WORLD HEALTH ORGANIZATION

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Highlights on health in Finland

2004

Highlights on health

Highlights on health give an overview of a country's health status, describing recent data on mortality, morbidity and exposure to key risk factors along with trends over time. The reports link country findings to public health policy considerations developed by the WHO Regional Office for Europe and by other relevant agencies. *Highlights on health* are developed in collaboration with Member States and do not constitute a formal statistical publication.

Each report also compares a country, when possible, to a reference group. This report uses the 27 countries with very low child mortality and very low adult mortality, designated Eur-A by WHO, as the reference group. Eur-A comprises Andorra, Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. To make the comparisons as valid as possible, data, as a rule, are taken from one source to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data in the reports is the European health for all database of the WHO Regional Office for Europe. Other data and information are referenced accordingly.

Keywords

HEALTH STATUS
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Summary: findings and policy considerations

Life expectancy

People in Finland are living longer – by 2030, almost 1 out of 5 people in the country will be aged 65 or over. Women continue to have a higher life expectancy than men: 81.5 years and 74.8 years, respectively.

As the length of life increases, older people can respond with lifestyle changes that can increase healthy years of life. Correspondingly, health care systems need to shift towards more geriatric care, the prevention and management of chronic diseases and more formal long-term care. Since people are living longer, measures to improve health and prevent disease need to focus on people of working age.

What are the main risk factors for disability in old age and how can disability be prevented? (Health Evidence Network, 2003a)

Ageing and employment policies (OECD, 2004a)

Infant mortality

Finland's infant mortality rate remains among the lowest in the world. Neonatal mortality is among the lowest in Eur-A.

Antenatal care is one of the most important services in health care. Nevertheless, it can be expensive, and interventions may be excessive, unneeded and unproven. A simplified model of antenatal care, based on evidence of benefit, is available.

The WHO reproductive health library, version 6 (WHO, 2003e)

Managing newborn problems: a guide for doctors, nurses and midwives (WHO, 2003b)

What is the efficacy/effectiveness of antenatal care? (Health Evidence Network, 2003b)

Main causes of death

Noncommunicable conditions account for at least 80% of all deaths in Finland. Cardiovascular diseases (CVD) account for 41% of total deaths; cancer, for 22% and external causes (intentional and unintentional injuries), about 10%. Ischaemic heart disease is the single biggest killer in Finland. The largest consistent excess mortality in Finland, relative to Eur-A averages, is due to injuries.

Among both men and women 45 to 59 years old, rates of death due to digestive diseases have jumped between 1995 and 2002, upward by almost 20% among men and by 58% among women. Men die from prostate cancer at a rate that is about 20% higher than the Eur-A average.

Preventive care, delivered through a country's primary care system can improve all-cause mortality and premature mortality, particularly from CVD.

Towards a European strategy on noncommunicable diseases (WHO Regional Office for Europe, 2004h)

A strategy to prevent chronic disease in Europe: a focus on public health action: the CINDI vision (WHO Regional Office for Europe, 2004e)

What are the advantages and disadvantages of restructuring a health care system to be more focused on primary health care services? (Health Evidence Network, 2004a)

Government resolution on the Health 2015 public health programme (Ministry of Social Affairs and Health of Finland, 2001)

Excess weight and physical inactivity

In Finland, more than two thirds of men and more than half of women are overweight (body mass index (BMI) of 25.0–29.9), and one fifth of both men and women are obese (BMI of 30+). About 14% of 15-year-old boys are pre-obese and about 3% are obese. About 8% of 15-year-old girls are pre-obese and 1%, obese.

In 2003, a health survey in Finland found that 26% of men and 20% of women 15–64 years of age had physical exercise less than twice a week and/or for less than 30 minutes per session during leisure.

Better eating habits can prevent premature death from CVD, but people's chances for a healthy diet depend on what food is available and whether it is affordable. Food and nutrition policies need to cross sectors and be coordinated, so that non-health sectors give priority to public health. This also applies to the promotion of physical activity: policies to encourage active living over the life course need to be integrated across health and non-health sectors.

Body mass index and obesity among adults in Finland – trends and determinants (Lahti-Koski, 2001)

CINDI dietary guide (WHO Regional Office for Europe, 2000)

Diet, nutrition and the prevention of chronic diseases (WHO, 2003a)

Food and health in Europe: a new basis for action (Robertson et al., 2004)

The potential contribution of increased vegetable and fruit consumption to health gain in the European Union (Joffe & Robertson, 2001)

Tobacco

According to official statistics, people smoke fewer cigarettes on average in Finland than in other countries in Eur-A. Smoking among women in Finland has been rising in recent years, however, and since 1995, their deaths from lung cancer have risen.

To reduce consumption across the whole population, policy-makers need permanently to raise prices for tobacco through taxes, and cessation policies need to target vulnerable groups. Increasing adults' cessation of tobacco use is cost-effective for public health in the short and medium terms.

European Strategy for Tobacco Control (WHO Regional Office for Europe, 2002b)

Which are the most effective and cost-effective interventions for tobacco control? (Health Evidence Network, 2003c)

WHO European strategy for smoking cessation policy (WHO Regional Office for Europe, 2003)

WHO Framework Convention on Tobacco Control (WHO, 2003d) Tobacco control database [online database] (WHO Regional Office for Europe, 2004f)

Injury and mental health

The death rate in Finland from intentional and unintentional injuries is high compared with the average for Eur-A. Despite decreases over the past 10 years, suicide and self-inflicted injury account for about a third of the excess deaths. The highest rates of completed suicides in Finland affect both men and women aged 25–64 years.

Neuropsychiatric conditions have the highest burden of disease in the Finnish population owing to the associated disability in daily living.

Better recognition and monitoring of depressive disorders can lead to positive effects, including reduced suicide rates. Comprehensive treatment programmes directed at the addictive and depressive features in alcohol abuse have been shown to be effective.

Mental health in Europe: country reports from the WHO European network on mental health (WHO Regional Office for Europe, 2001a)

Mental health policy and practice across Europe: the future direction of mental health care: proposal for analytical study (Knapp et al., 2004)

Project Atlas: mapping mental health resources in the world (WHO, 2003c)

The world health report 2001: Mental health: new understanding, new hope (WHO, 2001)

Alcohol

The level of pure alcohol consumption in Finland is below the average for Eur-A but it is rising while the Eur-A trend is downward. Deaths from mental and behavioural disorders due to alcohol are 50% higher than the Eur-A average. Finland has a relatively high number of deaths due to chronic liver disease and cirrhosis; alcoholic liver cirrhosis makes up a high percentage of all deaths from cirrhosis.

Alcohol consumption varies among countries and between population groups within countries. The variation in drinking patterns affects the rates of alcohol-related problems and has implications for the choice of alcohol control policies. Measures that are generally effective in reducing alcohol consumption and the associated harm include pricing and taxation and restricting the availability of alcohol, opening hours for sales outlets and the legal drinking age. Most drink-driving countermeasures have been effective as well. International trade agreements and common markets have weakened the ability of national-level decision-makers to establish national alcohol policies. Most notable are the converging trends in alcohol taxation in several countries in the European Union.

What are the most effective and cost-effective interventions in alcohol control? (Health Evidence Network, 2004b)

Alcohol: no ordinary commodity. Research and public policy (Babor et al., 2003)

Alcohol control database [online database] (WHO Regional Office for Europe, 2004a)

Government resolution on strategies in alcohol policy (Ministry of Social Affairs and Health of Finland, 2004)

HIV/AIDS

In 2002, heterosexual contact caused the majority of newly diagnosed HIV infections in Finland. Two thirds of the most recent new infections involved people who were or whose partners were from other countries with generalized HIV epidemics.

Prevention, treatment and care programmes need to reach all people affected by HIV/AIDS, particularly those whose language, culture or immigrant status might limit their access to health services.

The HIV/AIDS epidemic in Europe and central Asia (WHO Regional Office for Europe, 2004d)

Access to care: privilege or right? Migration and HIV vulnerability in Europe (Broring et al., 2003)

AIDS: epidemic update December 2003 (UNAIDS, 2003)

National plan against poverty and social exclusion for 2003–2005 (Ministry of Social Affairs and Health of Finland, 2003)

Drug use and hepatitis C

In Finland, limited local testing at needle exchange locations in 2002 found that 30–52% of injecting drug users were infected with hepatitis C.

