout Life reviews and assesses the efforts to improve public health in recent years in Denmark. The status report summarizes the trends based on the targets of the Government Programme

on Public Health and Health Promotion, 1999–2008.

The Government emphasizes maintaining continuity in efforts to improve public health. The status report states that especially the targets related to the risk factors and the targets for schools, workplaces and the health services are still relevant to health, have struck a responsive chord and have been integrated into health planning related to preventing disease and promoting health.

Nevertheless, the Government believes that the efforts to improve public health need to be reoriented. Healthy throughout Life presents a broader and more comprehensive approach to efforts to promote health and prevent disease, which increases the coherence in relation to major preventable diseases and disorders between primary prevention; individual self-care and health initiatives; and counselling, support, rehabilitation and other measures in relation to patients.

### **Increasing life expectancy free of disability or illness for everyone at all ages**

Life expectancy in Denmark has risen considerably more than in similar countries in recent years. Nevertheless, Denmark is still in the bottom half of the European Union (EU) countries. The latest data from 2001 show that life expectancy is 79.2 years for females and 74.5 years for males.

Life expectancy is not everything. The quality of life is at least as important. A positive trend in this area is the indication that the quality of older people's lives has improved.

Efforts to promote health and prevent disease should target both adding years to life and adding life to years.

The Government believes that the perspective should be broadened such that the focus is more on both life expectancy and the quality of life. This applies to such areas as life after paid employment ends, which is when the major preventable diseases and disorders have their greatest impact. Avoiding illness is decisive to having a good life, and having the opportunity and support for a high quality of life is crucial for people with chronic diseases and disorders.

The Government will continue to maintain the perspective of equity in health. Society must take responsibility for the most disadvantaged and vulnerable population groups. The Government therefore emphasizes the need for special attention and efforts in relation to several high-risk groups in Healthy

throughout Life.

The Government believes that social equity in health is one of the fundamental values of a welfare society, including for efforts to promote health.

**Increase life expectancy free of disability or illness for everyone at all ages**

- Life expectancy should be increased substantially
- The number of years with high quality of life should be increased
- Social inequality in health should be minimized

Healthy throughout Life maintains important features of the Government Programme on Public Health and Health Promotion, 1999–2008: targets for public health policy for efforts in relation to several risk factors (Chapter 2), several target groups (Chapter 4) and efforts to promote health and prevent disease in schools, workplaces and the health services (Chapter 5).

In its overall programme, the Government has signalled that it will focus on several major preventable diseases and disorders and the substantial loss the population thereby incurs in quality of life. These are diseases that impact much of the population. This focus is intended to create the basis for regular assessment, adjustment and development of the efforts to prevent the major preventable diseases and disorders, including the quality of these efforts. This includes both actual efforts to prevent disease and promote health and counselling, support, rehabilitation and other measures in relation to patients (Chapter 3).

**Collective responsibility – different tasks**

**Health is a collective responsibility**

Health is created in interaction between individuals, families and the local and extended networks and communities in which individuals participate. Close, everyday relationships influence our attitudes, perspectives on life and behaviour, including in relation to health.

Health is also created by people's living conditions and by the framework for

people's lives, such as housing conditions, the working environment, the external environment, food safety and the health services available.

The best way to develop and disseminate efforts to improve public health is by recognizing our responsibility and taking action based on this.

*Individuals* are responsible for their own lives. Everyone has the right to live their lives as they wish: to make their own choices. But people's choices affect them and may influence other people positively or negatively. For example, how parents act towards their children does matter. *The family* is a nucleus of society in Denmark, including in relation to health. Parents influence their children as they are growing up. People often seek and find support within the family when they become ill.

Individuals have responsibility for themselves, for their family and friends and for participating in communities.

*Communities* are everyday contexts in which people participate such as schools, sports clubs, neighbourhoods and workplaces.

People have responsibility for one another in such communities. In communities people help to create each others' lives. Communities – local social and extended networks – contribute to forming and changing our norms. This also applies to both positive and negative changes in health behaviour in a broad sense, including lifestyles, environmental behaviour and behaviour related to road traffic. Local social networks, such as the parents of the schoolchildren in one class, neighbours and co-workers, greatly influence how people act. Communities can support individuals and individual families, but they can also isolate and distance themselves from individuals, such as in bullying at school or mobbing at work.

Dialogue, openness and participation in decision-making are crucial to promoting change in the collective framework at workplaces, educational institutions and the like. Equality is an important prerequisite for ensuring co-ownership and collective responsibility in such situations. Experience shows that equality is crucial in the area of lifestyles.

Such initiatives as health promotion in workplaces should continue to be based on voluntary participation and respect for individuals.

Denmark is a country of nongovernmental organizations: sports clubs, voluntary organizations (including ones for senior citizens), associations of tenants and property owners and parents' boards in schools, child-care

centres and other institutions. The voluntary sector plays a great role in Denmark. It is therefore important in promoting health that voluntary organizations together with child-care centres, schools, workplaces and other institutions take collective responsibility for health by integrating it into their activities and tasks. This is already happening, but there is little doubt that organizations can contribute even more.

Communities also have an important role in illness and debilitation. People have a special collective responsibility for one another when they incur illness or debilitation. Neighbours are an important source of support for many older people and chronically ill people. Organizations and associations contribute through their activities by, for example, counselling patients, establishing self-help groups and creating visitation schemes.

*The public sector* – Denmark's municipalities, counties and state – are responsible for creating a good framework for the health of individuals, families and communities and for their efforts to improve health. The public sector carries this out through legislation, planning and other means and through the numerous social and health services offered by the welfare state. Another means is by ensuring that information on health and illness is disseminated, by monitoring the health of the population, by contributing to the development of new methods and by formulating collective targets and strategies for efforts to promote health and prevent disease.

The public sector has special responsibility towards the weakest groups in society, who need professional assistance and financial support. This is one of the core tasks of the welfare state.

Improving public health requires that all three levels recognize their responsibility.

## **Collective responsibility and different tasks at the three levels**

### **What can individuals do?**

Actors: individuals, families and local social networks

Action: establishing healthy habits, changing health behaviour and providing support in local social networks

### **What can communities do?**

Actors: communities, including nongovernmental organizations, child-care centres, schools, workplaces and health care services

Action: carrying out specific initiatives to prevent disease and promote health; and creating community environments and networks that support health

### **What can the public sector do?**

Actors: the state, counties and municipalities

Action: establishing a framework for health promotion (including legislation, fiscal appropriation, structure, tools, research and information dissemination); making specific disease prevention services available for the general public and for special target and high-risk groups; and supporting the weakest members of society.

## **Partnerships**

Denmark has a long and constructive tradition of close cooperation in carrying out society's tasks, such as between voluntary organizations and the public sector, between employees and employers and between parents and schools.

The Government, by adopting Healthy throughout Life, plans to extend this long and constructive tradition in improving public health.

The Government will maintain the responsibility of the public sector for public health. This will be manifested through such initiatives as the national strategy for sustainable development, efforts to ensure a good working environment, support for vulnerable and marginalized people and the development of the educational sector. Education has been shown to be one of the best ways to create health and to counteract social inequality in health.

The Government will attempt to generate additional interest for health in the numerous contexts in which people participate.

The Government believes that the concept of partnership for health still has great potential.

Partnerships are cooperation between equal partners, such as voluntary

organizations, municipalities, counties, workplaces, health care providers and others.

This concept is not new in public health. For example, disease-specific associations cooperate with the public sector in carrying out numerous tasks, companies have made agreements with providers of preventive health care services, and the state, counties and municipalities cooperate on development projects in health promotion and disease prevention. The partnerships are extremely diverse and varied.

Partnerships may have a flexible or fixed framework. The need to balance the mutual expectations plays a decisive role. This applies, for example, to the need to formulate collective objectives, such as the scientific or professional content.

Partnerships are one way to find new means and methods in efforts to promote health through new forms of cooperation between, for example, general adult education and the municipal social and health services. Entrepreneurs, volunteers and other citizens and municipal employees have alone or in partnership developed many new ideas and initiatives in health promotion and disease prevention.

The Government urges that more and new types of partnership be established in health promotion and disease prevention. The Government will use this approach in the coming years to develop health promotion and disease prevention.

The Government also wishes to emphasize the continuing important role of the public sector in promoting health and preventing disease as a cornerstone of Denmark's welfare state.

### **Effectiveness, efficiency, quality and professionalism**

Health promotion should be based on what works. The reasons for this are to avoid inconveniencing the population unnecessarily with initiatives in which the benefit to individuals is not commensurate with the resources applied and to ensure that resources are used optimally. This means that cost-effective methods of promoting health and preventing disease should be given priority.

Health promotion should be based on professionalism and supported by research-based development of methods and evaluation and by education and training.

More knowledge is needed in many fields. Much is known about the links between lifestyles and health, but less is known about effective and efficient

methods of promoting health. Knowledge is lacking in many fields, such as the habits and behaviour of ethnic minorities relating to tobacco smoking, alcohol consumption, diet, physical activity and other areas with the aim of assessing more specific and targeted initiatives.

The Government urges researchers to take up these issues.

The Government is initiating an indicator programme in connection with Healthy throughout Life (Annex). The indicator programme is intended to ensure the continuing surveillance and documentation of trends in an understandable way based on a relevant selection of the great quantity of statistics and data that are produced.

## 2. Risk factors

A risk factor is a factor within an individual or his or her lifestyle or a factor in the surrounding environment that negatively influences wellness and health and is documented to be associated with a specific disease or disorder. Examples include smoking, an unhealthy diet, obesity and air pollution.

Knowledge of risk factors is the basis for focusing efforts to promote health and prevent disease. Knowledge of the relationships between risk factors and disease is increasing continually, and risk factors for many diseases have been discovered.

But all cases of disease and illness cannot be prevented.

Targeted efforts in relation to the most important risk factors can reduce premature death and declining quality of life. Including risk factors in an appropriate way in counselling, support, rehabilitation and other measures in relation to patients can improve patients' quality of life and reduce the risk of remission and premature death.

The risk factors in Healthy throughout Life are based on the preventable causes of the major diseases and disorders and causes of death. The risk factors in Healthy throughout Life are:

- tobacco smoking
- alcohol consumption
- diet
- physical activity
- obesity
- accidents
- working environment
- environmental factors.

### **Facts about risk factors and major preventable diseases and disorders**

Smoking is the lifestyle factor that has the greatest negative effects on health in Denmark. Thus, smoking causes about 30% of ischaemic heart disease and about 90% of all cases of lung cancer. About 15% of all smokers develop

chronic obstructive pulmonary disease.

Accidents, smoking and alcohol consumption account for about 50% of all deaths among men younger than 65 years, and 36% among women.

Unhealthy diets and physical inactivity increase the risk of overweight and thereby the risk of such complications as non-insulin-dependent diabetes, which again can lead to cardiovascular diseases (mostly myocardial infarction and stroke).

Physical activity has an independent health-promoting effect.

Obesity increases the risk of such conditions as non-insulin-dependent diabetes – about 75% of people diagnosed with non-insulin-dependent diabetes are overweight at the time of diagnosis.

Accidents (road, work and home & leisure accidents) are the most common cause of death among people younger than 40 years of age, causing 2400 deaths each year in Denmark. Falling accidents cause 1200 deaths annually, especially among people older than 80 years.

The working environment influences the risk of developing, for example, musculoskeletal disorders, hypersensitivity disorders (allergy and asthma) and cardiovascular diseases.

The Organisation for Economic Co-operation and Development has estimated that environmental factors account for 2–5% of the burden of disease in affluent countries. About 10% of all cancer cases are thought to be caused by environmental factors.

# Smoking

## **Facts about smoking**

Tobacco smoking causes 12,000–13,000 deaths each year in Denmark.

Lifetime smokers on average live 7–9 years shorter than nonsmokers in Denmark.

Lifetime smokers are seriously ill for 13 years versus 8 years for nonsmokers in Denmark.

A man smoking in Denmark has been estimated to cost society about EUR 20,000 in direct costs and more than EUR 47,000 in indirect costs from 35 to 89 years of age. A comparable nonsmoker costs EUR 10,000–13,500 in direct costs and about EUR 27,000 in indirect costs.

## **Target for public health policy**

### **Smoking**

The number of smokers should be reduced considerably through smoking cessation and by reducing the number of new smokers. Smoke-free environments should become widespread.

## **Current trends**

Tobacco smoking has had distinct trends in recent years. The prevalence of smoking has declined from 43% of adults 10 years ago to 30% today. The same positive trend does not really apply to heavy smoking, as the prevalence has only dropped slightly. Smoke-free environments have been established in more and more places, and cessation services have been expanded and access improved.

## **Strategy**

Promoting health with regard to tobacco includes:

- rules and agreements on smoke-free environments: consideration for high-risk groups, including children and including people with asthma, should be an important factor;

- information, motivation and counselling on smoking cessation through such means as professional cessation programmes for smokers in high-risk groups, including heavy smokers; and
- information and supportive environments to reduce the number of new smokers.

### *Smoke-free environments*

It is important to give the population the opportunity to choose to be smoke free and to create a framework that allows fewer people to be subjected to passive smoking. Smoke-free environments have become more widespread in publicly accessible spaces, especially in recent years. This has happened through changing legislation on smoke-free environments and through voluntary initiatives. Future promotion of smoke-free environments should be based on voluntary measures. Experience with voluntary smoking rules in health care institutions, at workplaces and in hotels and restaurants shows that voluntary initiatives can produce results.

### *Cessation services*

Half of all smokers in Denmark would like to quit. Many would find cessation services useful. It is therefore important to produce services that reach the smokers where they are and in the life situations in which they are motivated to be receptive to them. More and more counties are providing smoking cessation services for their residents. They are organized in different ways, such as independent cessation clinics or as agreements with pharmacies on cessation opportunities.

### *Fewer new smokers*

The population has obtained knowledge on the harmful effects of smoking on health. Continuing to ensure that the choice of smoking or not smoking is based on good information is important. A continuing task is to give the population factual information on the harmful effects of smoking and the opportunities for cessation. Strengthening the efforts to ensure that fewer children and young adults start to smoke is especially important.

### **Who will do what?**

Promoting health in relation to tobacco requires efforts at many levels and requires that many people take responsibility. These include the people with the authority to make decisions on smoke-free environments in educational institutions, workplaces, restaurants and other buildings; those responsible for smoking cessation services in counties, municipalities, disease-specific

associations and others, including smoking cessation counsellors; and the educational sector, public health authorities, disease-specific associations and others with the aim of disseminating knowledge and shaping attitudes.

### *Examples of partnerships*

The National Board of Health has entered into a partnership with the Association of the Hotel, Restaurant and Tourism Industry in Denmark. This has resulted in a Web site ([www.fritvalg.info](http://www.fritvalg.info)) providing a guide to restaurants, cafés and other tourist facilities with smoke-free sections.

The National Board of Health and representatives of the Sports Confederation of Denmark, the Danish Gymnastics and Sports Associations and the Danish Union of Sports Centre Managers cooperate on sports and tobacco. The objective is to create awareness on smoking among those working and otherwise present in the sports and leisure environment.

Several counties cooperate with pharmacies on offering people help in stopping smoking.

Smoking is the theme to which the counties give highest priority in their health promotion planning.

### **Collective challenges**

- Reducing the number of heavy smokers
- Reducing smoking among children and young people
- Reducing the social gradient in smoking
- The end of all cross-border restrictions on the personal purchase and import of tobacco and other products from January 2004

### **What can individuals do?**

- Support children and young people in not starting to smoke.
- Support smokers who are trying to quit.
- Be considerate by not smoking where children are present.
- Be aware of being a role model for children and young people.
- Smokers should try to quit.
- Pregnant women should avoid smoking.

### **What can communities do?**

- Create more smoke-free environments in the public domain – restaurants, canteens and the like, in connection with sports activities and at hospitals.
- Establish smoking policies at workplaces.
- Train smoking cessation counsellors.
- Offer smoking cessation services.

### **What can the public sector do?**

- Ensure a high level of information on the harmful effects of smoking.
- Create supportive environments, especially for children and young people.
- Include smoking cessation for pregnant women as part of the services offered by the public health care system.
- Include the prevention of harm from tobacco as part of the training of health care personnel.

## Alcohol consumption

### **Facts about alcohol**

Young people in Denmark drink more alcohol and more often than do other young people in Europe.

About 500,000 adults in Denmark exceed the maximum number of standard alcoholic drinks per week recommended by the National Board of Health.

Denmark has about 200,000 alcohol addicts.

Alcohol kills about 2600 people in Denmark each year and costs society EUR 1.35 billion per year.

At least 60,000 children 0–18 years old in Denmark are growing up in a family with an alcohol abuser.

### **Target for public health policy**

#### **Alcohol**

The number of heavy consumers of alcohol should be reduced considerably, alcohol consumption among young people should be reduced and children should not consume any alcohol.

### **Current trends**

The average alcohol consumption in Denmark has been very steady in the past 30 years at about 11–12 litres of pure alcohol equivalent per person 15 years or older per year.

The composition of consumption has changed. Drinking alcohol at work has become less common, and drinking at leisure has become more widespread. About 60% of workplaces in Denmark have a policy on alcohol. Young people in Denmark drink more than those in any other EU country. In 2000, 24% of men and 14% of women 16 to 20 years old and 15–20% of those 65 years or older exceeded the maximum number of standard drinks recommended by the National Board of Health. This number is a maximum of 21 standard drinks per week for men and 14 for women.

### **Strategy**

Promoting health in relation to alcohol includes:

- informing about the harmful effects of alcohol, including the recommended maximum intake;

- providing supportive environments to reduce alcohol consumption, including supportive environments with stricter enforcement of the existing rules for children and young people; and
- early intervention for people consuming large quantities of alcohol.

### *Information*

A large proportion of the population consumes more alcohol than the quantity recommended by the National Board of Health. Many people who do this probably do not know about the harmful effects of heavy alcohol intake. It is important to disseminate information on the effects of heavy alcohol consumption to both adults and to children and young people.

### *Supportive environments*

Alcohol consumption is related to culture. Denmark's alcohol culture is very loose and permissive. Alcohol is drunk on many occasions. It is important that parents and other adults take responsibility for alcohol consumption among children and young people. It is important to ensure that the community environment supports an alcohol culture that protects children and young people and supports efforts to reduce heavy drinking and alcohol abuse. The collective framework for alcohol consumption should be discussed and agreed at the municipal level, at workplaces, in schools, in each school class, in sports clubs and elsewhere. The regulations for serving alcohol in bars and restaurants, the prohibition of alcohol sales to children under 15 years of age, marketing agreements and other measures should be respected and enforced. This business sector has great responsibility.

### *Early intervention*

Individuals may find it difficult to admit that they consume large quantities of alcohol. Many people would benefit by having someone who wants to and can help them. For example, general practitioners and many other people can contribute significantly. The relevant people should have the qualifications to intervene and try to motivate people who need professional help.

### **Who will do what?**

Preventing disease and promoting health in relation to alcohol requires cooperation between numerous actors, including schools, workplaces, educational institutions for young people, public health authorities, county alcohol and narcotics specialists, municipalities, municipal and county social and health services, general practitioners, the police and the voluntary social sector.

### *Examples of partnerships*

The National Board of Health cooperates with the counties' specialists in workplace alcohol policy and with private and public workplaces. The National Board of Health works with county alcohol and narcotics specialists on the annual week-40 anti-alcohol campaign of the National Board of Health, collective efforts in schools and other initiatives.

The Danish Centre for Alcohol Research of the National Institute of Public Health and the Danish Centre for Alcohol and Drug Research of the University of Aarhus cooperate on alcohol research within social sciences and health sciences.

The Municipalities of Ballerup, Fredericia, Horsens, Ikast, Nykøbing-Rørvig, Nykøbing Falster and Randers and the National Board of Health cooperate on developing municipal action plans on alcohol.

The Danish Resource Centre and Information Centre on Alcohol (an independent entity under the Ministry of Social Affairs), the National Board of Health and the Ministry of Social Affairs cooperate on gathering and processing information on alcohol from Denmark and elsewhere and on creating intersectoral and interdisciplinary networks.

The efforts of the counties to promote health and prevent disease give high priority to reducing alcohol abuse.

### **Collective challenges**

- The high alcohol intake among young people
- Heavy consumers of alcohol among adults and young people
- Heavy consumers of alcohol among elderly people
- The end of all cross-border restrictions on the personal purchase and import of alcohol and other products from January 2004

### **What can individuals do?**

- Support children and young people in getting a late start in consuming alcohol.
- Avoid drinking more than the recommended amount.
- If pregnant: avoid drinking alcohol.

- Do not mix drinking and driving.
- Take care of friends, co-workers and others who show signs of having an alcohol problem.
- Seek help and support as early as possible for alcohol problems.

### **What can communities do?**

- Develop policies on alcohol consumption in workplaces, schools, educational institutions for young people and elsewhere.
- Inform the municipal department of social services if a child's well-being is endangered because of alcohol problems in a family.
- Ensure that young people have secure environments in which to have parties.

### **What can the public sector do?**

- Ensure adequate information on the harmful effects of alcohol, the recommended maximum intake and other matters.
- Ensure that health promotion in relation to alcohol is included in the education of the relevant front-line personnel.
- Take care of the children and other relatives of alcoholics.
- Anchor the early intervention in a specific place or organization.

## Diet

### **Facts about diet**

A healthy diet is very important for promoting and maintaining health and for preventing overweight and diet-related diseases such as cardiovascular diseases, non-insulin-dependent diabetes, certain types of cancer and osteoporosis.

The dietary intake of fat is still too high in Denmark, although fat intake as a proportion of total energy declined from 37% to 33% from 1995 to 2000–2001. The recommended proportion is 30%.

The proportion of adults in Denmark eating the recommended 600 grams of fruit and vegetables per day increased from 4% in 1995 to 11% in 2000–2001. The proportion eating less than 200 grams per day has declined from about one third to about one fourth.

### **Target for public health policy**

#### **Diet**

The number of people who eat a healthy diet should be increased considerably, and healthy dietary habits should be a natural part of everyday life.

### **Current trends**

Dietary habits greatly influence public health. The increasing prevalence of overweight especially illustrates the importance of healthy dietary habits. Recent dietary habits in Denmark have both positive and negative trends. Fat intake has fallen and the intake of fruit and vegetables has increased substantially. The average diet in Denmark does not comply with the recommendations, however. The consumption of sugary drinks and sweets has increased, especially among children. Many children consume considerably more sugar than the amount recommended.

### **Strategy**

Promoting health in relation to diet includes:

- information, motivation and counselling on healthy dietary habits;
- increased access to healthy food and a healthy framework for meals at schools, educational institutions for young people, workplaces, meal services organized or subsidized by the public sector and elsewhere;

- regulation and initiatives that promote healthy dietary habits; and
- special efforts in relation to elderly people and ill people.

### *Information, motivation and counselling on healthy dietary habits*

The population is very interested in eating a healthy diet, and this interest is increasing. Continuing to support this interest is important. The population and professionals must have access to objective information, instruction and guidance on healthy dietary habits. Health dietary habits must be promoted based on everyday life. Efforts must include increasing the intake of fruit and vegetables, reducing fat intake, reducing children's excessive intake of sugar and urging people to eat food in appropriate amounts.

### *Increased access to healthy food*

A healthy framework and opportunities to eat healthy food are important. These include food and meal schemes and policies in schools, child-care centres and other institutions, workplaces and elsewhere. Choosing healthy food must become the easy choice.

### *Regulation and initiatives that promote healthy dietary habits*

The public should be ensured healthy food of high quality and be protected against deception. National and international regulation must account for the overall dietary habits of the population and thereby contribute to promoting health in general.

### *Elderly people and ill people*

Many elderly people and ill people do not eat enough food. Targeted efforts are needed to ensure these people adequate and nutritious food. Increased freedom of choice for elderly people between public and private schemes for home delivery of meals should contribute to ensuring that publicly financed programmes are based more highly on the needs and desires of elderly people. Cooperation and coordination between the caretakers of elderly and ill people should be strengthened – for example, between general practitioners, home helpers, public or private suppliers of meals, hospitals and relatives – such that malnutrition can be prevented or discovered as rapidly as possible.

### **Who will do what?**

Promoting healthy dietary habits requires intersectoral cooperation and requires that many people take responsibility. For example, schools, child-minders, institutions, the health care services, community centres for elderly

people and other settings play an important role in creating a framework for good and healthy meals. General education for adults, the educational sector, public authorities and others maintain a high level of information dissemination. Producers of food and retail trade outlets ensure accessibility to food, the quality of food, food-supply security and other tasks.

### *Examples of partnerships*

The Danish Veterinary and Food Administration, the Danish Nutrition Council, Danish Consumer Information, the National Board of Health, the Danish Cancer Society, the Danish Fruit, Vegetable and Potato Board and the Marketing Committee of the Danish Horticultural Marketing Board (GAU) cooperate on promoting the consumption of fruit and vegetables in Denmark – the Six per Day Campaign.

Fyn County and 10 municipalities have developed the Children, Food and Physical Activity Project. The purpose is to increase well-being and health among children through such means as developing local policies on diet and physical activity, activating families and providing in-service training for teachers in schools and child-care centres.

Diet is a high priority in the counties' health promotion planning.

### **Collective challenges**

- Developing healthy dietary habits among children
- Developing healthy dietary habits among adults, especially elderly people
- Ensuring adequate intake of specific nutrients such as vitamin D, folate, iron and iodine
- Improving the quality of the publicly subsidized home meal services, especially in relation to special target groups
- Increasing Denmark's influence in the harmonization of food policy by the EU

### **What can individuals do?**

- Choose healthy dietary and mealtime habits.
- Create a sense of community around meals.
- Support children and young people in developing healthy dietary habits.
- Support people who are trying to change their dietary habits.

- Eat a healthy diet and appropriate amounts.

### **What can communities do?**

- Create healthy food and mealtime schemes in schools, institutions, sports associations, workplaces and elsewhere.
- Ensure the quality of food at hospitals and nursing homes and for elderly people in their own home.
- Build networks and initiatives that can support healthy dietary habits.
- Ensure that the people working with the diets of elderly people and ill people have a professional background.

### **What can the public sector do?**

- Ensure a high level of information dissemination on health in relation to food and meals.
- Ensure that messages are coordinated to reduce confusion.
- Ensure that citizens have access to healthy food and that citizens are not deceived.
- Include information on a healthy diet in the education and training of health care personnel.
- Develop strategies for promoting healthy dietary habits.

## **Physical activity**

### **Facts about physical activity**

About 20–30% of the population in Denmark is so sedentary that this comprises a risk to health.

The risk of premature death is twice as high among people who are physically inactive as among physically active people.

The proportion of the population of Denmark with sedentary work increased from 33% in 1987 to 37% in 2000.

People with sedentary work do not compensate by being more physically active at leisure.

Participation in physical activity is strongly correlated with level of education and income.

### **Target for public health policy**

#### **Physical activity**

The number of people who are physically active should be increased considerably, and physical activity should become a natural part of everyday life.

### **Current trends**

Physical activity is very important for health – more important than was previously known. This has led to and must lead to increased interest in physical activity. Growing numbers of children get no exercise in their daily lives, and polarization is increasing between the children who are physically active and those who are not.

### **Strategy**

Promoting health in relation to physical activity includes:

- general information on recommendations for physical activity, including targeted information and counselling for physically inactive people;
- making physical activity a natural part of everyday life, through such measures as improving opportunities for physical activity; and
- ensuring physical activity as part of treatment and rehabilitation.

### *Information*

The population should be familiar with the recommendations on physical activity. The National Board of Health recommends that adults be physically active at moderate intensity for at least 30 minutes per day, and 60 minutes for children. This activity may be divided into smaller portions. Information about the significance of physical activity in promoting health should be included in the education, continuing education and in-service training of health care professionals, teachers in schools and child-care centres and other professionals.

### *Opportunities for physical activity*

It is important that individuals have opportunities for being physically active in everyday life, including in spontaneous ways. This applies to home life, leisure activities, community environments, transport and workplaces, and especially workplaces with sedentary work. Policies on exercise can be established in many areas and achieve benefits. The voluntary organizations and associations are important actors.

### *Physical activity as part of treatment and rehabilitation*

Physical activity can replace medical treatment in some cases. This potential should be utilized better. For example, general practitioners treating obese people may refer them to exercise classes for overweight people or the like.

### **Who will do what?**

Preventing physical inactivity requires efforts from many different partners, including schools, child-care centres, workplaces, sports and other associations and disease-specific associations. Other examples include those responsible for spatial planning, construction and the health care services in relation to rehabilitation and exercise as medicine.

### *Examples of partnerships*

The Danish Cyclists' Federation and the Danish Federation for Company Sports cooperate on a Bicycle to Work campaign to get more people to cycle to work.

The National Board of Health works with the Danish Heart Association in investigating the motivation for and barriers to physical activity among the population.

Several projects to improve distressed urban districts, such as the Holmbladsgade district of Copenhagen, have culture and sports as a priority area, with one aim being to get sedentary people to become physically active.

The Ministry of Social Affairs has cooperated with the University of Southern Denmark on research into exercise for elderly people.

The counties have given higher priority to efforts to combat physical inactivity in their health planning.

### **Collective challenges**

- Creating coherence in exercise schemes, especially for children and young people
- People with little tradition for or experience with physical activity, including ethnic minorities
- Promoting physical activity among elderly people and ill people, including physical activity and rehabilitation as part of treating illness
- Promoting new forms of cooperation with sports associations and other organizations
- The tendency of technological development to promote physical inactivity

### **What can individuals do?**

- Children: be physically active at least 60 minutes per day.
- Adults: be physically active at least 30 minutes per day.
- Support children and young people in becoming or remaining physically active.
- Make daily transport active by cycling, taking the stairs or in other ways.
- Support sedentary people in becoming physically active.

### **What can communities do?**

- Create physical environments that promote physical activity in such settings as schools, child-care centres and workplaces.
- Provide comprehensive schemes that can motivate people who do not have a tradition for being physically active, including ethnic minorities.

### **What can the public sector do?**

- **Ensure substantial information dissemination on the importance of physical activity for health.**
- **Focus on physical activity in preventing disease and as part of treatment.**
- **Include information on physical activity in the education of health care personnel, teaching personnel and other personnel.**

# Obesity

## **Facts about obesity**

The prevalence of obesity among those older than 16 years in Denmark increased from 5.5% in 1987 (250,000 people) to 9.5% in 2000 (400,000 people). The number of overweight people increased from 1.3 million to 1.7 million in the same period.

Obesity increases the risk of several diseases, including cardiovascular diseases, non-insulin-dependent diabetes mellitus, certain types of cancer and degenerative injuries from wear on the musculoskeletal system. Obesity reduces women's fertility.

Obesity is associated with the risk of exclusion from the labour market, stigmatization, bullying or mobbing and low self-esteem.

## **Target for public health policy**

### **Obesity**

The increase in the number of people who are obese should be stopped.

## **Current trends**

The prevalence of overweight and obesity is increasing rapidly in Denmark and in the rest of the Western countries. Nearly one tenth of all adults in Denmark are obese.

Obesity is defined as a body mass index (BMI) exceeding 30 and overweight as exceeding 25. BMI is calculated based on:  $(\text{weight in kg}/(\text{height in metres})^2)$ .

## **Strategy**

Efforts in this area include:

- general prevention of overweight, including targeted efforts for children and young people;
- developing effective methods of preventing and treating obesity; and
- measures for people at special risk of developing obesity or overweight-related diseases.

### *General prevention of overweight*

Overweight is the most important risk factor for obesity. Primary prevention

includes a healthy diet and physical activity.

Obesity is an increasing problem among children and youth. Most overweight teenagers remain overweight as adults. It is important that children develop healthy and regular dietary habits and derive pleasure from exercising. This can be achieved by creating health-promoting environments in children's daily lives and by having the adults who spend time with children support and encourage them in developing good dietary and exercise habits.

### *Methods of prevention and treatment*

Methods and tools need to be developed for efforts to prevent and to treat obesity. To ensure comprehensive efforts with established priorities, the National Board of Health is preparing a proposal for a national action plan on the prevention and treatment of obesity. The proposal will include documentation, an overview of activities and services offered and a catalogue of ideas for future initiatives. The proposal is expected to be presented in early 2003.

### *People at special risk*

Preventing obesity and increasing overweight requires special efforts, especially in relation to people at risk, including children and young people who are genetically disposed, certain groups of ethnic minorities and people undergoing certain types of medical treatment. Developing diverse forms of treatment is important. The treatment must be interdisciplinary and individual and include biological, psychological, social and cultural aspects.

### **Who will do what?**

Preventing obesity and developing effective treatment methods requires efforts in many fields. Important actors include schools, child-care centres, municipal health services, educational institutions for children and young people, workplaces, disease-specific associations, patient organizations and others. In addition, research institutes, general practitioners, county health promotion departments, temporary foster centres for children with problems and other treatment programmes and opportunities have important roles to play.

### *Examples of partnerships*

Storstrøm County, its hospital and the municipalities in the county cooperate on initiatives targeting overweight pregnant women and overweight children and young people.

The City of Copenhagen is cooperating with the Danish Gymnastics and Sports Associations, the National University Hospital and the Research Department of Human Nutrition of the Royal Danish Veterinary and Agricultural University on initiatives for overweight children.

The Municipality of Thisted is cooperating with the Conservative Learning Association (FOF, a general education association) on programmes for overweight children with a team comprising a public health nurse, dietitian, psychologist, physical education teacher, child-care teacher and health coordinator.

Vejle County is cooperating with the Municipality of Horsens on the Horsens Light Project ([www.letby.dk](http://www.letby.dk)). The Project includes self-help groups and focuses on a healthy diet among children.

The Ebeltoft Kurcenter (an obesity treatment centre) and the Danish Job Centre cooperate in several municipalities.

### **Collective challenges**

- Developing effective forms of treatment
- Intervening early for people at risk

### **What can individuals do?**

- Support and encourage children and young people in developing healthy dietary and exercise habits.
- Be aware of large increases in weight.
- Stop a trend of increasing weight, perhaps by seeking support for this.
- Be at least as physically active as is recommended.
- Eat a healthy diet and in appropriate portions.
- Support people who want help in controlling their weight or in losing weight.

### **What can communities do?**

- Avoid stigmatizing people who are obese.
- Provide opportunities for support for people who want to control their

weight or lose weight.

- Build interdisciplinary and coherent programmes to prevent overweight.
- Prepare health policies at workplaces.
- Motivate food producers and others to produce and market healthy food.

### **What can the public sector do?**

- Ensure coordinated messages on controlling weight or losing weight.
- Develop interdisciplinary forms of treatment for people in high-risk groups.
- Monitor population trends in overweight.
- Integrate the prevention of obesity with initiatives related to diet and physical activity.
- Include the prevention of obesity in the education and training of health care personnel.

# Accidents

## **Facts about accidents**

Accidents are the most frequent cause of death among people younger than 40 years in Denmark.

Home and leisure accidents in Denmark cause about 500,000 contacts with an emergency and accident ward and 1800 deaths each year.

Road accidents cause about 46,000 contacts with an emergency and accident ward and more than 400 deaths each year.

Occupational accidents cause about 86,000 contacts with an emergency and accident ward and 70 deaths each year.<sup>a</sup>

<sup>a</sup> Occupational accidents are included in the target for the working environment.

## **Target for public health policy**

### **Accidents**

The numbers of road, home and leisure accidents should be reduced substantially.