The key to effective prevention of hepatitis C is to reduce the number of people who start to inject drugs and to encourage harm reduction among young and new injectors. A high proportion of those with the most serious drug use and addiction problems are found in prisons. Coordination of efforts within and between countries is a vital component of effective drug policy in the WHO European Region.

Annual report 2003: the state of the drugs problem in the European Union and Norway (EMCDDA, 2003)

Declaration. Prison health as part of public health, Moscow, 24 October 2003 (HIPP, 2003)

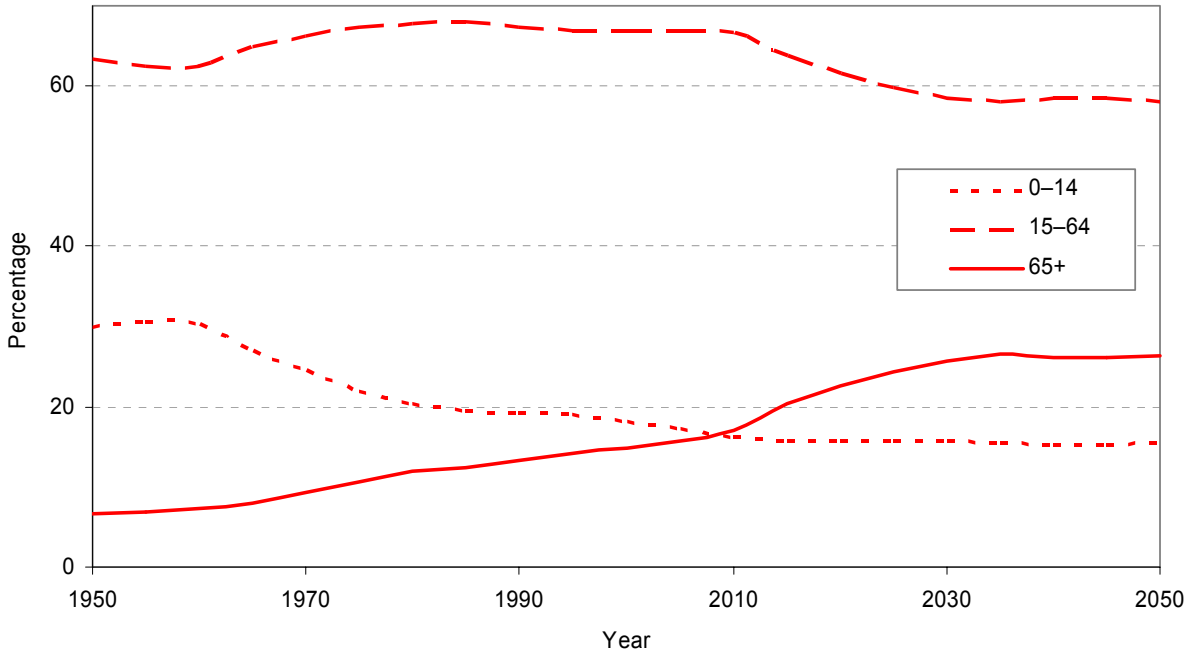
Selected demographic information

Population profile

Finland had a population of just over 5.2 million at the start of 2003. It has one of the lowest percentages of urban population in Eur-A.

The most striking demographic feature, observed in Finland and across Eur-A countries, is the increasing proportion of elderly people in the population. As the large birth cohorts of the late 1940s approach retirement age, the number of people aged 65 and over in Finland is expected to grow from about 15.5% of the population in 2003 (Council of Europe, 2003) to an estimated 19.4% in 2030 (Fig. 1, Annex 1).

Fig. 1. Percentage of the population aged 0–14, 15–64 and 65+ years, Finland, 1950 to 2050 (projected)



Source: United Nations (2002).

Finland's birth rate is currently about equivalent to the Eur-A average. Over the last 20 years, the rate has dropped by about 20%, a trend similar to that for Eur-A. Finland's positive rate of natural increase and of net migration has caused its population to grow (Table 1).

Table 1. Selected demographic indicators in Finland and Eur-A, 2002 or latest available year

Indicators	Finland	Eur-A		
	Value	Average	Minimum	Maximum
Population (in 1000s)[a]	5206.0	–	–	–
0–14 years (%)	17.8	–	–	–
15–64 years (%)	66.9	–	–	–
65+ years (%)	15.3	–	–	–
Urban population (%)[b, c]	59.0	79.5	49.2	100.0
Live births (per 1000)[d]	10.7	11.3	8.7	21.2
Natural population growth (per 1000)	1.2	1.1	–2.4	15.5 [b]
Net migration (per 1000)[d]	1.0	3.5	–9.6	17.3 [b]

[a] As of 1 January 2003.

[b] 2001.

[c] Including Andorra and Monaco.

[d] Including Andorra.

Sources: Council of Europe (2003); WHO Regional Office for Europe (2004c); Central Bureau of Statistics of Israel (2003) for data on Israel.

Vulnerable populations

Income

The evidence on determinants of health shows that people who are socioeconomically disadvantaged bear the greatest burden of disease. Among determinants, income is related to an accumulation of factors that affect mortality (Martikainen et al., 2001). For example, it influences and is influenced by education and employment.

Even in the richest Member States in the WHO European Region, wealth is not equitably distributed and pockets of relative poverty exist (WHO Regional Office for Europe, 2002a; WHO, 2002). The association between poverty and urban areas is especially important in Europe. As populations migrate and become more urban, there are increases in the number of urban poor whose housing, employment conditions and diet expose them to greater risk of illness and disease (WHO Regional Office for Europe, 2001b). The nature and impact of poverty can be unevenly distributed among poor people according to such factors as gender and age group (Ziglio et al., 2003).

According to the GINI index, Finland has a relatively low level of income inequality overall, with a better distribution of wealth than most Eur-A countries (UNDP, 2004). In the period 1990–2000, about 5% of Finland's population lived below the 50% median income level, compared with an average of almost 9% for 19 Eur-A countries for which estimates exist.

In 2002, overall unemployment was 9.1% in Finland, compared with an average of 6.5% for 25 of the Eur-A countries (UNSD, 2004). Unemployment among people in Finland aged 15–24 years in 2001 was dramatically higher than the average: 19.8% among young men and 20.2% among young women (UNECE, 2003). Over 80% of unemployed Finns had educational attainment of secondary education or less in 2001. Of the unemployed, 24% had been jobless for 12 months or more.

Social exclusion

Social exclusion has a broad impact on health. It refers to the relative position of an individual or a group in society as a whole. The processes that accompany and result in social exclusion – such as discrimination, stigmatization and hostility – prevent people from getting education or training and from gaining access to services and citizenship activities, making them more vulnerable to health risks and disease.

Examples of people outside the mainstream include members of ethnic or religious minorities; people who live in geographically disadvantaged areas, are unemployed or are elderly; and in some countries, indigenous peoples. People new to a country – such as refugees, immigrants or migrant

workers – may also be socially excluded. Table 2 gives the population figures for various vulnerable groups in Finland. Immigrants include nationals and foreigners from within and outside the European Region. Countries have different data sources and administrative definitions of immigrant status.

Table 2. Vulnerable populations in Finland

Population	1992	1995	1998	2001	2004 (estimate)
Immigrants	14 554	12 222	14 192	18 955	
Refugees	–	–	–	13 000	
Prison inmates (per 100 000 national population)	65	59	50	59	71

Sources: EUROSTAT (2004), UNDP (2003) and International Centre for Prison Studies (2004).

Table 2 also includes data about prison inmates, a particularly vulnerable population in that they are typically from minority groups and have lower socioeconomic status and less education than the general population. Incarceration can expose them to direct health hazards, particularly if prison populations outpace capacity. The resulting overcrowding causes and contributes to many health problems, most notably mental health conditions and communicable diseases. In fact, drugs and drug-related infectious diseases in prisons are causing major problems in all countries in the European Region, with the risks of transmission affecting not only inmates but also prison employees and contacts outside the institutions (EMCDDA, 2002).

As of April 2004, Finland reported a 107% occupancy level for its prisons, based on official capacity (International Centre for Prison Studies, 2004).

Burden of disease

The burden of disease can be viewed as the gap between current health status and an ideal situation in which everyone lives into old age free of disease and disability. Causing the gap are premature mortality, disability and certain risk factors that contribute to illness. The analysis that follows elaborates on the burden of disease in the population.