### **Current trends**

The number of home and leisure accidents in Denmark has been largely constant in the past 10 years. The incidence of accidental death among children is higher in Denmark than in several similar countries. Falling accidents among elderly people are an increasing problem.

The number of road deaths has been declining in recent years. Numerous measures have been taken to improve road safety for especially vulnerable people in road traffic: children, cyclists, pedestrians and elderly people. The Government has proposed expanding enforcement and introducing stricter sanctions, especially for young drivers.

### **Strategy**

Preventing accidents includes:

- coherent efforts to prevent home and leisure accidents, including consumer safety;
- strengthening the general prevention of road accidents through information, enforcement, technical measures related to roads and

research and monitoring; and

- special efforts in relation to very vulnerable groups in traffic and people in road traffic that engage in high-risk behaviour.

### *Preventing home and leisure accidents*

Numerous initiatives have been carried out in recent years to prevent accidents among children and elderly people, who are more vulnerable than people in other age groups. One location of these initiatives is Denmark's network of healthy cities. The Government wants to continue to promote the local efforts to prevent accidents. It is important that efforts be persistent and differentiated in relation to the various target groups. Effectively preventing accidents requires interdisciplinary efforts with personal contact.

Efforts to improve consumer safety include ensuring standards for product design, carrying out services to minimize or eliminate the risk of using products and making active and targeted efforts to disseminate information on safe consumer behaviour. These efforts should continue based on such measures as registration of accidents.

### *Preventing road accidents*

The number of people killed in road accidents has declined in recent years in Denmark, but it still exceeds the proportion killed in road traffic in other similar countries. Targeted efforts need to be made to reduce the number of deaths and severe injuries from road traffic. This would also indirectly reduce the number of minor injuries sustained in road traffic. The targets of Every Accident Is One Too Many, the 2000 action plan of the Transport Commission, should be maintained.

### *Especially vulnerable groups in road traffic and efforts to reduce high-risk behaviour*

Road safety should be improved for especially vulnerable groups in road traffic, including children and elderly people. One means of achieving this is by systematically combating accidents on both state roads and municipal and county roads. Automated speed detection systems are especially targeted towards stretches of road and intersections that account for an excessive number of road accidents or are otherwise dangerous and where children and elderly people are often present.

It is important to intervene in relation to people in road traffic who, because of their behaviour or lack of experience, comprise a risk not only to themselves but also to other people on the road. The police should therefore

exercise effective and targeted enforcement, and stricter penalties should be imposed for such violations as substantially exceeding speed limits and driving under the influence of alcohol. The period during which people obtaining a driving licence for the first time can be prohibited from driving for serious violations of traffic law is being extended from 2 to 3 years.

### **Who will do what?**

Effectively preventing accidents requires well-developed cooperation. Preventing home and leisure accidents requires both efforts at the national level to promote safe products and local efforts to prevent accidents. The Danish Road Safety Council cooperates extensively on road safety with local and national authorities and organizations.

#### *Example of partnerships*

Counties and municipalities participating in Denmark's network of healthy cities cooperate on preventing injuries. The network has prepared material on preventing accidents.

The counties, municipalities and voluntary organizations cooperate on preventing falling accidents. An example is the Walking Project in Storstrøm County. The purpose is to prevent the hospital admission of elderly people, to strengthen their physical activity and to stimulate social contact.

The Danish Road Safety Council cooperates with about 80 local road safety councils, resulting in joint annual campaigns.

A campaign on designated drivers is a partnership between the Danish Road Safety Council and the Danish Association for Good Attitudes towards Alcohol (GODA). The campaign especially targets young people attending technical schools.

The police and primary and lower secondary schools cooperate on such projects as learning about road safety and carrying out tests of cycling skills.

### **Collective challenges**

- Coherence in initiatives to prevent home and leisure accidents, including extending efforts to prevent falling accidents among elderly people
- High-risk behaviour in traffic, drunk driving and speed-limit violations
- Stretches of road and intersections that account for an excessive number of road accidents

<b>What can individuals do?</b>
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- Be aware that safety starts with themselves.
- Do not take chances with defective or dangerous equipment in the home.
- Help elderly people to make their home safer against falls.
- Use safety belts.
- Do not drive after drinking alcohol.
- Observe the speed limits.
- Be courteous in road traffic.
- Drive according to the rules, the conditions and ability.

### **What can communities do?**

- Disseminate information on first aid.
- Assess institutions and the local road system for risks.
- Exercise positive influence on the attitudes of other people in road traffic.
- Focus attention on the risks associated with drunk driving among young people.
- Set up car-pooling schemes to pick up young people after parties, outings and other gatherings.

### **What can the public sector do?**

- Inform and carry out campaigns on consumer safety.
- Ensure that preventing falls is incorporated in preventive home visits and other public schemes.
- Ensure that accidents are registered.
- Inform about the dangers of violating traffic laws.
- Strengthen the enforcement of traffic laws.
- Implement stricter penalties for such violations as drunk driving and excessive speeding.
- Systematically combat accident risks on the road network.



## The working environment

### **Facts about the working environment**

A healthy working environment can prevent about 10% of hospital admissions in Denmark. Among life-threatening diseases, this figure is 20% for cardiovascular diseases and 5% for cancer.

Each year about 50,000 occupational accidents and about 15,000 work-related diseases and disorders are officially reported in Denmark.

The working environment causes about 10% of cases of respiratory allergies, and skin problems rank highly in the reported work injuries.

The average worker in Denmark is absent for 1 day per year because of occupational accidents.

A poor working environment results in exclusion from the labour market and sick leave. Many groups of workers with unskilled jobs are especially burdened, such as in the health and social care sectors.

### **Target for public health policy**

#### **The working environment**

The total negative burden of the working environment on health should be reduced substantially. This should be achieved through such initiatives as targeted activities to improve occupational safety and health and integration with targeted health promotion activities.

### **Current trends**

The forms of work and organization, changing conditions of employment and the ever-increasing intensity of work have presented new challenges for the associations of employers and employees and for the public authorities. These problems should be solved in parallel with solving the traditional problems of the working environment.

The number of occupational injuries caused by heavy lifting has declined, but heavy lifting is still a widespread and serious problem in the working environment. The prevalence of work with repetitive motion has been reduced in several sectors but is still an important occupational safety problem. After many years of hard work by companies, associations of employers and employees and public authorities, reported occupational nervous system injuries such as brain damage have declined substantially. No clear trends can be discerned in numerous other fields related to occupational

safety and health.

Promoting health at workplaces is an effective way of improving health, and there is a basis for increasing the future integration of activities to promote occupational safety and health and general activities to promote health.

### **Strategy**

The 1995 Government action plan Clean Working Environment 2005 establishes a framework for the overall efforts to improve the working environment. A status report in 2002 showed that 18 important occupational safety and health problems should comprise the framework for the overall public efforts to improve the working environment. Priorities have been set among these 18 problems, to intensify the efforts. Thus, the associations of employers and employees involved and the public authorities will give special attention to four important problems related to the working environment until 2005:

- preventing fatal accidents and serious accidents;
- preventing injuries caused by heavy lifting;
- preventing injuries caused by repetitive motion; and
- improving the mental working environment.

Nationwide targets to be achieved by 2005 have been established for each of these areas.

Each company and sector will, however, continue to work to ameliorate all important occupational safety and health problems to the extent that they are relevant to that company or sector.

Health problems caused by a poor working environment have changed from being problems with relatively simple causal pathways to the more complex health problems of modern life in which the working environment is one of many risk factors for health problems. In addition, the way people otherwise live their lives may influence whether they become ill or not. Conversely, the conditions of work may greatly influence individuals' opportunities to choose healthy lifestyles.

Thus, the working environment holds considerable potential in preventing many of the major preventable diseases and disorders. The initiatives should mostly be voluntary.

### **Who will do what?**

The targets established for the priority occupational safety and health problems are nationwide and cover the overall efforts to improve the working environment, including those of both the associations of employers and employees involved and the public authorities. All sectors are expected to contribute to substantially reducing the problems.

This requires cooperation and coordination between the associations of employers and employees and the public authorities. Concerning the efforts of the partners, the associations of employers and employees must ensure coherence between the nationwide priorities and the priorities in each sector, especially including the initiated activities.

### *Examples of partnerships*

The Danish Working Environment Council and the 11 sectoral councils have established a structure for cooperation in which the associations of employers and employees, both private and public, cooperate in tackling issues related to occupational safety and health in general and within one or more specific sectors. The Danish Working Environment Council and the 11 sectoral councils cooperate with both the National Working Environment Authority and the occupational health services.

Amagerforbrænding, an intermunicipal waste-incineration company, is cooperating with the City of Copenhagen on a project that has aimed to promote health and well-being for each worker and for the workplace as a whole.

### **Collective challenges**

- Setting priorities among the efforts to improve the working environment
- Developing potential solutions and choosing instruments for promoting health and preventing disease
- Retaining skilled employees and keeping companies competitive by ensuring a good working environment

### **What can individuals do?**

- Improve their own working environment and those of others.
- Participate actively in occupational safety and health work.
- Support the work of safety representatives.
- Comply with instructions.

- Teach children and young people to place demands on and to manage the working environment.

### **What can communities do?**

- Make the debate on the working environment central to the workplace and ensure easy access to information on methods of improving occupational safety and health.
- Support colleagues and fellow workers in daily work.
- Allow flexibility for the return of colleagues and fellow employees with occupational injuries.
- Create networks of local companies to exchange experience.
- Focus more attention on the paid work of young people who are under education.
- Create a healthy environment at the workplace.
- Place special focus on the mental working environment, heavy lifting, repetitive motion and the risk of serious accidents.

### **What can the public sector do?**

- Maintain the increasing focus on the working environment.
- Adapt regulation, supervision and guidance work to technical and social trends.
- Disseminate knowledge and experience on workplace health promotion.
- Get the health care services to focus on occupational diseases and disorders.

## Environmental factors

### **Facts about environmental factors**

The Organisation for Economic Co-operation and Development says that 2–5% of the burden of disease in affluent countries is related to the environment.

About 10% of cancer cases in Denmark are considered to be related to the environment.

Air pollution in cities reduces life expectancy. Reducing the present concentration of particulate matter of all particle sizes by about one third in cities and towns in Denmark would reduce long-term mortality by an estimated 400 per million inhabitants per year.

The Danish Environmental Protection Agency has found about 20,000 chemical substances, 100,000 chemical products and 200,000 goods and industrial products sold in Denmark that contain chemical substances. There is very little information on the effects of most of these substances on health.

Many people are burdened by noise in daily life. Noise can influence children's ability to learn.

Symptoms related to indoor climate can result from mould in buildings. People with asthma or hayfever are especially vulnerable to negative effects from mould.

### **Target for public health policy**

#### **Environmental factors**

The negative effects of environmental factors on health should be prevented, and a high level of environmental protection should continue to be ensured.

#### **Current situation**

The Government will soon publish a proposed strategy for environment and health that covers the external environment, chemical substances in products and goods, food, the working environment and indoor climate. The strategy is undergoing consultation until 31 December 2002. The strategy compiles and sets priorities among the numerous initiatives managed by various public authorities.

#### **Strategy**

The strategy for environment and health includes a plan that sets priorities

and compiles the initiatives for the coming years. The strategy covers factors in the physical environment such as particulate matter pollution, noise and radiation, chemical environmental factors and certain forms of biological environmental factors in the external environment. The strategy aims to both coordinate and strengthen the efforts of the public authorities to combat numerous environmental factors harmful to health and to designate areas in which increased knowledge is decisive for ensuring more effective efforts.

### **Who will do what?**

Environment and health involve several sectors and public authorities. It is important that the public authorities take responsibility for the presence of a framework that supports health and for ensuring strong and coherent regulation related to environment and health. This also means imposing standards on companies and producers and disseminating information to consumers. Consumers can contribute to ensuring that the goods marketed have the least environmental effects by placing demands on the goods they buy. Consumers should be aware that using unnecessary chemicals can contribute to the overall burden on health.

### **Collective challenges**

The strategy and action plan being prepared list many areas as challenges and priorities for the efforts in relation to special health effects, special environmental factors and the sources of these factors.

#### **What can individuals do?**

- Be aware of instructions, labelling and warnings in using chemical consumer products.
- Be aware of the recommendations of public authorities.
- Consider the environment and the immediate surroundings in daily activities in relation to resource consumption, use of unnecessary chemicals and other environmental factors.
- Store chemical products responsibly.

#### **What can communities do?**

- Consider the environment and be aware of potential negative effects and risks.

- Be considerate when other people feel annoyed by noise, chemical effects, odours and other environmental factors.
- Ensure that information is accessible and that the necessary precautions are taken.
- Importers and producers are responsible for producing information on the dangers and risks of using products.

### **What can the public sector do?**

- Ensure that relevant and use-oriented information is disseminated.
- Enter into mutual dialogue with businesses and citizens to target information and guidance.
- Strengthen the cooperation between public authorities.
- Generate more knowledge on the importance of environmental factors for health through research and the development of knowledge.

### 3. Major preventable diseases and disorders

Disease prevention and health promotion do not solely aim to keep healthy people healthy. They are also intended to rehabilitate ill people: to prevent further decline of functioning and to re-create the quality of life and the love of life. Not all serious diseases immediately threaten life, but they result in severe limitations on self-realization and the risk of permanent loss of functioning. Disease prevention and health promotion should also therefore focus on diseases and disorders that do not threaten life and on the great loss of quality of life resulting from these chronic conditions.

This is not a minor problem. More than one third of adults in Denmark have a chronic disease or disorder, and nearly 500,000 have a very limiting chronic disease or disorder. Nearly half of these have musculoskeletal disorders, including osteoporosis. The rest include cardiovascular disease, respiratory diseases and the effects of accidents.

These preventable diseases and disorders are so widespread that they are considered major preventable diseases and disorders. They have great human costs and also have high economic costs for Denmark's health care and social services.

In its programme, the Government advised that strategies would be developed for four of the major preventable diseases and disorders: non-insulin-dependent diabetes mellitus, cardiovascular diseases, osteoporosis and hypersensitivity disorders (asthma and allergy). Four more have been added: preventable cancer, musculoskeletal disorders, mental disorders and chronic obstructive pulmonary disease. All eight diseases and disorders have great human and economic costs. Targeted efforts are therefore required based on human, health and economic considerations.

The Government will develop strategies for the following major preventable diseases and disorders:

- non-insulin-dependent diabetes;
- preventable cancer;
- cardiovascular diseases;
- osteoporosis;
- musculoskeletal disorders;
- hypersensitivity disorders (asthma and allergy);

- mental disorders; and
- chronic obstructive pulmonary disease.

Many of these diseases and disorders can be avoided through disease prevention and health promotion initiatives or their effects can be reduced if they have begun.

The major preventable diseases and disorders and the risk factors of Healthy throughout Life are clearly related. Efforts to reduce the risk factors comprise efforts to prevent the major preventable diseases and disorders. The figure on the next page depicts the relationships between the risk factors and the major preventable diseases and disorders of Healthy throughout Life.

Non-insulin-dependent diabetes mellitus

Preventable cancer

Cardiovascular diseases

Osteoporosis

Musculoskeletal disorders

Hypersensitivity disorders (asthma and allergy)

Mental disorders

Chronic obstructive pulmonary disease

Tobacco smoking

Alcohol consumption

Diet

Physical activity

Obesity

Accidents

Working environment

Environmental factors

The Government will initiate the development of strategy work for these eight major preventable diseases and disorders.

The strategy work is intended to form the basis for the continuing assessment, adjustment and development of efforts to prevent disease and their quality. The strategy work will thus be an ongoing process.

This strategy work is not starting from scratch.

Great efforts are already being made to prevent all the major preventable diseases and disorders and their effects. The task will therefore initially comprise establishing a comprehensive overview of these preventive efforts with the aim of organizing them for the future.

One initiative that will accompany the strategy work is the preparation of relevant indicators for the major preventable diseases and disorders with the aim of ensuring the continued monitoring and documentation of trends. Such documentation will be decisive for targeted disease prevention efforts that are continually adapted and adjusted based on new information on trends in morbidity and health behaviour.

The strategy work is intended to function as the springboard for preparing detailed action plans in specific fields, starting specific initiatives, producing and incorporating the necessary documentation and other measures. In this connection, new knowledge on the causes of disease, effective methods of prevention and effective methods of providing counselling, support, rehabilitation and other measures in relation to patients needs to be gathered regularly. The strategy work will serve as a springboard for a continuing process of development.

The efforts to prevent the major preventable diseases and disorders have three key aspects:

- disease prevention and health promotion;
- efforts by individuals to improve their health; and
- counselling, support, rehabilitation and other measures in relation to patients.

The efforts of individuals are important in maintaining and improving health. Individual efforts depend on such factors as knowledge and action competence. They are created in interaction with individuals, families and local social networks and with the initiatives to prevent disease and promote health and to counsel, support and rehabilitate patients that are carried out in numerous parts of society.

The health care and social services play a special role for people with chronic

illness. For many of the eight major preventable diseases and disorders of Healthy throughout Life, people with the disease must change their life and lifestyles. In these cases, self-care and individuals' responsibility for their own health are often decisive for maintaining health optimally and as long as possible. The health care and social services have an important role by contributing to creating a framework and the prerequisites for individuals to make healthy choices and to live a healthy life despite being ill.

These three aspects will permeate the efforts to prevent all eight major preventable diseases and disorders. An important part of the strategy work is to ensure that the various aspects of the efforts to prevent disease are coherent and that the various aspects are assessed and coordinated in relation to one another.

Involving the key actors in the various fields in the strategy work is therefore important. Networks will therefore be established in connection with each strategy area. One aim of this is to enter into partnerships on specific initiatives.

To ensure and maintain progress in this process, the trends in the eight major preventable diseases and disorders will be monitored regularly using the indicator programme, and the strategy work and the resulting initiatives will be described and assessed regularly through such means as annual reports.

## Non-insulin-dependent diabetes

### **Facts about non-insulin dependent (type 2) diabetes mellitus**

More than 100,000 people in Denmark have been diagnosed as having non-insulin-dependent diabetes. A similar number is estimated to have non-insulin-dependent diabetes without knowing it. The prevalence of diabetes increases substantially with age and is increasing rapidly in the population and appearing in younger and younger age groups.

Non-insulin-dependent diabetes produces a risk of complications and sequelae such as arteriosclerosis, amputation, apoplexy, myocardial infarction, kidney disease, blindness, diseases of the nervous system, premature death and disability. In addition to the suffering these complications cause, substantial treatment and care expenditure is associated with such diseases and disorders as kidney failure, amputation and blindness.

### **Target for public health policy**

#### **Non-insulin-dependent diabetes**

The growth rate in the number of people with non-insulin-dependent diabetes should be reduced. Complications among people with diabetes should be prevented through such means as initiatives by individuals to improve their own health.

### **Causes of non-insulin-dependent diabetes**

Non-insulin-dependent diabetes is a welfare disease that is clearly associated with lifestyles. The most important risk factors are overweight as a result of inappropriate diet and physical inactivity. Genetic disposition for diabetes and certain drugs can strongly increase the risk. Smoking does not directly increase the risk of diabetes but increases the risk of developing complications among people with diabetes.

### **How can diabetes be prevented?**

The fundamental, long-term efforts to prevent diabetes focus on physical activity and healthy dietary habits. These areas have been given increasing attention in recent years and several initiatives have been taken, but the challenges continue to be substantial, as described under the targets on diet and physical activity.

Diabetes typically requires instruction in self-care, changes in daily life for the individual and family and frequent contact with the health care services and

home care services.

### **What is already being done?**

The National Board of Health published a report in 1994 on the future organization of diabetes treatment in Denmark. The report contains several recommendations relevant to non-insulin dependent diabetes on the following topics:

- establishing county diabetes committees and a national follow-up group on diabetes;
- the organization of treatment and care;
- the division of tasks between general practitioners and hospitals;
- diabetes clinics with adequate professional support;
- instruction and communication – helping people to help themselves;
- preventing late complications through systematic case detection;
- evaluation, monitoring and quality development;
- economic considerations across sectors; and
- quality development.

Activity in Denmark and elsewhere is substantial and increasing. For example, the Danish College of General Practitioners recently published consensus guidelines for general practitioners. The Danish Centre for Evaluation and Health Technology Assessment of the National Board of Health is currently reporting on the efforts of the health care services to prevent and treat non-insulin-dependent diabetes. In late 2002, a health technology assessment report is expected that will describe the fields of screening, diagnostic techniques and pharmaceutical and non-pharmaceutical treatment.

## Preventable cancer

### **Facts about preventable cancer**

Each year about 30,000 people in Denmark are diagnosed as having cancer and about 15,000 die from cancer. An estimated 39% of cancer cases among men and 23% among women can be prevented.

Cancer is the disease group that causes the greatest number of lost years of life among people younger than 65 years of age.

### **Target for public health policy**

#### **Preventable cancer**

The number of cancer cases should be reduced by reducing the exposure of the population to risk factors known to be associated with the development of cancer.

### **Causes of cancer**

Several types of cancer, including cancer of the lungs, mouth, pharynx, skin and colon, can be prevented to varying degrees. What is required is efforts to reduce smoking, alcohol consumption, carcinogenic substances in the working environment, human-caused exposure to ionizing radiation (such as that used for radiography), ultraviolet radiation (from sunlight), overweight and radon in the environment. Efforts to reduce smoking would have the greatest effects by far, as about 25% of all cancer cases among men and 15% among women result from smoking. For example, smoking causes 85% of all lung cancer cases. Carcinogenic substances in the working environment cause about 3–5% of all cancer cases. Diet and exercise are also believed to be very important in the development of cancer, but this is difficult to quantify.

### **How can cancer be prevented?**

Primary prevention targets the known risk factors for certain types of cancer, which are described under the targets for risk factors. Prevention aims at eliminating or reducing the exposure of the population or individuals to these risk factors.

Attempts can be made to prevent a few types of cancer by screening: breast cancer, cervical cancer and cancer of the colon. Nevertheless, prevention through screening requires effective treatment at the preliminary stages of each type of cancer. Screening does not reduce the number of people with cancer but can reduce mortality. Screening for breast cancer, cancer of the

colon and cervical cancer can reduce mortality from these types of cancer in the relevant age groups by an estimated 20%, 15% and 50%, respectively.

### **What is already being done?**

The prevention of cancer was a priority theme in the reports of the Committee on Life Expectancy of the Ministry of Health from 1994 and in the national action plan on cancer from 2000. The National Board of Health, the former Danish Council on Tobacco and Health, the Danish Cancer Society and others have prepared campaign and instructional material on smoking for several years targeting the general population and especially schoolchildren and young people. In addition, many national and international initiatives have been taken on the labelling of tobacco products and restrictions on their marketing. Campaigns have been carried out against excessive exposure to sunlight, especially targeting the parents of young children.

Mass screening programmes for cervical cancer have now been implemented in all counties. Screening for breast cancer has been carried out in Copenhagen and in Fyn County, equivalent to about 20% of Denmark, and screening for cancer of the colon has been introduced as a pilot project so far.

## Cardiovascular diseases

### **Facts about cardiovascular diseases**

At least 200,000 people in Denmark have ischaemic heart disease. This is the second largest cause of death in Denmark and causes more than 1000 premature deaths (among people younger than 65 years) annually. A large group of people are at high risk of developing heart disease. People with diabetes comprise a large portion of these. Cardiovascular diseases account for slightly less than 140,000 annual hospital admissions: 13% of all admissions and 17% of total bed-days. This means that cardiovascular diseases comprise one of the largest disease groups. Expenditure for drug treatment is increasing.

### **Target for public health policy**

#### **Cardiovascular diseases**

The number of new cases of ischaemic heart disease should be reduced.

The progression of disease among people at high risk should be prevented through such means as cardiac rehabilitation for patients diagnosed as having cardiovascular disease.

#### **Causes of cardiovascular diseases**

Ischaemic heart disease results from the interaction of many factors, some of which can be changed. These include lifestyle factors (smoking, physical activity and dietary habits), the mental working environment (such as stress and night work) and biological factors (elevated blood pressure, disorders of serum cholesterol and others). The risk of cardiovascular disease is clearly associated with living conditions, such as socioeconomic conditions, level of education, social networks and the working environment.

Although the number of deaths from ischaemic heart disease has declined in recent years, trends cause concern. The number of hospital admissions accounted for by cardiovascular diseases has been steadily increasing for the past 20 years.

#### **How can cardiovascular diseases be prevented?**

Healthy lifestyles and a positive mental working environment are well documented to reduce the risk of cardiovascular disease. Studies have shown that the prevalence of cardiovascular disease among healthy people can be reduced very substantially if they change their lifestyles by being more

physically active in daily life, eating more fruit and vegetables, reducing their intake of saturated fat and of total energy and stopping smoking.

People with elevated risk of developing ischaemic heart disease because of genetic factors, elevated serum cholesterol, elevated blood pressure, heavy cigarette smoking, obesity and diabetes especially need targeted initiatives. The effects on the development of actual heart disease are particularly pronounced in this group. Unskilled workers are an especially vulnerable occupational group.

Programmes for integrated, individually adapted cardiac rehabilitation that include intervening in lifestyles (such as physical training, support for dietary changes and support for smoking cessation), instructing patients, providing psychosocial care and providing preventive drug treatment can contribute positively to the physical, mental and social functioning and quality of life of people with heart disease. In addition, this substantially reduces the risk of readmission and death.

### **What is already being done?**

The National Board of Health presented a national strategy for the prevention of ischaemic heart disease in 1994. The recommendations have been followed up by many national and local activities on diet and physical activity.

The Danish Heart Foundation has provided general preventive measures by supporting initiatives targeting the general population in the past 15–20 years. One initiative has been follow-up programmes for patients with heart disease after they are discharged at cardiac treatment centres and local associations.

Several reports and clinical guidelines on cardiac rehabilitation have been published:

- *Forebyggelse af iskæmisk hjertesygdom i almen praksis. Klinisk vejledning* [Prevention of ischaemic heart disease in general practice. Clinical guidelines]. Copenhagen, Danish College of General Practitioners, 2002.
- Danish Heart Foundation and Danish Society of Cardiology. *Rehabilitering af hjertepatienter. Retningslinjer* [Rehabilitation of cardiac patients. Guidelines]. Copenhagen, Danish Heart Foundation, 1997.

The Danish Network of Health Promoting Hospitals is currently preparing clinical guidelines on cardiac rehabilitation in hospitals.

The treatment being offered has been expanded considerably. The systematic cardiac rehabilitation offered has been gradually extended.

Initiatives have been taken in other areas. Thus, the National Working Environment Authority and associations of employers and employees are giving priority in the field of the working environment to targeted and intensive work to improve the mental working environment.

# Osteoporosis

## **Facts about osteoporosis**

Estimates of the number of people with osteoporosis in Denmark range up to 300,000. About 10,000 to 12,000 people in Denmark suffer a fracture in the neck of the femur each year; similar numbers fracture a bone in the spinal column and even more fracture their wrist. Osteoporosis is estimated to cause about half these fractures. The overall lifetime risk of an osteoporotic fracture for a 50-year-old woman is 30–40%. The risk for men is considerably lower but is increasing. The mortality 1 year after a hip fracture is 20%.

Hip fracture alone accounts for 300,000 hospital bed–days annually and considerable municipal resources for home help, rehabilitation and nursing care.

## **Target for public health policy**

### **Osteoporosis**

The rate of growth in the number of people with osteoporosis should be reduced.

The development of osteoporosis among people at high risk should be prevented through such means as measures to prevent falls and fractures.

## **Causes of osteoporosis**

Osteoporosis generally results from poor bone growth in childhood and adolescence and the loss of bone mass during adulthood. Osteoporosis can largely be considered a welfare disease clearly associated with lifestyles. The most important risk factors are physical inactivity, deficiency of calcium and vitamin D and smoking. Underweight and early menopause are also risk factors. Genetic disposition is an important risk factor for osteoporosis. Certain drugs can also strongly increase the risk.

## **How can osteoporosis be prevented?**

Primary prevention focuses on physical inactivity, smoking, heavy alcohol consumption and poor diet for all age groups. For elderly people with elevated risk, prevention also focuses on preventing falls, including how the home is furnished (loose rugs, inadequate light and other aspects) and considering how drugs that cause dizziness such as tranquillizers and sedatives are used.

Secondary prevention includes the early detection of people at high risk, including people with genetic disposition, women with early menopause,

heavy smokers and very thin people. If studies show signs of osteoporosis, the services offered include a discussion of preventive changes in lifestyles, the recommendation of dietary supplements in the form of calcium and vitamin D and the implementation of measures to prevent falls, including supplying hip protectors. Finally, tertiary prevention with drug treatment can be instituted for people at high risk, including people who have had fractures without sudden great physical strain, typically a fractured wrist or a collapse of the spinal column (vertebral compression fractures).

### **What is already being done?**

The fundamental and long-term efforts to prevent osteoporosis target physical activity in all age groups and dietary deficiencies, especially among elderly people. These areas have been given increasing attention in recent years, and numerous initiatives have been taken. Nevertheless, considerable challenges remain, as mentioned under the targets on diet and physical activity.

Increasing attention has been focused on osteoporosis in the past decade. Thus, a number of reports and other documents have been prepared:

- *Konsensus-rapport om knogleskørhed* [Consensus report on osteoporosis]. Copenhagen, Danish Medical Research Council and Danish Institute for Health Services Research, 1995.
- *Osteoporose – Forebyggelse, diagnostik og behandling* [Osteoporosis – prevention, diagnosis and treatment]. Copenhagen, Danish Veterinary and Food Administration and National Board of Health, 2000.
- Brixen, K. et al. *Klaringsrapport om osteoporose* [Consensus report on osteoporosis]. Copenhagen, Danish Bone Society, 2000.
- Osteoporose 2: Knogletæthedsmåling (BMD) og “højrisiko” behandling [Osteoporosis 2. Measurement of bone mass density and “high-risk” treatment]. *Praktisk lægemiddelinformation*, 1997: **12**(4).
- Osteoporose: Rationel forebyggelse og behandling [Osteoporosis: rational prevention and treatment]. *Praktisk lægemiddelinformation*, 1999: **14**(5).

The Danish College of General Practitioners is expected to issue guidelines on osteoporosis at the end of 2002.

## Musculoskeletal disorders

### **Facts about musculoskeletal disorders**

Sixteen per cent of adults in Denmark have chronic musculoskeletal disorders (such as back disorders or arthritis), and about 50% of the population had musculoskeletal pain or discomfort in the 14 days before they were surveyed. The prevalence of musculoskeletal disorders has been increasing. Musculoskeletal disorders are one of the most frequent causes of sickness absence and the second most frequent reason for health-related anticipatory pension.

### **Target for public health policy**

#### **Musculoskeletal disorders**

The number of new cases of musculoskeletal disorders should be reduced, and the exclusion from the labour market caused by musculoskeletal disorders should be prevented.

### **Causes of musculoskeletal disorders**

Musculoskeletal disorders include disorders and pain in the musculoskeletal system, especially joints, muscles and tendons. The spectrum of disorders is very broad, ranging from sore and stiff muscles (muscular rheumatism or myosis) to joint pain caused by, for example, osteoarthritis and polyarthritis to more well-defined states of pain such as those that can be caused by a herniated spinal disc. The largest group of musculoskeletal disorders by far is the widespread disorder lower-back pain.

No cause can be discerned for most people with musculoskeletal disorders. For example, only about 20% of people with lower-back pain can be diagnosed. The causes of disorders such as mouse arm, fibromyalgia, chronic fatigue syndrome and whiplash injuries are also unknown. Some disorders are caused by musculoskeletal strain, such as in the form of work with repetitive motion and heavy lifting; minor trauma or accidents, sometimes in combination with inappropriate strain afterwards, can be another cause.

Osteoarthritis is rare before the age of 45 years. Congenital defects and prior injuries to the musculoskeletal system are risk factors specific to osteoarthritis. Injuries from sports, exercise and work strain the muscles and tendon insertions and therefore result in irritative conditions. Polyarthritis, which is present among 1–2% of the population, is a chronic disorder that attacks and can destroy several joints. The basic cause is unknown, but early

treatment can be decisive in ensuring functioning and counteracting disability.

Osteoporosis, which is a musculoskeletal disorder, is treated as a separate major preventable disease or disorder here.

### **How can musculoskeletal disorders be prevented?**

The fundamental and long-term efforts to prevent the common types of musculoskeletal disorders should target reducing physical inactivity in all age groups. Attempts can be made to reduce the prevalence of musculoskeletal disorders through targeted initiatives for improving exercise habits. Efforts at workplaces should promote variation in work, combat heavy lifting and repetitive motion and emphasize the importance of being able to carry out work using varied positions and movements. People who contact the health care services in connection with such events as accidents should be offered thorough information and instruction in rehabilitation to a relevant degree.

### **What is already being done?**

The Government issued an action plan for preventing musculoskeletal disorders in 1993. This recommended strengthening efforts in four main areas: health information, children and young people, work and preventive treatment. This plan was later followed up by several initiatives.

The associations of employers and employees have made a special effort to reduce the prevalence of harmful repetitive motion by 25% from 1995 to 2000. Heavy lifting and repetitive motion are being given priority as themes that will enjoy special attention from these associations and the public authorities from 2002 to 2005. Nationwide targets have been established for reducing repetitive motion by 10% and heavy lifting by 15%.

The Danish Rheumatism Association has focused on musculoskeletal disorders for many years and regularly informs about activities focusing on exercise.

The pension fund Pen-Sam has carried out an extensive nationwide campaign for several years on Making Your Back Happy targeting the members of the pension fund, including nurses' aides, care assistants, hospital orderlies and transport employees.

Several reports and other documents have been prepared in recent years:

- *Lændesmerter* [Lower-back pain]. Copenhagen, Danish Society of Internal Medicine, 1996. Discussion of the investigation and treatment of

the most common acute and chronic lower-back disorders.

- *Osteoporose* [Osteoporosis]. Copenhagen, Danish Bone Society, 1998. Discussion of the pathology, prevention and treatment of osteoporosis.
- *Ondt i ryggen – forekomst, behandling og forebyggelse i et MTV-perspektiv* [Lower-back pain – prevalence, treatment and prevention from the perspective of health technology assessment]. Copenhagen, Danish Centre for Evaluation and Health Technology Assessment, National Board of Health, 1999.

## Hypersensitivity disorders (asthma and allergy)

### **Facts about hypersensitivity disorders**

More than one fourth of adults in Denmark report having had one or more hypersensitivity disorder within the past year. One fifth have asthma, hayfever or another type of allergic rhinitis; this percentage seems to have doubled since 1987. More than 5% of men and more than twice as many women report having had allergic eczema within the past year. Asthma is the most common chronic disease or disorder among children. About one fifth of all children develop atopic dermatitis, nearly four times as many as 40 years ago. About EUR 100 million was spent on asthma medicine in Denmark in 2000.

### **Target for public health policy**

#### **Hypersensitivity disorders**

The growth in the number of people with hypersensitivity disorders should be reduced. The progression of disorders and complications should be prevented through such means as self-care initiatives.

### **Causes of hypersensitivity disorders**

Hypersensitivity is manifested as an increased tendency to react to exposure to several different and not necessarily harmful types of substances. The reaction is allergic if the immune system is involved and the agents are called allergens. The resulting symptoms may, however, be of the same type and severity even though the immune system is not involved.