Life expectancy and healthy life expectancy

A person born in Finland in 2002 can expect to live 78.2 years on average: 81.5 years if female and 74.8 years if male, according to WHO (2003f) estimates. Women have higher life expectancy (LE) than men.

Over the past 20 years, according to estimates reported by Finland, people in Finland have gained about 4.6 years in life expectancy, with men showing a greater gain than women: 5.5 years and 3.8 years, respectively. While this represents an almost 8% gain in men's LE, compared with the 6.6% average gain for Eur-A men, Finnish men can still expect to die about 1–2 years earlier than their Eur-A counterparts. In contrast, women can expect to live about the same number of years in Finland as in other Eur-A countries (Fig. 2 and 3).

Fig. 2. Life expectancy at birth for males, Finland and Eur-A, 1980 to latest available year

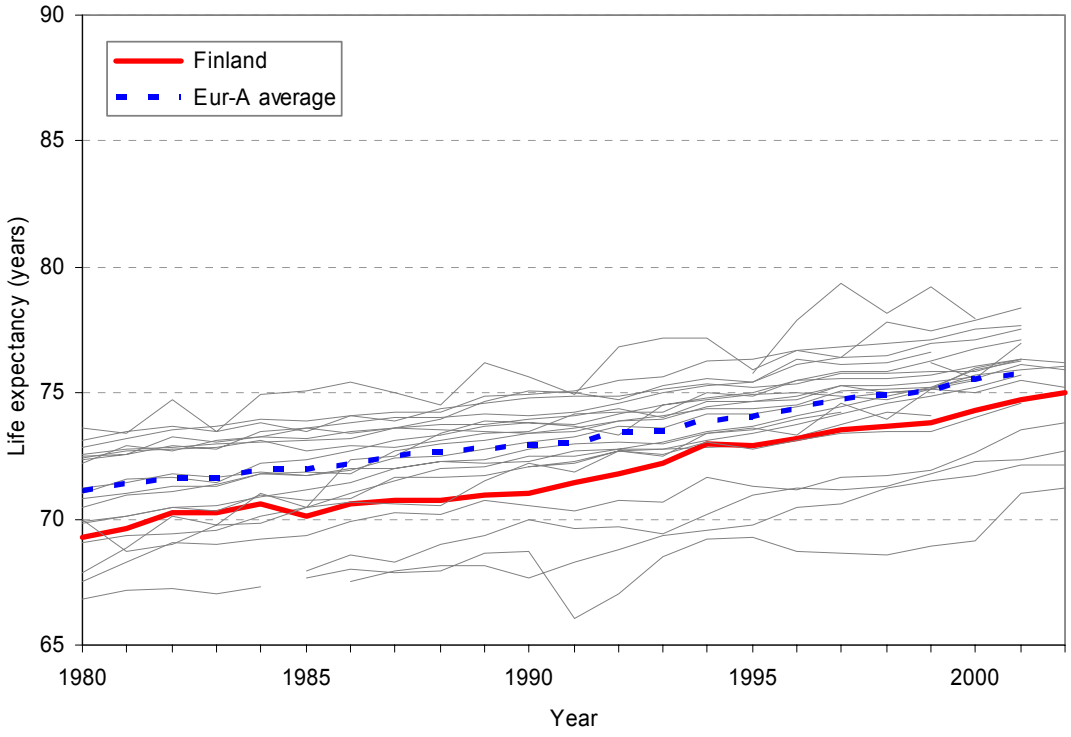
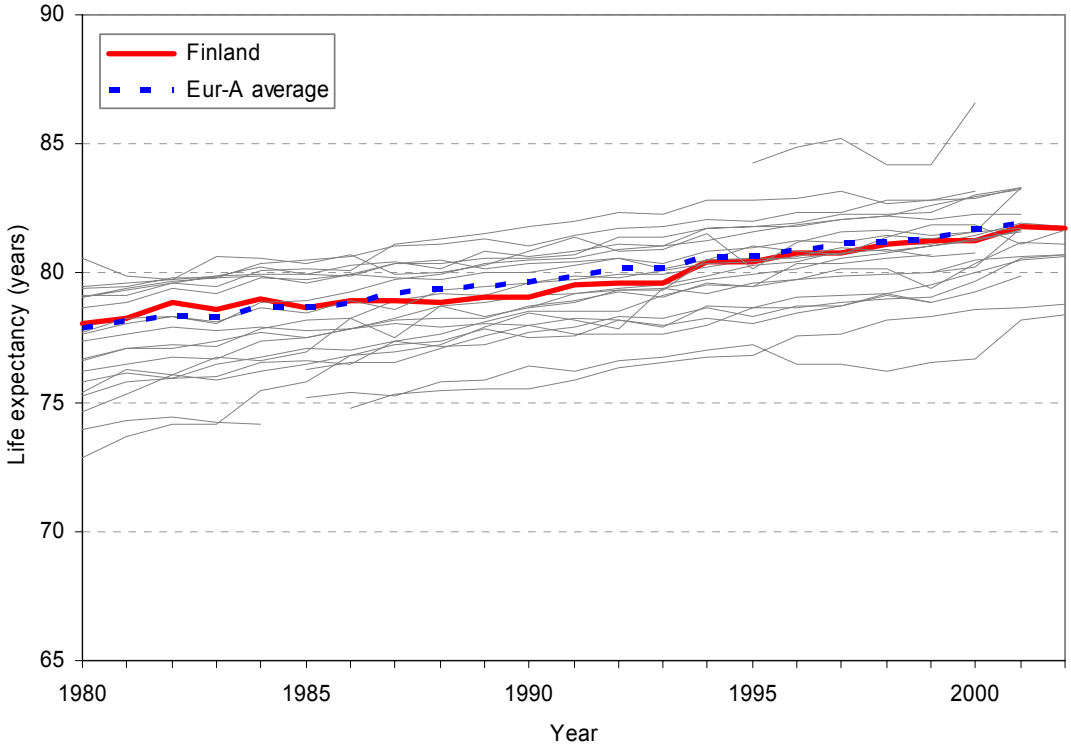
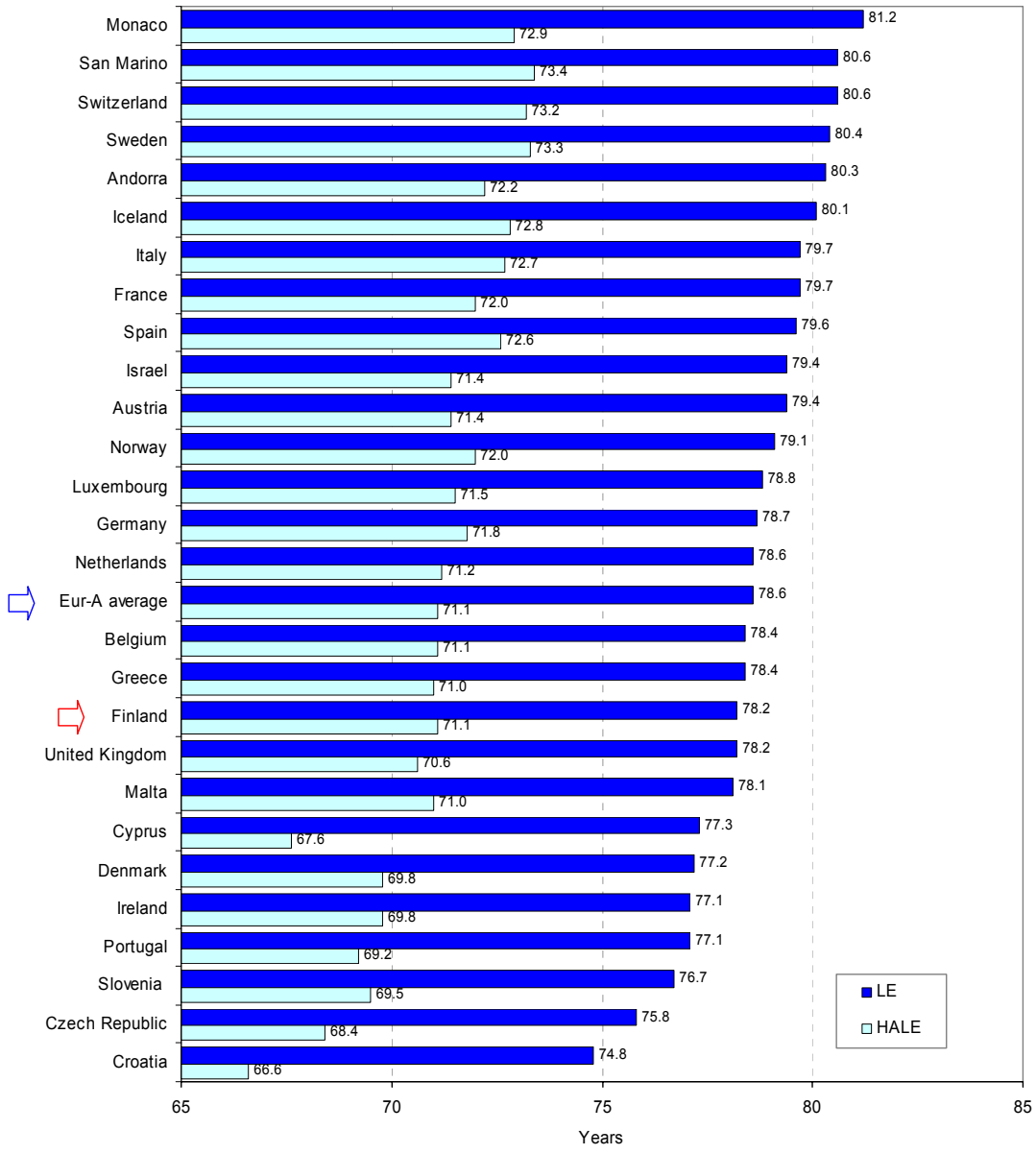