No single factor can be identified as the cause of the increasing prevalence of these disorders. In addition to known allergens such as pollen, mould, house-dust mites, animal dander and chemicals, such factors as smoking during pregnancy, exposure of young children to passive smoke and air pollution from such sources as transport may strengthen and perhaps result in hypersensitivity disorders, but the precise relationships are partly unknown. Genetic factors also influence the development of hypersensitivity disorders.

### **How can hypersensitivity disorders be prevented?**

Hypersensitivity disorders should be prevented based on the type of allergy.

Only for contact allergy and, in part, for food allergy is there a certain basis for the effects of primary prevention, which comprises reducing exposure to allergens in the environment (for contact allergy) and breastfeeding (for food

allergy). Primary prevention also has considerable potential for respiratory allergy and asthma, including in relation to the working environment and indoor climate in such places as the home. Outdoor air also has important effects, but knowledge is lacking in this field. The efforts must therefore mainly target secondary prevention with early detection, investigation and preparation of treatment programmes, including drastic improvement of local environmental conditions, preventive treatment and patient training. Early efforts improve the prognosis for asthma and may perhaps reduce the risk of developing other hypersensitivity symptoms or allergies. Tertiary prevention includes rehabilitation with long-term drug treatment and optimizing the state of physical functioning.

### **What is already being done?**

Attention focused on hypersensitivity disorders has increased in recent decades, and several action plans have been prepared in this area:

- *Regeringens handlingsplan for en forstærket forebyggelse af astma og allergi* [The action plan of the Government of Denmark on improving the prevention of asthma and allergy]. Copenhagen, Ministry of Health, 1993. Includes contributions from nine ministries, counties, municipalities and the Danish Asthma and Allergy Association.
- *Allergiske sygdomme. Forslag til organisation af forebyggelse, diagnostik og behandling* [Allergic disorders. Proposal for organizing prevention, diagnosis and treatment]. Copenhagen, Danish Centre for Evaluation and Health Technology Assessment, National Board of Health, 1999.
- *Handlingsplan for forebyggelse af overfølsomhed og allergiske sygdomme i Danmark 2001–2005* [Action plan for the prevention of hypersensitivity and allergic disorders in Denmark, 2001–2005]. Copenhagen, Danish Board of Technology, 2000 (Teknologirådets rapporter 2000/7).
- Scientific societies and the National Board of Health have published various guidelines in this area.

In 2001, the Danish Environmental Protection Agency established the Danish Information Centre on Allergy to Chemical Substances in Consumer Products. The tasks of the centre are to focus the efforts in this area by ensuring the quality of diagnosis, prevention and treatment of contact allergy through monitoring, research and disseminating information.

Some counties have cooperated with general practices in establishing allergy centres without walls. Others have established agreements with general practices on diagnosis of allergy based on a collective agreement on the compensation of health care providers.

## Mental disorders

### **Facts about mental disorders**

Slightly less than 2% of adults in Denmark report having a chronic mental disorder; the proportion is slightly higher among women than among men. Nearly 10% of adults report that they worked less or reduced other activities because of emotional problems in the past 4 weeks. The prevalence of good mental health remained at about 50% in Denmark from 1994 to 2000. Mental health is most impaired among people with little education, very young people and very old people.

Mental disorders account for one fifth of all bed–days and one third of all health-related anticipatory pensions.

### **Target for public health policy**

#### **Mental disorders**

The prevalence of mental disorders should be reduced. Special initiatives should be taken in relation to children in families with a parent who is mentally ill or a substance abuser.

### **Causes of mental disorders**

Mental disorders include a very broad spectrum of disorders and conditions from major mental disorders to such disorders as depression, chronic anxiety and stress disorders and such disorders as burnout and nervousness. The causes are very diverse. Genetic, social and psychological factors are part of the causes. Thus, for example, the previous strict demarcation between “endogenous” and “reactive” depression has been replaced by a more dynamic model that views how robust individuals are in relation to developing or resisting such disorders as depression as a result of unfavourable external life events. Children and young people are an especially important target group for preventing mental disorders, because mental robustness is especially formed in early life. Children born to substance-abusing mothers or to parents with mental disorders are an especially vulnerable and distressed group.

The mental working environment has great influence. For example, work-related violence or mobbing can lead to posttraumatic stress disorder and anxiety. In addition, long-term stress may lead to depression, and working with people requiring care may lead to burnout from mental strain under unfavourable circumstances.

Early and effective treatment may prevent some of the further development of certain mental disorders, reduce the length of individual episodes of a disorder and, in many cases, contribute to ameliorating the often severe social effects in the form of substance abuse, violence and social exclusion.

### **How can mental disorders be prevented?**

Early intervention in postpartum depression and other situations that can contribute to creating a poor relationship between the mother and child is fundamentally important. The development of children and adolescents can otherwise be supported by protecting them against neglect and abuse, by combating bullying, by preventing chronic stress, by supporting the development of self-esteem and by counteracting social exclusion and isolation. The interdisciplinary groups in the municipalities are an important aspect of the early efforts targeting children.

Primary prevention for adults must take place at such settings as workplaces by combating a poor mental working environment, including work-related violence and mobbing; increasing the influence of individuals on the organization of work; and combating the causes of chronic stress. Workplaces are also an important component in creating individual identity and local social networks and are important for mental health.

General practitioners play an important role in early intervention in relation to mental disorders. New screening instruments and guidelines have emerged in several areas (such as depression and senile dementia) directed towards delaying loss of functioning by maintaining a secure environment in daily life, establishing dementia teams and other measures.

Further, the early and thorough treatment by general practitioners of people with long-term sickness absence is important in preventing exclusion from the labour market.

### **What is already being done?**

For major mental disorders, the focus in recent years has been on improving the treatment offered to people with mental disorders through such measures as educating and training more personnel, modernizing the physical surroundings, expanding district psychiatry and creating new forms of independent living for people with mental disorders. Another focus has been developing the quality of treatment in the form of, for example, clinical guidelines on treatment, research and documentation, including in clinical databases.

Several guidelines and other documents have been prepared in this area, including:

- *Diagnostik og behandling af depression i almen praksis* [Diagnosis and treatment of depression in general practice]. Copenhagen, Danish College of General Practitioners, 2001. Clinical guidelines.
- *Identifikation og udredning af demens og demenslignende tilstande i almen praksis. En klinisk vejledning* [Identification and investigation of dementia and dementia-like disorders in general practice. Clinical guidelines]. Copenhagen, Danish College of General Practitioners, 2000.
- *Demens – den fremtidige tilrettelæggelse af sundhedsvæsenets indsats vedrørende diagnostik og behandling* [Dementia – the organization of the future efforts of the health care services concerning diagnosis and treatment]. Copenhagen, National Board of Health, 2001.
- *Vejledning om behandling med antidepressiva* [Guidelines on treatment with antidepressants]. Copenhagen, National Board of Health, 2000.

The National Working Environment Authority and the associations of employers and employees have decided to give priority to four themes related to the working environment until 2005, of which one is the mental working environment. These associations and the public authorities have pledged to reduce the negative aspects of the mental working environment by 5% from 2000 to 2005.

# Chronic obstructive pulmonary disease

## **Facts about chronic obstructive pulmonary disease**

About 200,000 people in Denmark have chronic obstructive pulmonary disease (COPD), and the number is increasing. It causes about 3000 deaths per year and is thereby the fourth most frequent cause of death. This disease has developed disturbingly, especially among women, in parallel with the changes in women's pattern of smoking. An estimate 15,000 people are admitted to hospital each year because of COPD. The number of bed-days occupied by women because of COPD has doubled within the past 10 years. Each year 700 people are granted a health-related anticipatory pension because of COPD.

## **Target for public health policy**

### **Chronic obstructive pulmonary disease**

The growth in the number of people developing COPD should be reduced. Complications and progression of the disease should be prevented among people with COPD through such means as smoking cessation activities.

## **Causes of chronic obstructive pulmonary disease**

COPD has great health effects for individuals and results in considerable excess mortality. Smoking causes 85–90% of all COPD cases. About 15% of all smokers develop COPD of varying degrees of severity. In addition to resulting in coughing and expectoration, smoking affects lung functioning by accelerating the age-related decline in lung functioning. Environmental factors, including factors related to the working environment, may also contribute to developing and exacerbating COPD in some cases. The severity of COPD depends on individual factors, but the total consumption of tobacco (the number of cigarettes throughout the years) is the risk factor that is most strongly associated with reduction in lung functioning and thereby functional limitations in COPD.

The everyday lives of people with COPD is characterized by lost lung capacity, with discomfort in the form of shortness of breath, cough and expectoration. COPD develops gradually, with occasional worsening of symptoms as a result of complicated cases of pneumonia.

## **How can chronic obstructive pulmonary disease be prevented?**

The fundamental and long-term efforts to prevent COPD target tobacco smoking. Preventing children and young people from beginning to smoke and

offering help in quitting to smokers who are motivated are crucial.

Very intensive smoking cessation activities should be able to be offered to smokers with initial symptoms of COPD.

It is known that counselling by physicians on smoking increases the chances that people will quit and that subsequent support for smoking cessation, including the use of nicotine replacement therapy, can increase the success rate considerably. Measuring lung functioning among heavy smokers can ensure that COPD is detected at an early stage.

For tertiary prevention, treatment with bronchodilatory agents and rehabilitation programmes with physical activity have known positive effects, resulting in improved health and enhanced quality of life. Further, providing oxygen based on well-defined treatment criteria can prolong survival.

### **What is already being done?**

The National Board of Health, the former Danish Council on Tobacco and Health, the Danish Cancer Society and others have prepared relevant material and carried out numerous preventive activities, including smoking cessation activities and training programmes, for many years.

In addition, several national and international initiatives have been taken concerning labelling tobacco products and restricting marketing.

In relation to the health care services, the Danish Society of Respiratory Medicine and the Danish College of General Practitioners prepared a consensus report on diagnosis and treatment in 1998. A COPD network group under the auspices of the Danish Network of Health Promoting Hospitals is working on a report on respiratory rehabilitation that is expected to be presented in May 2003. There is an international consensus in this field in the form of evidence-based recommendations on the prevention, diagnosis and treatment of COPD.

## 4. Target groups

Basing the practical work involved in promoting health and preventing disease on the health problems and potential for health promotion of the various target groups is an important prerequisite for targeted efforts. Healthy throughout Life therefore focuses on a number of target groups:

- pregnant women;
- children (0–14 years old);
- young people (15–24 years old);
- vulnerable and distressed adults;
- elderly people (65 years or older); and
- chronically ill people.

These target groups cover two perspectives. First, different stages of life pose different health challenges and differ in how people are located in social life. In some phases, people are connected with large social systems such as schools and workplaces. In other phases, this connection is weaker, such as for young people and healthy elderly people. Basing the efforts to promote health and prevent disease on the health problems and life situation of the various target groups is important.

Second, all population groups have subgroups or individuals at high risk because of being especially vulnerable or distressed. For example, this applies to neglected children; substance abusers among young people and adults; and people who are chronically ill.

These perspectives comprise the basis for forming the six target groups.

Chronically ill people, frail elderly people and vulnerable and distressed adults have considerable contact with the social and health care services. It is important that this contact be used to ensure early intervention, to prevent the problems from getting worse and, if necessary, to institute active outreach efforts. Voluntary organizations play an important role in this. For example, they have been shown to be effective in such outreach efforts. Partnership between the public sector and voluntary and private organizations can contribute to diverse, flexible efforts with the potential for new and untraditional services.

Efforts to promote health and prevent disease should consider the special conditions that may apply to people of non-Danish ethnic origin. The

proportion of the population of non-Danish ethnic origin will increase in the coming years. The demographic trends thereby pose new challenges and the need for more knowledge on the characteristics of the health status of various ethnic groups.

### **Descriptions of the target groups**

The descriptions of the target groups explain the typical health problems of each target group and list several collective challenges.

Responding to these challenges often requires differentiated efforts.

Preventing parental neglect of children also requires, for example, effective efforts to reduce abuse of alcohol and other controlled substances among adults: 40% of neglected children have families with an adult substance abuser. Similarly, the effects of chronic diseases and disorders depend not only on the efforts of the health care services but also on a supportive network surrounding the ill person.

Thus, effective efforts to promote health and prevent disease in relation to risk factors and the major preventable disease and disorders – with active efforts by individuals and families, communities and the public sector – form the basis for improving the health status of the various target groups and for more specific and targeted initiatives directed towards the special health problems of certain groups.

### **Pregnant women**

Most pregnancies and births go well. Prenatal and perinatal health can be divided into health promotion for all pregnant women and special initiatives towards a small group of vulnerable and distressed pregnant women.

A modern expectant couple wants a safe birth, wants to experience the pregnancy as contributing to the development of their family life and wants to decide as much as possible themselves. Avoiding unnecessarily depriving people of their action competence is important.

Many modern parents do not have the opportunity to learn about pregnancy, birth, breastfeeding and infant care from close relatives and depend on getting information from other sources. This requires such measures as health-promoting aspects in services offered by midwives and other health care personnel. In this connection, targeted efforts to increase the number of children breastfed and the period of breastfeeding are important.

It is important that people of non-Danish ethnic origin have information and

knowledge on the health care services in Denmark and on the services offered before, during and after birth.

Ample documentation shows that the lifestyles of pregnant women greatly influence the development and health of the fetus and child. This applies especially to such risk factors as heavy alcohol consumption and smoking. The proportion of women who smoke during pregnancy is declining slowly. Targeted efforts towards pregnant women and their opportunities to live healthy lives are required, including through systematic counselling on alcohol consumption and through smoking cessation services.

A small group of very vulnerable and distressed pregnant women exists; many are substance abusers, are developmentally disabled or have mental disorders. This requires especially targeted intervention including early detection, treatment and support with the aim of preventing harm to the child in the fetal stage and to ensure that the child is cared for after birth. Many vulnerable and distressed pregnant women also consume harmful quantities of tobacco and alcohol. Experience has shown that a large proportion of the most vulnerable and distressed pregnant women can be reached through interdisciplinary teams or family clinics with specially trained personnel.

### **Collective challenges**

- Ensuring a positive birth experience for the whole family
- Systematic alcohol counselling and smoking cessation for pregnant women
- Especially vulnerable and distressed pregnant women

### **Children**

Most children (0–14 years) in Denmark are healthy and vibrant.

In most families with children, both parents are employed full time and the children are minded by various child-care schemes. Creating a good framework for families with children is important. This is one reason why the Government has extended the duration of maternity leave and has worked towards increasing the child-care options for parents.

The most frequent diseases and disorders among children are infections and asthma & allergy. The quality of child care, including good hygiene and a healthy indoor climate, greatly influences the health of children, and especially younger ones. Efforts should therefore be made to reduce the spread of infection in child-care centres and home child care, mainly by

improving hygiene. The prevalence of asthma or asthmatic bronchitis among children increased from 6.2% in 1994 to 7.6% in 2000.

Accidents are the most frequent cause of death among children. Targeted efforts are still needed in relation to road accidents and to home and leisure accidents, such as safe routes to school.

The number of children with impaired mental health and well-being in the form of such problems as loneliness and bullying has increased. Lonely children need a refuge where they can get help. Schools and child-care centres should be aware of children's well-being and actively counteract bullying. The Ministry of Social Affairs issued a brochure in September 2002 that can support preschool child-care centres and other child-care centres in their efforts to counteract bullying.

Children's health habits include two trends. Far too many children consume far too much sugar, as sugar comprises about 15% of total energy intake for children versus the recommended maximum of 10%, and children are becoming increasingly polarized into those who are physically active and those who are physically inactive. The number of overweight children has increased dramatically. Children learn healthy dietary and exercise habits from their parents, but also in schools and child-care and leisure centres. It is important that schools and child-care centres comprise a healthy framework for children's daily lives. The Government will strive to ensure that more children are offered prepared meals in child-care centres by giving the municipalities better opportunities to establish meal schemes in preschool child-care centres.

Neglected children need special services. One or both parents of many of these children are substance abusers, are developmentally disabled or are mentally ill. The efforts to help these children require help from professionals and taking advantage of opportunities for help – as early as possible. This requires well-developed cooperation between especially the social, school and health sectors in each municipality. Guidelines on dialogue with parents, which provide information on the obligation of professionals who have contact with families and children to report cases in which a family or child is at risk, are intended to ensure that early and comprehensive initiatives are taken.

### **Collective challenges**

- Promoting health in schools and child-care centres – including diet and physical activity

- Asthma and allergy among children
- Problems in mental health and well-being among children
- An increasing number of overweight children
- Neglected children

## **Young people**

Young people (15–24 years old) in Denmark are in good health overall; as many as 90% rate their own health as being very good or good.

Serious health problems among young people are especially associated with accidents, the start of smoking and alcohol consumption, violence, the use of illegal substances and attempted suicide. In addition, health problems at this stage of life are especially related to mental health and well-being and lifestyles.

A relatively large proportion of young people feel stressed; tiredness is relatively widespread, especially among young women. Severe eating disorders are also a major problem for many young girls, destroying their quality of life. Young people do not have as good mental health and well-being as do adults on average. It is therefore important that parents and educational institutions be aware of the well-being of young people.

Trends in youth culture include substantial alcohol consumption. Thus, among 16- to 20-year-olds, 24% of men and 14% of women drink more than the recommended number of weekly standard drinks for adults (21 for men and 14 for women). In addition, the use of illegal intoxicating substances is increasing and the consumption of tobacco is still high. A small proportion of young people tend clearly to have lifestyles that include several types of risk factor. An example is the fact that heavy alcohol consumption, experimental use of illegal substances and tobacco smoking are clearly related among a small group of young people. For example, 46% of young men who smoke tobacco daily exceed the recommended number of weekly alcoholic drinks versus 15% of the young men who do not smoke.

The high sugar intake in many children's diets is replicated among young people. Similar to adults over 25 years of age, young people eat inadequate amounts of fruit and vegetables and fat comprises too large a share of total energy intake. Young people's exercise habits are becoming increasingly polarized, with a small group becoming more sedentary. This is one reason why the prevalence of obesity is increasing among young people, and especially among young men; the prevalence among men increased from 1%

in 1994 to 5% in 2000.

Targeted efforts are needed in relation to these aspects of young people's lifestyles that can cause health problems in the long term. Such efforts require that young people themselves, parents, educational institutions and local communities make a commitment to creating frameworks that support healthy behaviour and counteract marginalization. The community environments of young people should combine leisure activities, counselling options, clearly expressed attitudes in the form of policies and the active involvement of parents to provide young people with a foundation for developing healthy lifestyles. The entire educational system should be activated in a more targeted way in promoting health. One way is through targeted health education in primary and lower secondary schools and in upper secondary schools.

Sexually transmitted diseases are an increasing problem among young people. Chlamydial infection is especially widespread, and most of the estimated 25,000 new cases of chlamydial infection annually are among young people. The number of unwanted pregnancies has declined steadily. The number of abortions among 15- to 24-year-olds declined from 6474 in 1995 to 4212 in 2000. This trend implies that young people have information on contraception but lack knowledge on how to protect themselves effectively against sexually transmitted diseases.

Youth is a very vulnerable period for many people. Young people who have a weak family base are especially vulnerable. This also applies to young people who do not get an education that qualifies them for employment. Protecting young people from becoming marginalized from the educational system and working life is important. It is especially important to be aware of the transitions of young people from primary and lower secondary school to upper secondary school, from upper secondary school to vocationally oriented education and from vocationally oriented education to employment. These changes of environment often produce changes in young people's lifestyles, and they risk dropping out of the educational system.

### **Collective challenges**

- Special high-risk behaviour (attempted suicide, substance abuse, eating disorders, dangerous driving and violence)
- Problems in mental health and well-being among young people
- The culture of liberal use of intoxicating substances among young people

- Increasing numbers of overweight young people
- Marginalization from the educational system and working life

### **Vulnerable and distressed adults**

Vulnerable and distressed adults include such people as alcohol abusers and drug abusers as well as the subgroup of people with mental disorders who are extremely vulnerable and distressed. The Government gives priority to the collective responsibility for the most disadvantaged people in society and has focused on this in Our Collective Responsibility – the Government’s action programme for the weakest groups in society (Ministry of Social Affairs, 2002).

An estimated 200,000 people older than 14 years of age consume enough alcohol that this comprises a great risk for harming health. Of these, about 20,000 to 25,000 people are in the group of vulnerable and distressed adults. About 14,000 people are substance abusers, defined as abusers of heroin and/or other illegal substances and often with concurrent abuse of medicine and alcohol. About 22,000 people have a mental disorder that requires treatment. Of these, about 1000 can be considered to be in a dire situation because they both have a mental disorder and abuse alcohol and/or narcotics.

Most alcohol abusers, drug addicts, extremely vulnerable and distressed people with mental disorders and developmentally disabled people are both socially marginalized and at great risk in terms of health. They lack a social network, are lonely and isolated and often do not have the necessary resources to provide an independent life for themselves. They have difficulty in influencing their own daily life and development. It is therefore important that the efforts to improve the health and welfare of these groups of people be carried out based on the prerequisites of these people and involve the individuals concerned in the organization of the initiatives.

The concepts of the quality of life and a good life among vulnerable and distressed groups of people may challenge the usual norms and values of society. Being able to tackle this challenge is important in working with these target groups.

One way of ensuring understanding for the needs of vulnerable and distressed adults is through education. For example, the basic education within health care and social services could target the specific challenges associated with vulnerable and distressed people, health care personnel and other professionals could undergo in-service training and the development of methods could be initiated in this field.

Health promotion, disease prevention, care and treatment in relation to vulnerable and distressed adults require interdisciplinary, intersectoral and coordinated efforts combined with outreach initiatives. These require the involvement of voluntary organizations and autonomous, private institutions, which are already making great efforts for vulnerable and distressed adults. One way in which the voluntary organizations have been effective is in outreach work. It is therefore important that efforts to help the weakest people in society be developed in a dialogue between the public sector and voluntary and private organizations.

The most distressed drug addicts are a special subgroup of vulnerable and distressed adults. This subgroup includes 900 to 1200 people. In February 2002, an expert group issued a report on the efforts to help this subgroup. The report includes such features as several recommendations that would be a natural starting-point for preparing future initiatives.

### **Collective challenges**

- The conditions of vulnerable and distressed adults
- Improving intersectoral cooperation both within the public sector and within the voluntary sector

### **Elderly people**

Elderly people do not comprise a homogeneous group. They range from healthy people with a high quality of life and no functional limitations to frail people with poor functioning, substantial illness, loneliness and poor quality of life.

The group of healthy elderly people, who have high health-related quality of life, good physical functioning and little illness, comprises 36% of people 65–79 years old and 12% of those 80 years or older.

The physical functioning of elderly people has improved in recent years, and more and more elderly people rate their health as being very good or good. One sign of this is that the number of years of healthy life lost because of reduced physical functioning declined from 5.3 years in 1987 to 4.1 years in 2000 among men 60 years or older and from 8.4 to 77.7 years among women of the same age. This trend should continue.

There is great health-promoting potential for elderly people to be conscious of the health dimension. For example, it is important that the transition from working life to senior life not lead to physical inactivity.

Health promotion efforts for elderly people should aim to maintain a high level of health-related quality of life and physical functioning as long as possible and to ensure the early detection of health and social problems and initiatives to counteract their effects. The proportion of elderly people who are physically active has increased during the past 15 years, but many are still sedentary or only slightly physically active. Elderly people can obtain great health benefits through physical activity and training – one effect is reducing or delaying the expected age-related functional decline and reducing the risk of falling accidents – but also substantial health benefits. Elderly people with reduced functioning – for example, because of illness – can also achieve great benefits from regular physical training.

It is therefore important to disseminate offers related to physical activity and training to elderly people. Both the public sector and voluntary organizations play an important role in this.

Good nutritional status and adequate intake of energy, vitamins and minerals can contribute to ensuring elderly people a positive ageing experience with high quality of life. Most healthy elderly people have good nutritional status. Nevertheless, as people age, energy intake declines, thereby increasing the risk of poor nutritional status and debilitation. Informing elderly people about the significance of a healthy diet and good nutritional status is important. Ways of doing this include through general practitioners and the health-promoting home visits offered to elderly people.

More than 80% of elderly people in Denmark contact their general practitioner at least once a year. This physician is often the first person people contact when they have either health or social problems. General practitioners therefore have a decisive role in relation to elderly people.

### **Collective challenges**

- Promoting physical activity among elderly people
- The nutritional status of ill and debilitated elderly people
- Loneliness and insecurity among elderly people
- Developing the quality of the health promotion efforts of general practitioners

### **Chronically ill people**

Chronically ill people have one or more very limiting chronic (longstanding) illness.

In 2000, 11.5% of adults in Denmark indicated that they had one or more longstanding illness that limited their usual daily activities. This is equivalent to 500,000 people. Chronic illness leads to great loss of quality of life. One indication of this is that 4 of 10 people with very limiting chronic illness assessed their health as being very poor or poor. The prevalence of very limiting chronic illness increases with increasing age – from 3% among those 16–24 years old to 32% among those 80 years or older. The prevalence is higher for people outside the labour market than for those within the labour market. The proportion of women with very limiting chronic illness is higher than that of men in all age groups.

The prevalence of very limiting chronic illness declined slightly from 1994 to 2000. Musculoskeletal disorders, cardiovascular diseases and diseases of the nervous system and sensory organs are the most common very limiting chronic diseases and disorders.

Chronic illness has various risk factors, including genetic, biological and external factors. Targeted efforts in relation to chronically ill people include primary prevention, early detection of disease, effective treatment and regular follow-up. When illness emerges, efforts should especially focus on avoiding exclusion from the labour market, avoiding exacerbation of illness and ameliorating the negative effects. Examples include efforts to maintain mobility, to strengthen the level of functioning, to ensure access to functional aids and assistive devices, to establish supportive networks and others.

This requires simultaneous and coordinated efforts in the social and health care sectors, at workplaces and in local social networks.

### **Collective challenges**

- Keeping people within the labour market
- Targeted follow-up of people receiving sickness benefit
- Targeted health promotion and rehabilitation services
- Establishing supportive networks

## **5. Collective efforts**

Future efforts to promote health and prevent disease face some great collective challenges and tasks, as described in Chapters 2, 3 and 4. Meeting these challenges and carrying out these tasks require collective efforts, because no one can do this alone. Efforts are needed from and cooperation is needed between:

- individuals and families;
- communities; and
- the public sector.

### **Individuals and families**

The population's interest in health is great and increasing, and people in Denmark live healthier lives in many ways that they did just a few years ago.

People's knowledge about health is generally good. Work to promote health has a good basis. Relevant information is an important prerequisite for efforts to promote health so that individuals can base their choices on good information. Respecting individual autonomy is decisive. The public sector should not control our lives.

Individuals have responsibility – for themselves, for their family and friends and for communities.

### **Communities – local communities and settings**

#### *Local communities*

Local communities and their social networks are decisive in supporting individuals and families, in providing a forum for dialogue on health and for creating and maintaining attitudes and health behaviour. Communities include neighbours, friends, groups of parents with children, nonprofit housing associations, sports associations and others.

Collective responsibility and work across sectors are required for such challenges as the alcohol habits of children and adolescents and care for lonely people.

Local communities can contribute significantly to health promotion efforts, and many already do.

The Government urges everyone – and especially the organized part of local communities – to tackle the collective challenges.

## *Settings*

Some of the most important communities in people's daily lives are:

- child-care centres and schools;
- workplaces; and
- the health care services.

The Government urges people in these settings to recognize and take their share of responsibility for health. This includes, among others, parents, personnel and their organizations in child-care centres and schools; employees, employers and the associations of employers and employees; the health care services and their professions and organizations; and municipalities and counties.

### ***Child-care centres and schools***

About 550,000 children in Denmark attend municipal child-care schemes daily, including preschool child care in private homes, preschool child-care centres for various age groups, leisure programmes for schoolchildren and others. The primary and lower secondary schools comprise the daily communities for more than 600,000 children and employ more than 60,000 adults.

It is therefore important that child-care centres and schools comprise a healthy environment and have a culture of health that supports healthy habits and promotes well-being.

Child-care centres have more clearly focused on health in recent years, with clear rules for smoke-free environments and a strong tradition for cooperation with parents and cooperation with the health professions. Trends for schoolchildren are also positive in many places, with cooperation between schools and leisure centres and clubs. This cooperation can include, for example, ensuring good conditions for healthy meals and daily physical activity for everyone, including people who are not traditionally physically active. For older children, such themes as alcohol and smoking are important. There is great potential in cooperation between leisure programmes for schoolchildren and schools on the health needs of individual children, and especially vulnerable and distressed children.

The primary and lower secondary schools have worked intensively on the core tasks of the school in the past couple of years. No formal changes have been carried out with the aim of strengthening the health aspects of instruction, but

many initiatives have been taken, such as on children and food, children and alcohol, children and exercise as well as bullying.

Schools have considerable potential to develop into a setting for health promotion.

The challenges in the coming years will include:

- developing professional competence and strengthening health education in schools;
- providing a good framework for children's physical activity;
- continuing to disseminate the adoption of health policies in schools on alcohol and other topics; and
- evaluating the school as a setting for health promotion.

### ***Workplaces***

Far more than half the adults in Denmark are linked to a workplace. The workplace is therefore a natural approach to improving the health of the population. The physical and mental working environment substantially influences employees' health, and the workplace as a social network is an important element in attitudes towards health and an important framework for support for specific changes in behaviour. Good health status among the population is important for a country's potential to produce – for consumption, for trade with the rest of the world and for welfare services.

Interest for health in a broad sense has increased at workplaces and in companies in recent years. Some companies make systematic efforts to solve the most important problems in the working environment at the companies. Many workplaces have adopted health policies on smoking, alcohol consumption, healthy canteen food, physical activity, schemes to support substance abusers and others. Interest in health promotion activities at workplaces is great – among both management and employees. Efforts should continue to be based on voluntary activity.

The challenges for workplaces will include:

- continuing to strengthen the systematic efforts to improve the working environment at companies;
- integrating efforts to promote health at workplaces, a healthy working environment and corporate social responsibility;
- continuing to disseminate health policies at workplaces in Denmark; and

- new partnerships between the associations of employers and employees on healthy workplaces.

### ***The health care services***

The health care services have a long tradition of preventing disease and promoting health and also have excellent opportunities to do this. One reason is that the health care services have a great contact base, as about 90% of the population see their general practitioner at least once per year, about 700,000 people are admitted to hospital annually and there are more than 4.5 million annual outpatient health care consultations. Another reason is that the interaction with the treatment services is often a factor in motivating people to take action to promote their health.

This opportunity should be taken advantage of, since individuals' motivation is decisive. The opportunities and services should be timed so that the individual is motivated. The aim is that health promotion should become an integrated part of the tasks of the health care services on a par with investigation, treatment and care – and with services that meet patients' motivation and needs.

The health care services are currently developing systematic health promotion and disease prevention initiatives in connection with hospital treatment, follow-up and rehabilitation of patients. This is a very positive trend.

The challenges in the coming years will include:

- continuing to disseminate and develop effective health promotion and disease prevention options in the health care services;
- preventive treatment;
- general practitioners and referral opportunities; and
- expanding the Danish Network of Health Promoting Hospitals.

### **The public sector**

Public health has been one of the most important tasks of the public sector for years, including hygiene, public health nursing, occupational safety and health, road safety and other tasks.

The counties and municipalities have made great efforts in health promotion and disease prevention in recent years; this is demonstrated by such means as the 2001 status report on public health work that is being published (in Danish) together with Healthy throughout Life.

The Government is looking forward to the counties and municipalities continuing their substantial commitment. The level of expectations towards the municipalities and counties is unchanged: that is, substantial.

The counties and municipalities have developed many diverse partnerships in public health both with one another and with communities in recent years. The Government would like to see this trend continue: that municipalities and counties enter into, support and develop partnerships to promote health and attempt to create a positive framework for the efforts of communities to improve public health.

The counties and municipalities have contributed substantially to developing new methods of promoting health. To develop this further, it will be valuable if the counties and municipalities continue to extend and develop forms of cooperation in health promotion that are intersectoral and interdisciplinary.

The Government will continue to support this work, to take initiatives to cooperate on development tasks and documentation and to support scientific networks and information and documentation work.

## **Instruments**

Public health work is based on a broad range of instruments, including:

- legislation;
- health policies;
- preventive health services;
- case detection;
- networks;
- communication and dialogue;
- education, research and documentation;
- implementation and development; and
- monitoring.

*Legislation.* This includes actual legislation (such as acts on tobacco, alcohol, the working environment and the external environment) and the implementation of the legislation by the public authorities in the form of statutory orders, instructions, guidelines and other regulations.

*Health policies.* Health policies are a tool for establishing objectives and

initiatives for a setting. Examples include local decisions in municipalities, in institutions (child-care centres, hospitals and others) and at workplaces on alcohol policy, dietary policy and others.

*Preventive health services.* Preventive health services include services for high-risk groups such as pregnant women with heavy alcohol consumption or the rehabilitation of patients with heart disease by smoking cessation and dietary changes. These also include services for smoking cessation in general, for heavy consumers of alcohol, for physical training and activity and others.

*Case detection.* Case detection includes investigating the population or parts thereof for risk factors or early signs of disease – such as screening for cervical cancer – and the investigation by general practitioners for certain conditions when a patient consultation provides an opportunity to do so (opportunistic screening). Examples include blood pressure testing and testing for symptoms of diabetes among obese people. In addition, there is the classical check-up programme for pregnant women and the routine check-ups of children. Detection can also take place in other sectors than the health care services, such as through health-promoting home visits.

*Networks.* Local social networks, family, friends and colleagues are documented to be an important factor in influencing attitudes and in encouraging changes in health behaviour. Local social networks are also an important source of practical support in everyday life and a key source of psychosocial support in case of illness. The absence of such networks is a negative factor, and the presence of good social networks is a positive factor. The significance of local social networks emerges in very different diseases as an independent factor influencing survival and the quality of life. An example is self-help groups. If local social networks are weak, secondary networks of professionals can be an important aspect in promoting health.

*Communication and dialogue.* Communication and dialogue in the population on health risks and solutions are required for health promotion work. For example, network communication is a method in which personal dialogue, education and influencing key people is in focus. A binding dialogue in the health care services between the personnel and patients is very important. Mass communication through nationwide, general campaigns is carried out when the frequency and severity of the problems justify targeting the efforts towards the whole population.

*Education, research and documentation.* Personnel who work with health promotion and disease prevention on a daily basis, and especially personnel who work with vulnerable and distressed people, should have their

qualifications improved through education and further education. Clinical guidelines and instructions can contribute to increasing the professionalism of health promotion.

Research on effective methods of promoting health forms the basis for targeted and effective efforts to promote health. An important prerequisite for making health promotion work more professional is documentation and targeted dissemination, which is carried out by the documentation unit of the Centre for Health Promotion and Disease Prevention of the National Board of Health and by others.

*Implementation and development.* Many of Denmark's counties and municipalities have developed appropriate methods of promoting health. Disseminating and implementing good methods of health promotion are important. New methods of promoting health should continue to be developed, especially ones directed towards vulnerable and distressed groups. One way is by establishing partnerships.

*Monitoring.* Regular surveillance of trends in the population's health status, trends in illness and accidents and trends in risk factors is required for setting priorities and for recognizing new development trends at an early stage with the aim of taking timely initiatives. Health promotion has developed more stable, regular and detailed monitoring systems in recent years.