Fig. 3. Life expectancy at birth for females, Finland and Eur-A, 1980 to latest available year



In addition, WHO (2003f) estimates that, on average, people in Finland can expect to be healthy for about 90% of their lives and to lose 7.8 years to illness – the difference between LE and healthy life expectancy (HALE) (Fig. 4). Since women live longer than men and since the possibility of deteriorating health increases with age, women lose more healthy years of life (8.0 years) than men (6.1 years). Nevertheless, the longer LE for Finnish women gives them about 5 more years' healthy life than men.

Fig. 4. LE and HALE, Finland and Eur-A[a], 2002



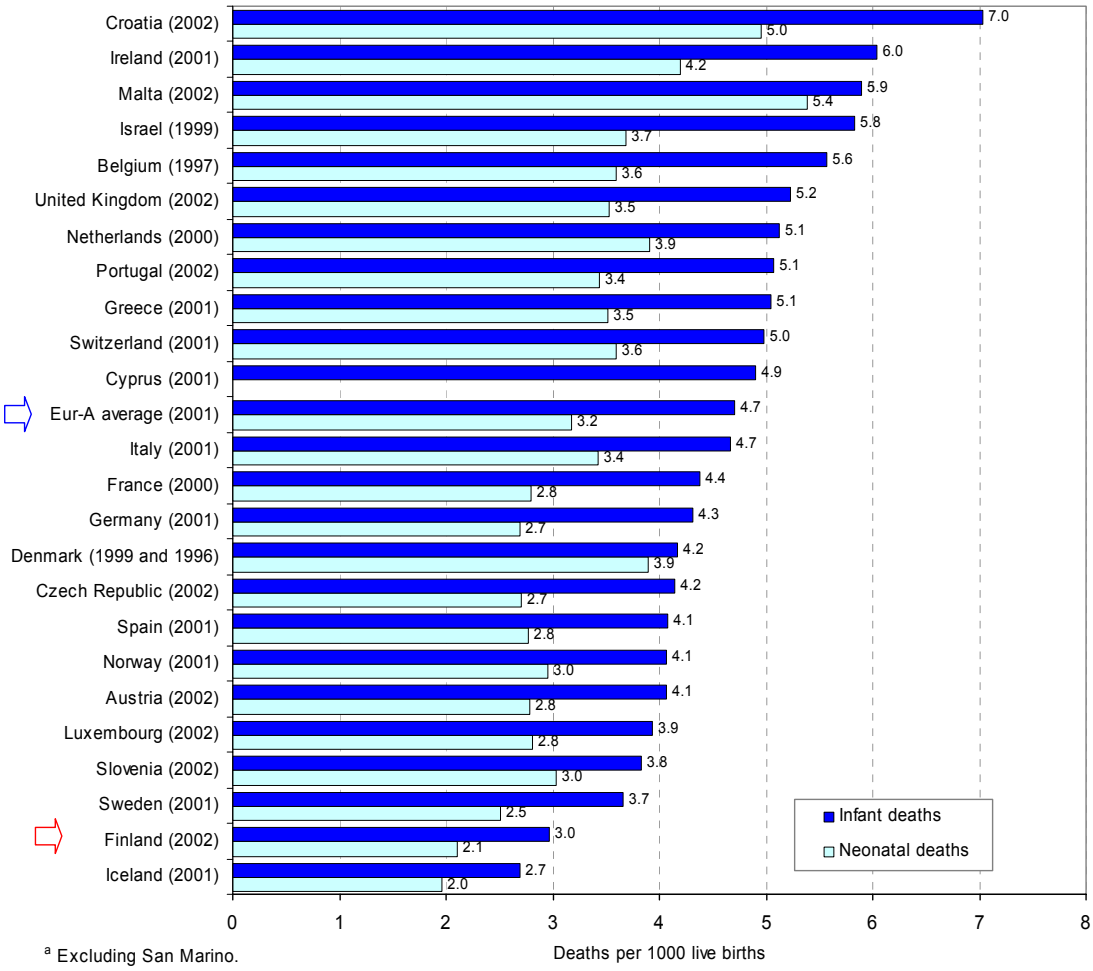
[a] Including Andorra and Monaco.
Source: WHO (2003f).

Mortality

Infant and neonatal mortality

Finland's infant mortality rate remains among the lowest in the world. In 2002, it was the second lowest among the Eur-A countries reporting, as was Finland's neonatal mortality (Fig. 5).

Fig. 5. Infant deaths and neonatal deaths per 1000 live births, Finland and Eur-A[a], latest available year

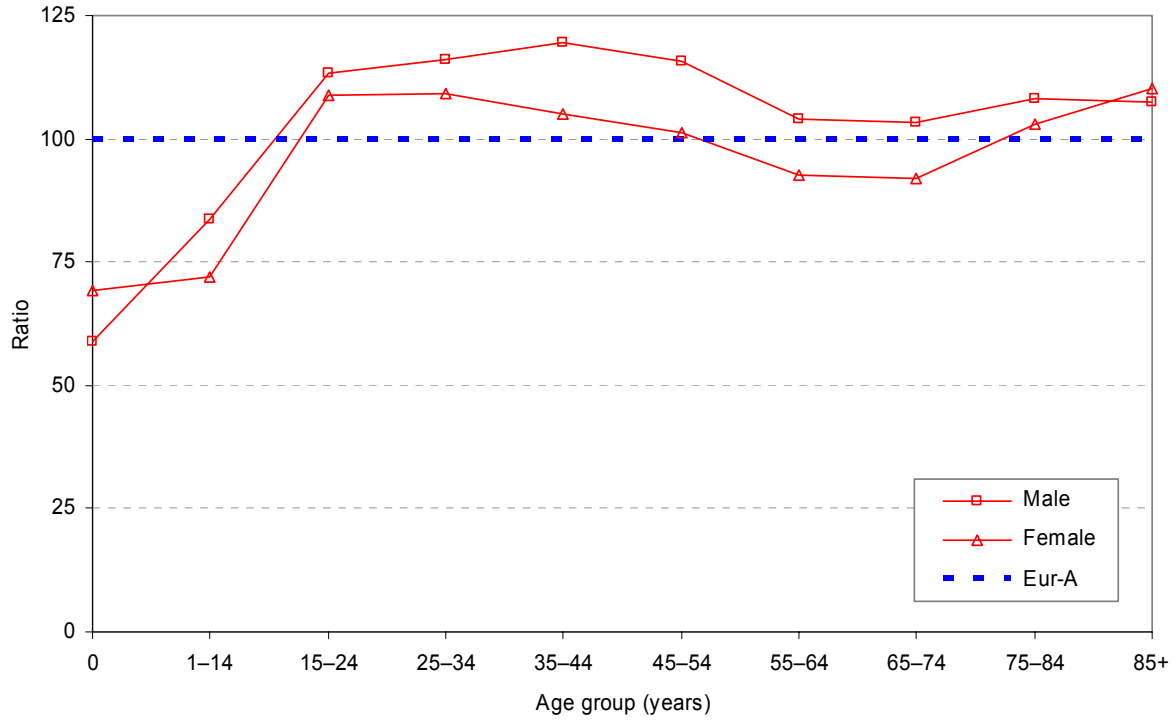


[a] Excluding San Marino.