### **Following up the policy**

*Initiatives.* The Government has regularly taken and will take a number of initiatives to improve the health of the population.

- In autumn 2002, the Danish Veterinary and Food Administration (Ministry of Food, Agriculture and Fisheries) is initiating a new project Everything about Food – Taste for Life. The aim of the project is to promote the establishment of catering schemes at schools and institutions and to provide citizens with guidance on facts related to nutrition.
- The Ministry of the Interior and Health will start a multi-year initiative on physical activity.
- The Ministry of the Interior and Health will initiate strategy work for the major preventable diseases and disorders of Healthy throughout Life.
- The Ministry of the Interior and Health will support such projects as local demonstration projects on preventing obesity and on physical activity.

- The National Board of Health has initiated work on a proposed national strategy on obesity.
- The Ministry of Culture will present a report on sports policy in spring 2003. The report will focus on the health and educational dimensions of sports, including how organized sports in interaction with other actors, such as schools, institutions and workplaces, can improve opportunities to participate in sports.
- The Minister for Culture will initiate the revision of the Promotion of Elite Sports Act. In this connection, the national and international trends and other factors in elite sports will be analysed.
- The Government will soon present a strategy for environmental factors and health.
- The Government will endeavour to give motivated alcohol abusers the opportunity to begin treatment rapidly.
- In spring 2002, the Ministry of Social Affairs initiated research on physical training and rehabilitation.
- In spring 2002, the Minister for Social Affairs established the Council for Socially Marginalized People to bolster the efforts for the weakest members of society.
- In autumn 2002, the Minister for Social Affairs will submit a bill on treatment guarantees for drug abusers.
- In early 2003, the Minister for Social Affairs will submit a bill on opportunities for catering schemes for meals in kindergartens for which the parents will pay the full cost.
- The Ministry of Education will publish new Targets for Learning for the obligatory subjects of health education, sex education and family education.
- The Ministry of Education will take the initiative to prepare inspirational material for health education in schools.
- The Ministry of Education will take the initiative to prepare material on experiences and inspiration related to local projects in which more time has been allocated to physical education in schools, how this time was used and other aspects.
- The Ministry of Education will cooperate with other ministries in taking

initiative to prepare a framework proposal for the development of models for health policy at schools.

- The Ministry of Education will take initiatives to develop instruments for evaluating schools as a health-promoting setting.

### *The indicator programme*

An indicator programme is being presented simultaneously with the publication of Healthy throughout Life that has key indicators for the overall targets of Healthy throughout Life, risk factors, target groups and settings for health promotion.

Trends in these indicators will regularly be updated on the Web site of Healthy throughout Life, [www.folkesundhed.dk](http://www.folkesundhed.dk). An updated version will be compiled in an annual publication throughout the duration of Healthy throughout Life.

### *Status for the implementation of Healthy throughout Life*

Healthy throughout Life will follow the local election periods and thereby the local planning periods. The status of public health work will be assessed in 2005 and 2009 similar to the 2001 status report on public health work. The status assessment should describe and assess trends in health status and health behaviour, efforts by the state, counties and municipalities, efforts in communities and other aspects.

The work of assessing the status in 2005 and 2009 will be subject to deliberation with the aim of adjusting or revising the targets and instruments of Healthy throughout Life. As part of this, the Minister for the Interior and Health will provide special priorities for health promotion work in connection with the 2005 state recommendations for the health planning of the counties and municipalities.

## Indicator programme for Healthy throughout Life

### **1. Introduction**

This indicator programme is being presented in connection with Healthy throughout Life. It includes all the priority areas for risk factors (tobacco smoking, alcohol consumption, diet, physical activity, obesity, accidents, working environment and environmental factors), target groups (pregnant women, children, young people, vulnerable and distressed adults, elderly people and chronically ill people), settings for health promotion (schools and child-care centres, workplaces and the health care services) as well as key indicators for health promotion by the public sector.

The indicator programme will be developed continually. Relevant indicators will be prepared for each of the eight major preventable diseases and disorders of Healthy throughout Life in connection with the strategy work for these diseases and disorders.

The purpose of the catalogue of indicators is to ensure the continued monitoring and documentation of trends in a clear way based on a relevant selection of the great quantity of statistics and data that are produced.

The indicators have been chosen so that they reflect the specific priority areas as completely and precisely as possible and are also scientifically well founded. For example, several validation studies have shown that the self-rated health of the population derived from the interview surveys of the Danish Health and Morbidity Surveys is very strongly associated with the actual morbidity and mortality.

Trends in the indicators will be updated regularly on the Web site of Healthy throughout Life, [www.folkesundhed.dk](http://www.folkesundhed.dk).

### **National and international work on indicators**

Inspiration has been sought both in Denmark and elsewhere in connection with the preparation of the indicator programme.

The development of the indicators of Healthy throughout Life considered the indicators that either have been developed or are being developed in the EU and in the Nordic countries.

Examples include the health monitoring programme developed by the EU with the purpose of monitoring public health initiatives and other public

health policy measures, which will enable the health status and factors affecting health status to be monitored in EU countries. The Lisbon Special European Council meeting in March 2000 established the list of structural indicators for monitoring the trends in Member States. The Council further decided to develop a health indicator based on the number of years of healthy life lost called disability-free life expectancy (DFLE).

The Nordic Council of Ministers has also initiated the development of a set of indicators for sustainable development in the Nordic countries. Special indicators for social and health factors will be developed in connection with this.

## **2. Indicators of public health**

Indicators are a tool for monitoring trends in a specific area. Selected indicators enable the determination of whether the trends are in the desired direction. Indicators can thus contribute to identifying challenges and indicating the need for initiatives.

A set of indicators has been selected that illustrates the various priority areas of Healthy throughout Life to portray the trends in targets and challenges.

### **Elements of the indicator programme**

Healthy throughout Life contains overall targets on health and the quality of life and selected specific priority areas for which targets and collective challenges have been formulated.

The indicator programme has two parts.

- *Key indicators.* These are a set of overall indicators that describe trends and results in relation to the overall targets of Healthy throughout Life.
- *A detailed, specific set of indicators.* This set of indicators describes the trends and results for each priority area in relation to the targets and collective challenges in Healthy throughout Life.

To ensure continuity in relation to the Government Programme on Public Health and Health Promotion, 1999–2008 and its indicator programme, many of the indicators used here are identical with those used previously. In addition, the indicator programme will enable comparison of trends with the quantitative targets of the Government Programme on Public Health and Health Promotion, 1999–2008.

### **Sources**

Numerous sources have been used in preparing the indicator programme. The sources are listed for each indicator. The most important sources include the Danish Health and Morbidity Survey conducted by the National Institute of Public Health, the National Patient Registry with information on hospital activity and the population's use of health services, the Danish Registry of Causes of Death, a project monitoring young people's lifestyles and daily lives, statistical publications from Statistics Denmark and others.

### **3. Set of key indicators**

The indicator programme for Healthy throughout Life is based for now on the following key indicators.

1. Life expectancy
2. Number of years of healthy life lost
3. Infant mortality
4. Self-rated health
5. Social differences in mortality
6. Social differences in the quality of life
7. Prevalence of heavy smoking among children, adolescents and adults
8. Proportion exceeding the recommended number of weekly standard alcoholic drinks among children, adolescents and adults
9. Prevalence of fat intake exceeding 40% of total energy intake
10. Level of physical activity at leisure and at work among children, adolescents and adults
11. Prevalence of body mass index (BMI) exceeding 30 among children, adolescents and adults
12. Road and home & leisure accidents among children, adolescents and adults
13. Serious occupational accidents, including fatal ones
14. Prevalence of use of controlled substances (young people)

### **4. Assessing the indicators' degree of coverage and further work on indicators**

The indicator programme has been created based on the existing sources of

data. The indicator programme will be developed as the data improve, as the strategy work for the eight major preventable diseases and disorders progresses and as new or other targets may be given higher priority in the efforts to improve public health.

Solid indicators exist in most of the areas included in this catalogue of indicators. This applies, for example, to tobacco smoking and alcohol consumption. Both these areas have comparable data and a good overview of trends. The phenomena being measured have been defined clearly, as have the methods of measurement.

Indicators are being developed in some areas. This applies, for example, to children: the National Board of Health is working on a national programme for monitoring children's health.

Continued and further development of methods and data is needed in other areas. For example, this applies to physical exercise. New indicators for physical activity need to be developed, especially given the new recommendations that children should be physically active for at least 60 minutes per day and adults at least 30 minutes daily. Such indicators are intended to be developed and incorporated into the catalogue.

Still other areas have been scarcely covered by indicators. This applies especially to the settings for health promotion in Healthy throughout Life. Here regular monitoring is not intended for reasons related to methods. In these areas, more ad hoc surveys must be used instead to provide a sense of the situation and trends.

## **5. The structure of the indicator programme**

The following section describes the indicators selected. The structure is identical to the structure of Healthy throughout Life. Thus, the indicators are in the order of the overall targets, then the risk factors, target groups and settings for health promotion.

The indicators are structured such that, corresponding to each indicator, the factual description explains how the indicator should be understood or read. Then the trends are described for previous years, sometimes with an explanation of causes. Finally, there are general comments and sources are given.

# The indicator programme for Healthy throughout Life

The key indicators are shaded.

## Health and the quality of life

Indicator	Description	Trends	Sources and comments
Life expectancy	Life expectancy at birth or at a specific age calculated based on the current trends in mortality	<p>From the mid-1970s to the mid-1990s, life expectancy increased much more slowly than in other European countries. In the second half of the 1990s, however, the increase in Denmark was similar to many other European countries.</p> <p>From 1995 to 2001, the life expectancy at birth for males increased by 1.7 years and was 74.5 years in 2001; for females, 1.2 years and 79.2 years.</p>	Source: Statistics Denmark (www.statistikbanken.dk)

<p>Number of years of healthy life lost</p>	<p>The number of years of healthy life lost is based on the calculated disability-free life expectancy, which estimates the average time a person can expect to live in various states of health. This indicator thus combines measures of mortality and morbidity in a single indicator.</p> <p>The number of years of healthy life lost is the life expectancy of a person at a specific age adjusted for reduced states of functioning or other forms of reduced health-related quality of life.</p> <p>This is measured using various parameters: 1) very poor, poor or fair self-rated health, 2) chronic (longstanding) illness or 3) longstanding activity limitation.</p>	<p>Self-rated health: the number of years of healthy life lost among 16-year-old males declined from 12.1 years in 1987 to 10.6 years in 1994. Among women, this declined from 1987 to 1991 but then increased again to 16.6 years in 1994, the same as in 1987.</p> <p>The life expectancy with chronic illness for 16-year-old males increased from 18.7 years in 1987 to 20.9 years in 1994. Among women, the number increased from 22.4 years in 1987 to 26.5 years in 1994. Most of the years of healthy life were lost because of musculoskeletal disorders.</p> <p>The number of years of healthy life lost because of reduced states of physical functioning among people 60 years or older declined among men from 5.3 years in 1987 to 4.1 years in 2000. The decline among women was smaller, from 8.4 years in 1987 to 7.7 years in 2000.</p>	<p>Sources: National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p> <p>Henrik Brønnum Hansen. Trends in health expectancy in Denmark, 1987–1994. <i>Dan Med Bull</i> 1998; <b>45</b>: 217–221.</p> <p>The number of years of healthy life lost can be measured by using several different parameters: people not feeling well enough to carry out their usual daily activities; poor or very poor self-rated health; debilitated physical functioning; prevalence of chronic illness; and others.</p>
<p>Anticipatory pension</p>	<p>Number of health-related anticipatory pensions granted in general and specific to each disease or disorder</p>	<p>In 2001, 14,818 new health-related anticipatory pensions were granted, an increase of 7% compared with 2000. A total of 33% of the newly granted anticipatory pensions resulted from mental disorders and 24% from musculoskeletal disorders. The next in order are cardiovascular diseases, diseases of the nervous system and sensory organs and cancer. The pattern of diseases and disorders among the anticipatory pensions granted is largely constant.</p>	<p>Source: <i>Førtidspensioner – Årsstatistik 2001</i> [Anticipatory pensions – annual statistics, 2001], National Social Appeals Board.</p>

Mortality	General mortality and according to cause	<p>In 1999, 58,722 people died in Denmark. The most frequent causes of death continue to be cardiovascular diseases (37% of deaths), cancer (27%), pulmonary diseases (10%) and suicide and accidents (6%).</p> <p>In the past 20 years, mortality from ischaemic heart disease has declined, whereas mortality from other types of heart disease has increased, but the overall decline is considerable. In the same period, the overall mortality from cancer has been largely unchanged, whereas mortality from chronic pulmonary diseases has increased among men and very strongly increased among women. The number of suicides declined by 50% from 1980 to 1999. Deaths resulting from diabetes are increasing; nearly all of these are among elderly people.</p>	Source: Registry of Causes of Death, 1999. <i>Nyt tal fra Sundhedsstyrelsen</i> 2002 6(8), National Board of Health.
Years of life lost before age 65 years	General and according to cause	In 1998, 164,000 years of life were lost before 65 years of age. The highest-ranking causes were cancer (26%), accidents and suicide (24%) and cardiovascular diseases (12%).	Source: Registry of Causes of Death, National Board of Health.  This indicator depends on the age composition of the population and is therefore difficult to compare over time.
Infant mortality	Number of deaths per 1000 living births at the age of 0–365 days	Infant mortality declined from 7.9 per 1000 living births in 1986–1990 to 5.0 in 1991–1995 and 5.6 in 1996.	Source: <i>Health statistics in the Nordic countries 1999</i> . Nordic Medico-Statistical Committee (Nomesco), 2001 (Publication No. 61).
Newborn babies with low birth weight	Percentage of newborn babies with birth weight less than 2500 g	The percentage of newborn babies with low birth weight has not changed.	Source: National Patient Registry.

Self-rated health	Measured by the question: How would you rate your present state of health in general?	<p>A total of 77.9% of adults rate their health as being very good or good. The proportion who rate their own health as being very good or good declines with increasing age. More men than women in all age groups rate their health as being very good or good.</p> <p>The proportion rating their health as being very good or good increased slightly from 1987 to 2000 among people 45 to 66 years old and among those 67 years and older and declined slightly in the youngest age groups.</p>	Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.
Activity limitation	Measured using the question: Has illness or injury made it difficult or impossible for you to carry out your usual daily activities during the past 2 weeks? (such as work inside or outside the home, leisure activities and the like)	A total of 14.9% of adults said that they had been limited in carrying out their usual daily activities because of illness or injury. The proportion with activity limitation within the past 14 days increased from 10.8% in 1987 to 14.9% in 2000. The proportion increased among men and women in all age groups but was most pronounced among women.	Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.
Chronic illness	Measured by the question: Do you have longstanding illness, longstanding effects of injury, a handicap or any other longstanding disease or disorder?	The prevalence of chronic illness increased from 32.4% in 1987 to 41.1% in 2000. The increase applied to men and women in all age groups.	Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.

<p>Social differences in mortality</p>	<p>Mortality in different occupations and sectors</p>	<p>From 1970 to 1995, the difference in mortality between unskilled male workers and other sectors increased substantially. In 1991–1995, mortality among unskilled workers was 20% higher than among skilled workers.</p> <p>Mortality among men with no occupation is nearly three times higher than for men with an occupation. For women this ratio is 2–3.</p> <p>The higher the educational level, the lower the mortality.</p>	<p>Source: Otto Andersen et al. <i>Dødelighed og erhverv 1981–1995</i> [Mortality and occupation in Denmark, 1981–1995]. Statistics Denmark, 2001.</p>
<p>Social differences in the quality of life</p>	<p>Self-rated health among various occupations</p>	<p>The results from 1987 and 1991 show that, among 30-year-old men, salaried employees in social class I had the highest life expectancy with good self-rated health (41 years) versus 32 years for unskilled workers and 19 years for men with no occupation. Among 30-year-old women, salaried employees in social class I had the longest life expectancy in good health (46 years) versus 36 years for assisting spouses (co-entrepreneurs) and 25 years for women with no occupation.</p>	<p>Sources: Henrik Brønnum-Hansen. Socioeconomic differences in health expectancy in Denmark. <i>Scand J Public Health</i> 2000; <b>28</b>: 194–199. Covers 1987 and 1991.</p> <p>Henrik Brønnum-Hansen et al. Social gradient in life expectancy and health expectancy in Denmark. In preparation. Covers 2000.</p>

<p>Social differences in smoking</p>	<p>Prevalence of daily smoking distributed according to level of education and socioeconomic status</p>	<p>The prevalence of daily smoking declined from 44.1% in 1987 to 34.0% in 2000. The decline is visible among women 16–24 and 25–44 years old and among men 25–44 and 45–66 years old. In relation to educational groups, the proportion of daily smokers among men has declined, especially among those with higher educational levels, whereas among women the prevalence has especially fallen among women with less education. The prevalence has declined among all socioeconomic groups in the workforce except self-employed people without employees (Danish Health and Morbidity Survey 2000).</p>	<p>Sources: National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p> <p>Annual monitoring of smoking habits in Denmark by the National Board of Health.</p>
<p>Social differences in the prevalence of very limiting chronic illness</p>	<p>Proportion with one or more very limiting chronic (longstanding) illness distributed according to educational level and socioeconomic status</p>	<p>In 2000, there was a clear gradient with educational level, with the highest prevalence of very limiting chronic illness among people with the least education. In relation to socioeconomic status, the lowest prevalence was among salaried employees in social classes I and II and the highest prevalence among unskilled workers.</p>	<p>Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p>