Excess mortality

Finnish men aged 15–64 years have excess mortality relative to the Eur-A average for men, with the most significant difference, almost 25%, experienced by the group aged 35–44. In contrast, Finnish women in general have a lower mortality rate than the Eur-A average for women, with only a slight excess in the group aged 85 and over (Fig. 6).

Fig. 6. Total mortality by sex and age group in Finland
in comparison with Eur-A (Eur-A = 100), 2002

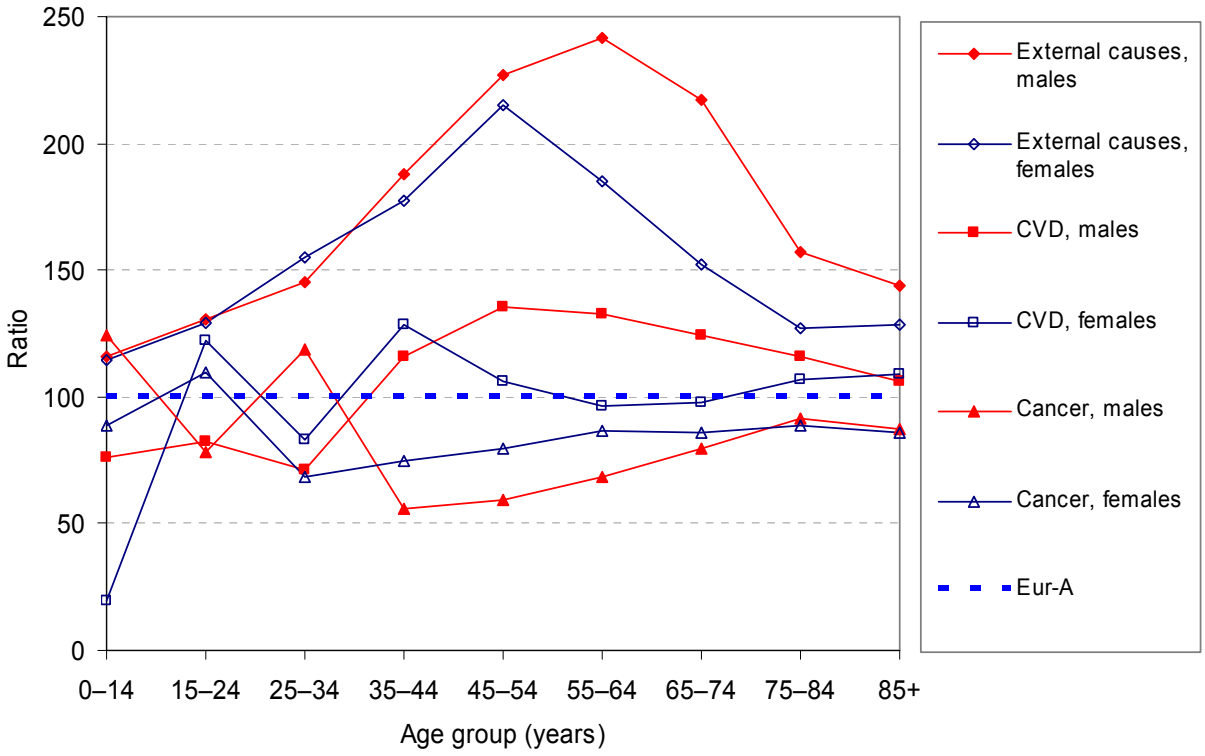


Main causes of death

In 2002, noncommunicable diseases accounted for at least 80% of all deaths in Finland; external causes for about 10%; and communicable diseases, for less than 1% (Annex 2). Among noncommunicable diseases, CVD account for almost 41% of all deaths and cancer, for almost 22%.

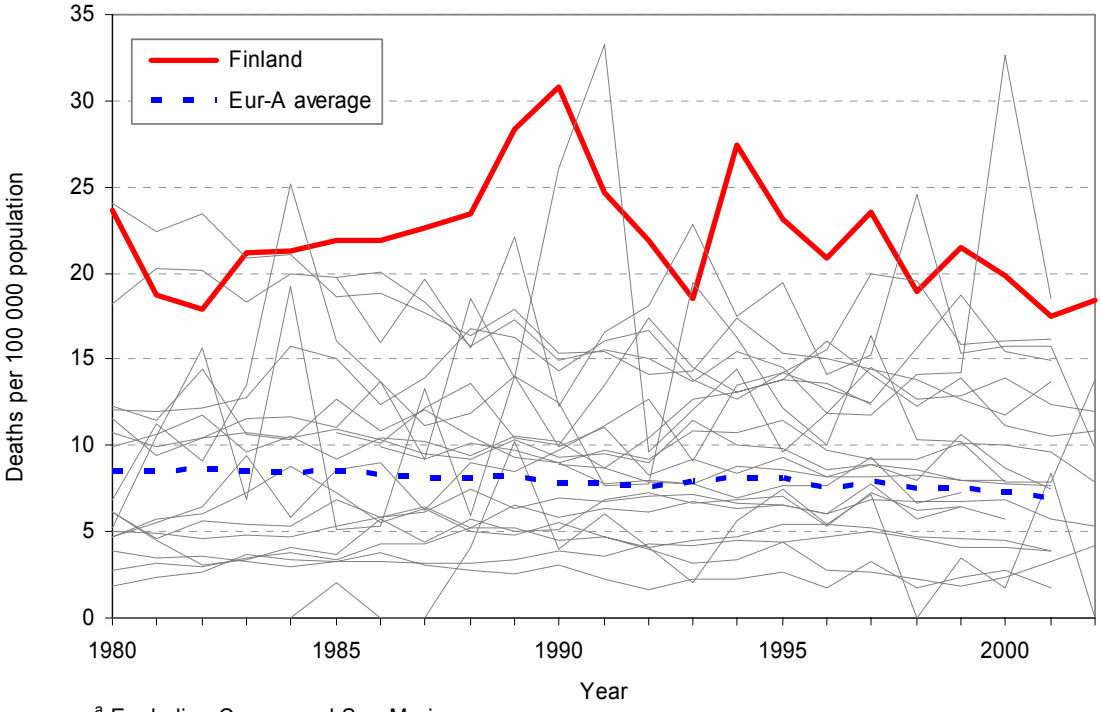
Compared with Eur-A averages, the largest excess mortality in Finland in 2002 was due to external causes (intentional and unintentional injury). Although the Finnish rates had dropped significantly since 1995, they were still dramatically higher than the Eur-A averages: 74% excess for males overall and 54% for females. Peak excesses were experienced by women aged 45–54 years (with over twice the Eur-A average rate for women in the age group), and by men 55 to 64 years of age (at almost 2.5 times the Eur-A average rate for men of the same age) (Fig. 7).

Fig. 7. Main causes of mortality by sex and age group in Finland in comparison with Eur-A (Eur-A = 100), 2002



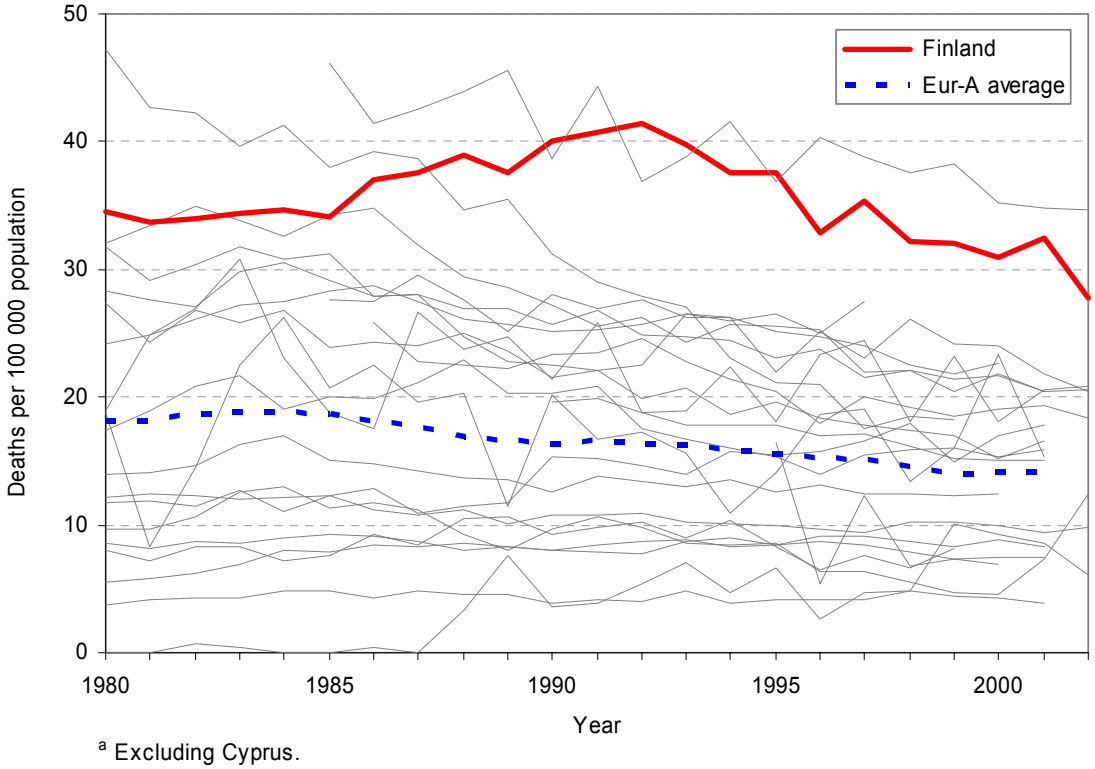
Unintentional injuries of all types, except those related to road traffic incidents, are the largest contributor (about 60%) to the difference in mortality from external causes between Finland and the Eur-A averages. Suicide and self-inflicted injury contribute about 33% to the excess (Fig. 8 and 9). Mortality from homicide is also high: three times the Eur-A average in 2001.

Fig. 8. Standardized death rates (SDR) for suicide and self-inflicted injury in people aged 15–24 years, both sexes, Finland and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus and San Marino.

Fig. 9. SDR for suicide and self-inflicted injury in people aged 25–64 years, both sexes, Finland and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

Mortality due specifically to unintentional alcohol poisoning in Finland is almost 30 times the Eur-A

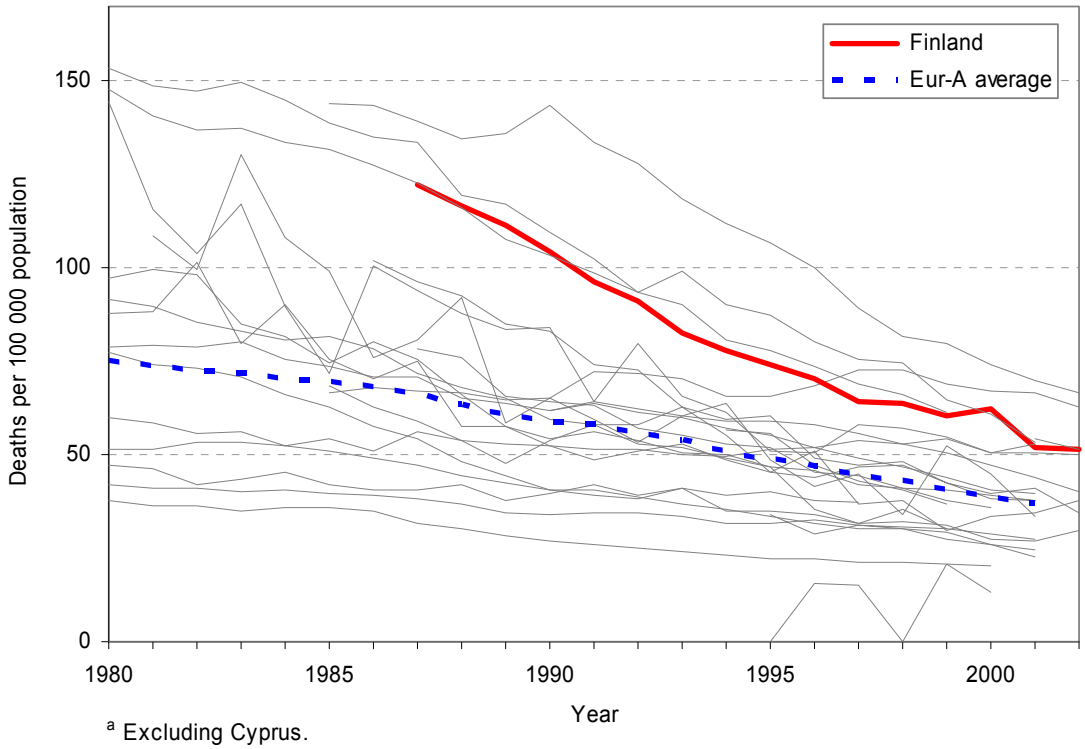
average.

While the rates of death from traffic incidents in Finland are among the lowest in Eur-A countries, they have increased for both males and females since 1995 (Annex 3).

In 2001, the rates of death from CVD in Finland among people 30–74 years of age exceeded the Eur-A average by 20–25%. Finnish men aged 25–64 had the third highest rate of death from CVD in Eur-A; Finnish women of the same age group were below the Eur-A average for women (Annex 3).

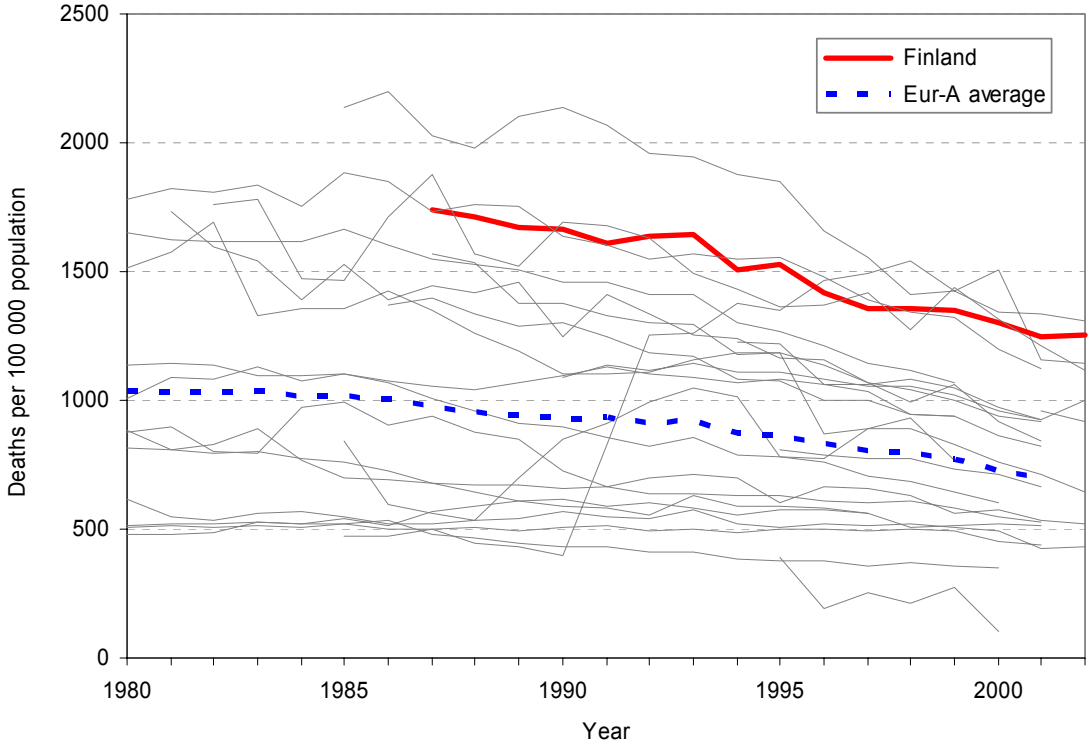
Within the CVD category, ischaemic heart disease continues to be the single biggest killer among Finns, even though mortality has declined by 46% over the past 30 years (Fig. 10 and 11). Ischaemic heart disease accounts for about 60% of all CVD deaths in Finland and about 40% in Eur-A countries on average. In 2001, Finland had the second highest mortality rate due to ischaemic heart disease in Eur-A affecting both men and women. The rate begins to climb among Finns aged 45–59 years, at 1.3 times the Eur-A average, to 1.8 times the average for those 75 years and older (Annex 3).