## Risk factors

Indicator	Description	Trends	Sources and comments
<b>Tobacco smoking</b>			
Tobacco consumption	Quantity of cigarettes, cigars and hand-rolling tobacco sold per person per year	<p>In 1999, 7.041 billion cigarettes were sold in Denmark.</p> <p>The number of cigarettes sold bottomed out in 1993 (at 6.382 billion) but began to increase afterwards.</p>	Source: Statistics Denmark
Prevalence of daily smoking among children, young people and adults	Prevalence of daily smoking according to gender and age	The prevalence of daily smoking declined from 43% in 1991 to 30% in 2001 (National Board of Health).	<p>Sources: Annual monitoring of smoking habits in Denmark by the National Board of Health.</p> <p>National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p> <p>Gert Allan Nielsen et al. <i>Unge livsstil og dagligdag – forbrug af tobak, alkohol og stoffer</i> [The lifestyles and daily lives of young people – consumption of tobacco, alcohol and controlled substances]. Danish Cancer Society and National Board of Health, 2002.</p> <p>Rasmussen M, Due P, Holstein B. <i>Skolebørnsundersøgelsen 1998</i> [Health Behaviour in School-Aged Children (HBSC) – results for Denmark, 1998]. Institute of Public Health, University of Copenhagen and Danish Committee for Health Education.</p>

Prevalence of heavy smoking among children, adolescents and adults	Proportion smoking more than 15 cigarettes per day distributed according to gender and age	<p>The prevalence of heavy smoking declined slightly from 20.4% in 1994 to 18.6% in 2000. The decline was most pronounced among people 25–44 years old.</p> <p>Among those 16–20 years old, 8.0% of men and 5.2% of women were heavy smokers in 2000 (Danish Health and Morbidity Survey 2000).</p>	<p>Sources: National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p> <p>Gert Allan Nielsen et al. <i>Unge livsstil og dagligdag – forbrug af tobak, alkohol og stoffer</i> [The lifestyles and daily lives of young people – consumption of tobacco, alcohol and controlled substances]. Danish Cancer Society and National Board of Health, 2002.</p> <p>Annual monitoring of smoking habits in Denmark by the National Board of Health.</p>
Smoking cessation	Proportion desiring cessation who are covered		
<b>Alcohol consumption</b>			
Alcohol consumption	Number of litres of pure alcohol equivalent sold per person per year	<p>In 1999, the registered consumption of alcohol was 11.6 litres per person 15 years or older. Consumption has been at about this level since the mid-1970s, with minor fluctuations.</p>	<p>Source: <i>Alkohol- og narkotikastatistik 2001</i> [Statistics on alcohol and narcotics in Denmark, 2001]. National Board of Health (2001/18).</p>

<p>Proportion exceeding the recommended number of weekly standard alcoholic drinks among children, adolescents and adults</p>	<p>The proportion of men drinking more than 21 standard drinks and women drinking more than 14 standard drinks within the past week distributed according to age</p>	<p>The proportion exceeding the recommended number of drinks was 11.7% in 2000 versus 10.7% in 1994. The increase applied to men and women in all age groups except people 25–44 years old. Among those 16–20 years, 24% of men and 14% of women exceeded the recommendations.</p>	<p>Sources: National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p> <p>Gert Allan Nielsen et al. <i>Unges livsstil og dagligdag – forbrug af tobak, alkohol og stoffer</i> [The lifestyles and daily lives of young people – consumption of tobacco, alcohol and controlled substances]. Danish Cancer Society and National Board of Health, 2002.</p> <p>King A et al. <i>The health of youth: a cross-national survey</i>. WHO Regional Office for Europe, 1996 (WHO Regional Publications, European Series, No. 69).</p> <p>ESPAD (European School Survey Project on Alcohol and other Drugs) reports, 1994 and 1999.</p>
<p><b>Diet</b></p>			
<p>Food supply</p>	<p>The quantity of foodstuffs produced minus exports and plus imports</p> <p>Milk with = 3% fat versus = 3% fat; meat; and sugar</p>	<p>From 1965 to 1998, the supply of milk with = 3% fat declined and the consumption of milk with = 3% fat increased. The consumption of other dairy products (cheese and cream) increased. The supply of meat increased. The consumption of sugar declined from 1965 to 1989 but is increasing again.</p>	<p>Sources: Fagt S, Trolle E. <i>Forsyningen af fødevarer 1955–1999. Udviklingen i danskernes kost – forbrug, indkøb og vaner</i> [Supply of food, 1955–1999. Trends in diet in Denmark – consumption, purchasing and habits]. Department of Nutrition, Danish Veterinary and Food Administration, 2001.</p> <p>Fagt S. <i>Kostvaner i Norden 1965–1998</i> [Dietary habits in the Nordic countries, 1965–1998]. Food Market Norden, 2001.</p> <p>This indicator is included to correspond to the consumption of tobacco and alcohol.</p>

Average fat intake	Distribution of total energy intake according to fat, carbohydrate and protein  Intake of saturated fat in relation to other fat	From 1995 to 2000–2001, the fat intake as a percentage of total energy intake declined from 37% to 33% (from 39% to 35% excluding alcohol from the calculation).	Source: nationwide dietary surveys by the Danish Veterinary and Food Administration. The latest figures are from the 2000–2002 dietary survey.
Prevalence of fat intake exceeding 40% of total energy intake		The proportion of people 15–75 years old consuming more than 40% of total energy as fat declined from 26% to 11% from 1995 to 2000–2001.	Source: nationwide dietary surveys by the Danish Veterinary and Food Administration. The latest figures are from the 2000–2002 dietary survey.
Consumption of fruit and vegetables		The average daily consumption of fruits and vegetables among people 11–75 years old has increased from 279 g to 379 g. The proportion who consume the recommended 600 g per day has increased from 4% to 11%, and the proportion who eat less than 200 g has declined from 36% to 23%.	Source: nationwide dietary surveys by the Danish Veterinary and Food Administration. The latest figures are from the 2000–2002 dietary survey.  The consumption of fruit and vegetables is included because it influences cardiovascular diseases and cancer.  Indicators for potatoes, grain products and fish products are omitted.
<b>Physical activity</b>			

<p>Level of physical activity at leisure and at work among children, adolescents and adults</p>	<p>The following are measured among adults: proportion with sedentary leisure activities, proportion with strenuous or moderate physical activity at leisure, proportion among those in the labour market with sedentary work and proportion with lifting or carrying activities or heavy or rapid strenuous work according to gender, age and occupation.</p>	<p>The proportion with sedentary leisure activities and the proportion with strenuous or moderate physical activity at leisure were unchanged from 1994 to 2000. The proportion with sedentary work in their main occupation increased, especially among men, from 33.1% in 1987 to 36.9% in 2000.</p> <p>The proportion of 15-year-olds who were physically active declined from 1984 to 1998, both boys and girls.</p>	<p>Sources: National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p> <p>King A. et al. <i>The health of youth: a cross-national survey</i>. WHO Regional Office for Europe, 1996 (WHO Regional Publications, European Series, No. 69).</p> <p>Rasmussen M, Due P, Holstein B. <i>Skolebørnsundersøgelse n 1998</i> [Health Behaviour in School-Aged Children – results for Denmark, 1998]. Institute of Public Health, University of Copenhagen and Danish Committee for Health Education.</p> <p>New indicators need to be developed for physical activity, especially in relation to the recommendation that adults be physically active for at least 30 minutes daily and children for 60 minutes.</p>
<p><b>Obesity</b></p>			
<p>Prevalence of body mass index (BMI) exceeding 30 among children, adolescents and adults</p>	<p>Based on self-reported height and weight distributed according to gender and age</p>	<p>The prevalence of obesity among adults increased from 5.5% in 1987 to 7.6% in 1994 and 9.5% in 2000. The increase was especially high among men 16–24 years old and women 25–44 years old.</p> <p>The prevalence of obesity among 14- to 16-year-olds has increased substantially during the past 25 years.</p>	<p>Sources: National Institute of Public Health: Danish Health and Morbidity Survey 2000.</p> <p>Rasmussen S, Petersen TA, Madsen M. [Body mass index of 6- to 15-year-old schoolchildren in Denmark measured from 1986/1987 to 1996/1997 compared with 1971/1972.] <i>Ugeskr Laeger</i> 2002; <b>164</b>: 5011–5015.</p>
<p><b>Accidents</b></p>			

Road accidents among children, adolescents and adults	Number of fatal accidents	2000: 498 2001: 431	Sources: <i>Færdssuheld</i> [Road accidents]. Statistics Denmark.  Ministry of Transport (police data).
	Number of children and adolescents injured in road accidents	The number of children and adolescents injured in road accidents declined from 3806 in 1997 to 3587 in 2000. The decline was slightly less than 6% between 1997 and 2000.	Sources: <i>Færdssuheld</i> [Road accidents]. Statistics Denmark.  Ministry of Transport (police data).
	Number of contacts with emergency and accident wards because of road accidents among children, adolescents and adults	There are about 46,000 annual contacts, and this number is constant or increasing slightly.  The number of people 0–24 years injured in road accidents:  1998: 28,570 1999: 27,920 2000: 28,510 2001: 27,530  This trend is composed, however, of increases among 20- to 24-year-olds, declines among 15- to 19-year-olds and no change for those younger than 15 years.	Sources: National Patient Registry (since 1995).  Danish Registry of Accidents (since 1990).  The Danish Registry of Accidents is working on developing and delimiting an indicator for severe injuries. This will create the opportunity to qualify the police data, which solely includes the accidents reported to the police.  The indicator for severity can also be used for home and leisure accidents.
Home and leisure accidents	Number of fatal accidents	About 1800 in 1996 – constant.  About 1800 in 1999 – constant.	Source: Danish Registry of Causes of Death
	Number of contacts with emergency and accident wards	About 500,000 per year – constant.	Sources: National Patient Registry (since 1995).  Danish Registry of Accidents (since 1990).
<b>Working environment</b>			

<p>Serious occupational accidents, including fatal ones</p>	<p>Includes accidents that result in death or in disability exceeding 5% and/or amputation</p>	<p>Trends for the past 10 years have not shown any significant change.</p> <p>In 1999, 69 fatal accidents and 5539 other serious accidents were reported to the National Working Environment Authority, a total of 5608 serious accidents.</p> <p>The associations of employers and employees and the public authorities will intensify the work of preventing accidents such that a decline of 15% can be identified by 2005.</p>	<p>Source: surveillance based on the Registry of Accidents of the National Working Environment Authority.</p>
<p>Injuries resulting from heavy lifting</p>	<p>Includes injuries caused by single incidents of heavy lifting or repetitive lifting, carrying, pushing and pulling of heavy objects</p>	<p>In 1999, 7532 lifting accidents were reported to the National Working Environment Authority.</p> <p>The associations of employers and employees and the public authorities will intensify the work of preventing lifting accidents such that a decline of 15% can be identified by 2005.</p>	<p>Sources: surveillance based on surveys of companies in specific sectors.</p> <p>The Danish Working Environment Cohort Study of the National Institute of Occupational Health</p>
<p>Injuries or disorders resulting from repetitive motion</p>	<p>Highly repetitive motion means that the work cycle is shorter than 30 seconds or that the same movement is repeated in more than 50% of the cycle time.</p> <p>Highly repetitive motion is considered the most harmful to health.</p>	<p>Evaluation of the action plan to combat repetitive motion from the associations of employers and employees showed that the prevalence of repetitive motion among the companies in high-risk sectors had declined by 25% since the action plan was instituted.</p> <p>The associations of employers and employees and the public authorities will intensify work to prevent repetitive motion such that a 10% decline can be identified by 2005.</p>	<p>Sources: surveillance based on company surveys in specific sectors and on the Danish Working Environment Cohort Study of the National Institute of Occupational Health</p>

Mental working environment	The mental working environment covers numerous influences at workplaces emerging from such factors as the organization of the work process, the arrangement of work and cooperation among employees.	<p>The surveillance report shows that demands for attention and concentration have increased. More positive trends are visible in several other mental risk factors. For example, more people consider that they can influence their own work.</p> <p>The associations of employers and employees and the public authorities will intensify work to improve the mental working environment such that a 5% decline in the number of employees assessing themselves as being burdened can be identified by 2005.</p>	<p>Source: surveillance based on the Danish Working Environment Cohort Study of the National Institute of Occupational Health.</p> <p>Efforts are also being made to extend and adapt the company surveillance conducted by the National Working Environment Authority.</p>
The proportion of major preventable diseases and disorders and accidents requiring treatment accounted for by the working environment		<p>The proportion of hospital admissions accounted for by the working environment was 7–15% from 1994 to 1999, equivalent to 60,000 to 100,000 total admissions in this period.</p> <p>These calculations were carried out for the first time ever recently but can be carried out regularly.</p>	<p>Source: Occupational and Hospital Admissions Registry of the National Institute of Occupational Health, which can be updated regularly and contains the information needed to make the calculations.</p>
<b>Environmental factors</b>			
			<p>See the list of indicators for <i>A shared future – balanced development</i>, Denmark's national strategy for sustainable development.</p> <p>An interdisciplinary group is being established that will analyse the potential to develop a broader set of indicators.</p>

## Target groups

Indicator	Description	Trends	Sources and comments
<b>Pregnant women</b>			
Daily smokers among pregnant women			Indicator being developed.
Alcohol consumption among pregnant women			Indicator being developed.
Participation in prenatal check-ups	Proportion who participate in prenatal check-ups		Sources: Danish National Health Service Registry. National Patient Registry.
<b>Children (0–14 years)</b>			
Participation in preventive health check-ups	Proportion who participate in preventive health check-ups		Source: Danish National Health Service Registry.
Various measures of illness and mental health and well-being among children	Self-rated health, acute illness and mental health and well-being		Sources: Rasmussen M, Due P, Holstein B. <i>Skolebørnsundersøgelsen 1998</i> [Health Behaviour in School-Aged Children – results for Denmark, 1998]. Institute of Public Health, University of Copenhagen and Danish Committee for Health Education.  National Institute of Public Health: Danish Health and Morbidity Survey 2000.  The National Board of Health is developing a monitoring programme for childhood diseases including a limited number of indicators on growth, development, health and well-being for children aged 0–15 years.

Mortality and morbidity among children	Self-rated health, acute illness and mental health and well-being		Sources: Danish Registry of Causes of Death.  National Patient Registry.  Danish Registry of Accidents.  National Institute of Public Health: Danish Health and Morbidity Survey 2000.  Denmark's surveys for Health Behaviour in School-Aged Children (HBSC).
<b>Young people (15–24 years)</b>			
High-risk behaviour			An overview of indicators is being developed.
Prevalence of use of controlled substances	Proportion using 1) cannabis and 2) narcotic substances within the past year	Among 16- to 24-year-olds, 25.8% of men and 15.0% of women had smoked cannabis with the past year.  Among 16- to 20-year-olds, 38% of the men and 28% of the women had tried one or more illegal substances, most often cannabis.	Sources: National Institute of Public Health: Danish Health and Morbidity Survey 2000.  Gert Allan Nielsen et al. <i>Unge livsstil og dagligdag – forbrug af tobak, alkohol og stoffer</i> [The lifestyles and daily lives of young people – consumption of tobacco, alcohol and controlled substances]. Danish Cancer Society and National Board of Health, 2002.
Proportion without upper secondary education			Source: pupil profiling model of the Ministry of Education.
Reported work-related disorders among young people			Source: surveillance based on the Registry of Accidents of the National Working Environment Authority.

Various measures of illness and mental health and well-being among young people	Self-rated health, acute illness and mental health and well-being		Sources: Rasmussen M, Due P, Holstein B. <i>Skolebørnsundersøgelsen 1998</i> [Health Behaviour in School-Aged Children – results for Denmark, 1998]. Institute of Public Health, University of Copenhagen and Danish Committee for Health Education.  National Institute of Public Health: Danish Health and Morbidity Survey 2000.
<b>Vulnerable and distressed adults</b>			
Alcohol abusers			Indicator being developed
Drug addicts			Indicator being developed
People with mental disorders			Indicator being developed
People of non-Danish ethnic origin			Indicator being developed
<b>Elderly people (= 65 years)</b>			
Healthy elderly people	Proportion with high health-related quality of life, good physical functioning and low morbidity		Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.
Physical functioning	Proportion with reduced physical functioning	The proportion with good physical functioning increased from 1987 to 2000, especially in relation to physical mobility.	Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.  Physical functioning is measured as the proportion who, without difficulty, can walk 400 metres, carry 5 kg, walk up and down stairs, read a normal newspaper text, listen to a conversation between several people and speak.
Social isolation	Proportion who are often alone even though they would prefer to be with other people	The proportion of socially isolated elderly people declined from 1987 to 2000.	Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.

Level of physical activity			Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.
<b>Chronically ill people</b>			
Very limiting chronic illness, in general and disease-specific	Proportion with very limiting chronic illness	Slight decline in the proportion with very limiting chronic illness: from 12.2% in 1994 to 11.5% in 2000.	Source: National Institute of Public Health: Danish Health and Morbidity Survey 2000.

## Settings

Indicator	Description	Trends	Sources and comments
<b>Child-care centres and schools</b>			
Schools with policies on smoking, alcohol, diet and exercise	Proportion covered	A total of 3% have formulated a policy on diet, but 43% have discussed policy on diet as a whole or for the canteen or snack bar within the past year.	Source: <i>Mad og måltider i grundskole og fritidsinstitutioner – hvordan ser det ud?</i> [Food and meals in primary and lower secondary schools and child-care centres – what is the situation?]. National Board of Health, 2000.
Environmental assessment of the educational environment	Proportion covered		
<b>Workplaces</b>			
Number of formal flex jobs (for people with reduced working capacity) and sheltered jobs			
Workplaces with policies on smoking, alcohol, diet and exercise	Number of workplaces		
Exposure to passive smoking at workplaces	Proportion of people in the labour market		
<b>The health care services</b>			
Policies on tobacco, diet and alcohol at hospitals	Proportion covered		
Participation in the Danish Network of Health Promoting Hospitals	Proportion participating		
<b>The public sector</b>			
Municipalities and counties with policies on alcohol, smoking, diet and exercise in general and targeting specific age groups	Proportion covered		