Fig. 10. SDR for ischaemic heart disease in people aged 25–64 years, both sexes, Finland and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

Fig. 11. SDR for ischaemic heart disease in people aged 65+ years, both sexes, Finland and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

Finland's total mortality from cancer has typically been lower than the Eur-A average: about 17% lower in 2001. The rate among males in Finland was about 1.6 times the rate among females.

Mortality due to tracheal, bronchial and lung cancers for the whole population is about 30% lower in Finland than in Eur-A, but again, the rate among males in Finland is more than four times the rate among females. Mortality from these types of cancer has declined among men in Eur-A countries since 1995 while increasing among women; in Finland, the increase has been 16% among women (Annex 3).

Among women, death rates due to cervical and breast cancer appear to be steady or falling slightly and were lower than Eur-A averages by about 30% and 15% respectively in 2001.

Finnish men die from prostate cancer at a rate that is about 20% higher than the Eur-A average. The rates in the Nordic countries seem to be generally higher than in the rest of Eur-A.

Overall mortality caused by digestive diseases has remained fairly constant in Finland from 1995 to 2002, whereas the Eur-A trend declined. Among both men and women 45–59 years old, rates in Finland jumped in this period: upward among men by almost 20% and among women, by 58% (Annex 3).

Among Finns, the death rate for mental disorders and diseases of the nervous system and sense organs was more than three times the Eur-A average in 2001, the highest in Eur-A countries. Within this disease category, mortality due to the use or abuse of alcohol exceeds the Eur-A average by about 50%.

Total mortality in Finland from infectious and parasitic diseases is typically less than in Eur-A countries on average. With tuberculosis (TB) however, although the death rate has fallen dramatically in Finland over the last 20 years, it has consistently remained higher than the Eur-A average and higher than the rates in neighbouring Nordic countries. The deaths involve predominantly older men who were exposed to TB in the 1940s and 1950s. Their deteriorating physical state, sometimes further compromised by alcohol problems, has raised the TB mortality rate in Finland to almost 1.7 times the Eur-A average.

Disability-adjusted life-years

The disability-adjusted life-year (DALY) is a summary measure that combines the impact of illness, disability and mortality on population health. Table 3 lists the top 10 conditions affecting males and females in Finland in terms of DALYs.

Table 3. Ten leading disability groups as percentages of total DALYs for both sexes in Finland

Rank	Males		Females	
	Disability groups	Total DALYs (%)	Disability groups	Total DALYs (%)
1	Neuropsychiatric conditions	24.1	Neuropsychiatric conditions	33.8
2	Cardiovascular diseases	20.7	Cardiovascular diseases	15.4
3	Unintentional injuries	12.0	Malignant neoplasms	14.0
4	Malignant neoplasms	11.9	Musculoskeletal diseases	5.5
5	Intentional injuries	6.3	Unintentional injuries	5.4
6	Digestive diseases	4.8	Sense organ diseases	5.2
7	Respiratory diseases	4.6	Digestive diseases	4.4
8	Sense organ diseases	4.0	Respiratory diseases	3.7
9	Musculoskeletal diseases	3.1	Intentional injuries	2.3
10	Respiratory infections	1.6	Respiratory infections	1.6

Source: Background data from WHO (2003f).

Neuropsychiatric conditions have the highest burden of disease among Finnish people. Because mortality from these conditions is minor in comparison to that from other diseases, disability in daily living comprises the bulk of their burden on the population's health.

Main risk factors

Table 4 presents the top 10 risks to health in developed countries in terms of DALYs. As with the conditions in Table 3, risk factors are estimated to contribute differently to the burden of illness and death in a population. The degree to which the Finnish population is exposed to five of these risks is described below.

Table 4. Ten leading selected risk factors as causes of disease burden measured in DALYs in developed countries

Risk factors	Total DALYs (%)
Tobacco	12.2
Blood pressure	10.9
Alcohol	9.2
Cholesterol	7.6
Overweight	7.4
Low fruit and vegetable intake	3.9
Physical inactivity	3.3
Illicit drugs	1.8
Unsafe sex	0.8
Iron deficiency	0.7

Source: WHO (2002).

Tobacco

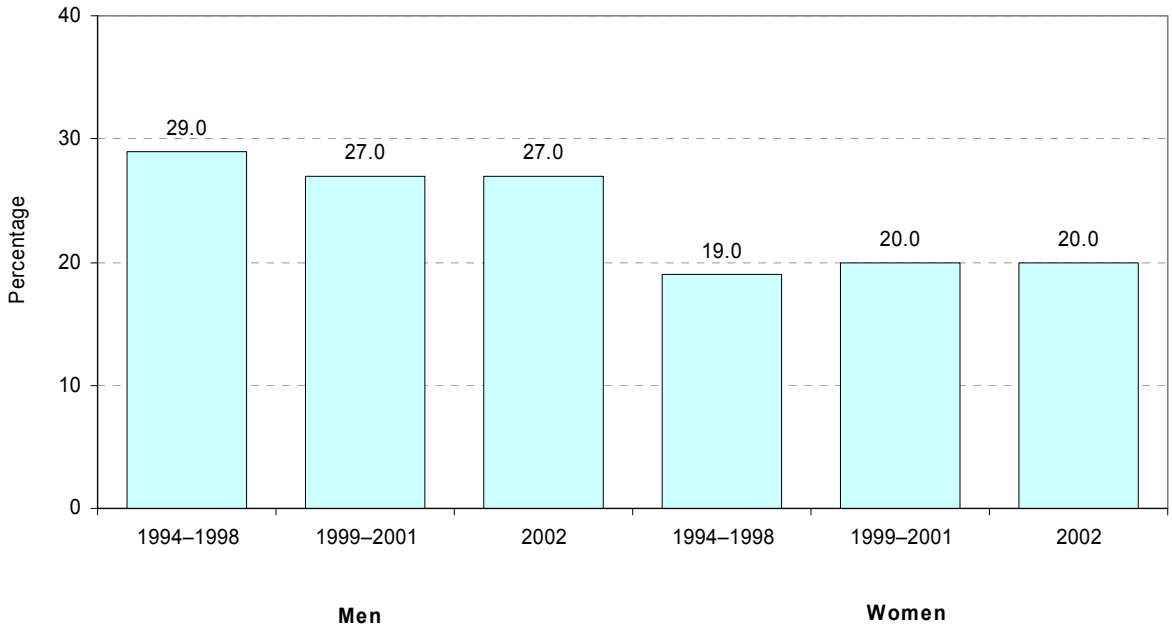
The European Region has only 15% of the world's population but nearly 33% of the worldwide burden of

tobacco-related diseases (WHO Regional Office for Europe, 2004g). The annual number of deaths in the Region attributable to the consumption of tobacco products was recently estimated to be 1.2 million, and about 40% occur in Eur-A countries (WHO Regional Office for Europe, 2002a). About half the deaths affect people in middle age. Typically, the more affluent are the first both to begin smoking and to stop. As they quit, smokers increasingly comprise people with less education and lower income (Bostock, 2003).

In 2000, Finns consumed about 43% fewer cigarettes per person than the Eur-A average, according to official statistics for production, import and export. This does not include consumption of additional cigarettes available unofficially, for example, through smuggling across borders and bootlegging.

From the mid-1990s, when consumption was lowest, until 2002, smoking increased among women and declined among men in Finland (Fig. 12). Among young people, the most recent national surveys in 2002 and 2003 showed a decrease in smoking among 14- and 16-year-olds (Rimpelä et al., 2003).

Fig. 12. Smoking prevalence among adults in Finland



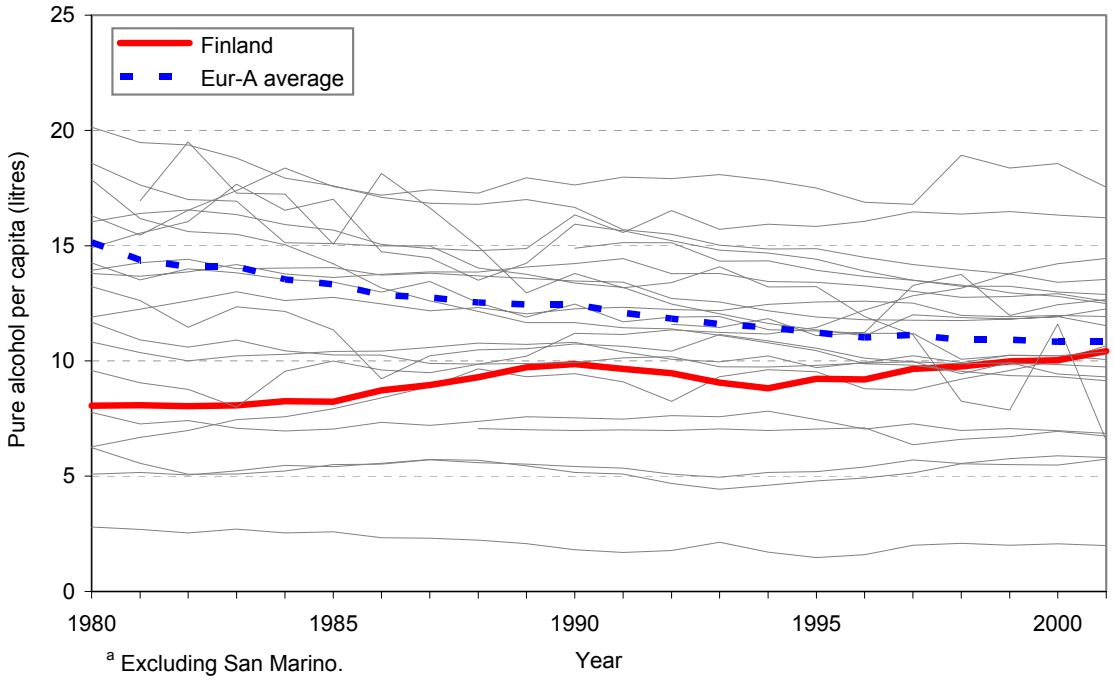
Source: WHO Regional Office for Europe (2004f).

Alcohol

Two major public health issues are related to alcohol consumption: regular drinking of more than small amounts and harmful patterns such as binge drinking (when a person consumes a bottle of wine or equivalent on one occasion; or having five or more "standard" drinks in a row). Both practices cause or aggravate health problems and increase the risks of injury to the drinker and others (European Commission, 2003).

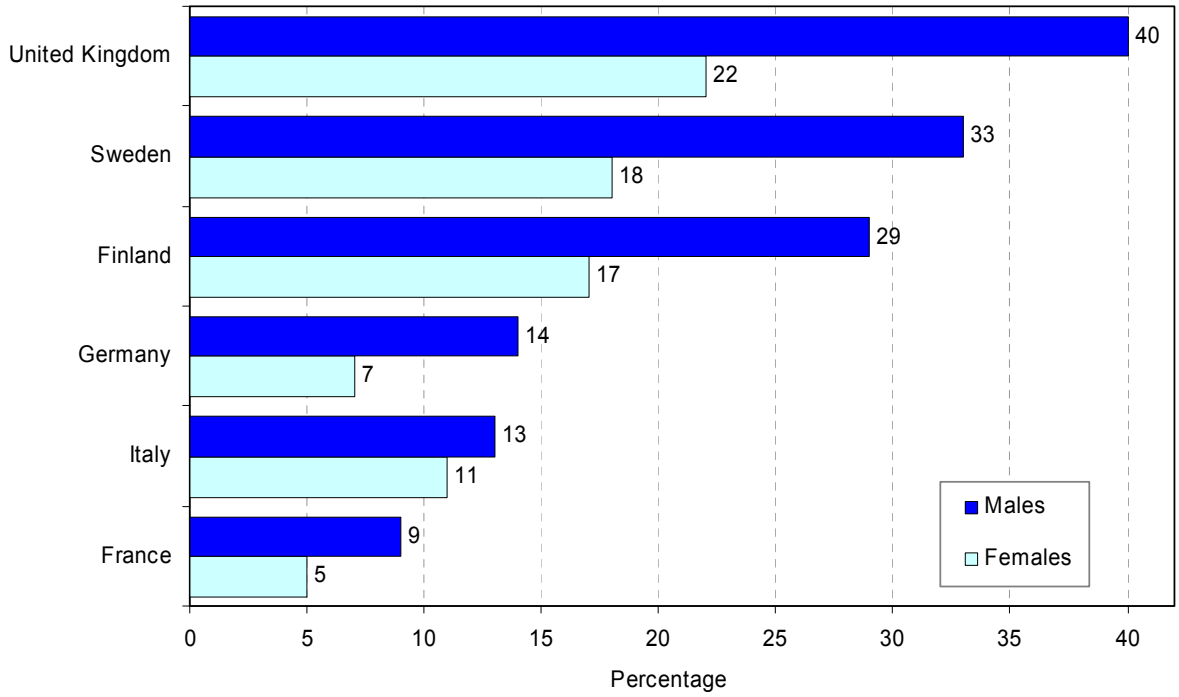
In 2002, pure alcohol consumption levels in Finland were about 10% less than the Eur-A average according to official statistics on local production, sales, imports and exports (Fig. 13). This does not include unrecorded consumption. Finland's consumption trend is upward, however, while the Eur-A average is moving downward. Further, Finns have harmful drinking patterns. Fig. 14 shows that, during a sample period of 12 months, binge drinking comprised almost 30% of drinking occasions for men and 17% for women.

Fig. 13. Alcohol consumption in the group aged 15+ years, Finland and Eur-A[a], 1980 to latest available year



[a] Excluding San Marino.

Fig. 14. Binge drinking as a percentage of all drinking occasions in the past 12 months, selected countries in Eur-A, 2000

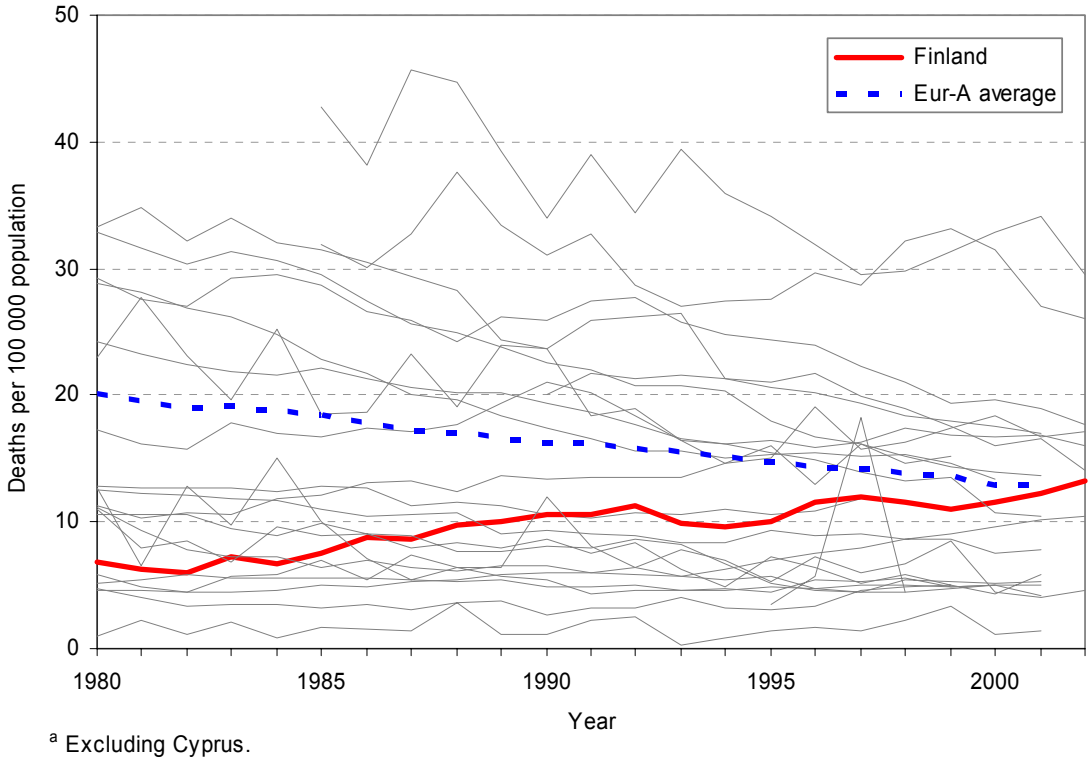


Source: Hemström et al. (2002).

Mortality from liver cirrhosis is the classic indicator of harm from chronic excessive drinking. As with alcohol consumption, Finland has an increasing trend in deaths from chronic liver disease and cirrhosis,

while the Eur-A trend is downward (Fig. 15).

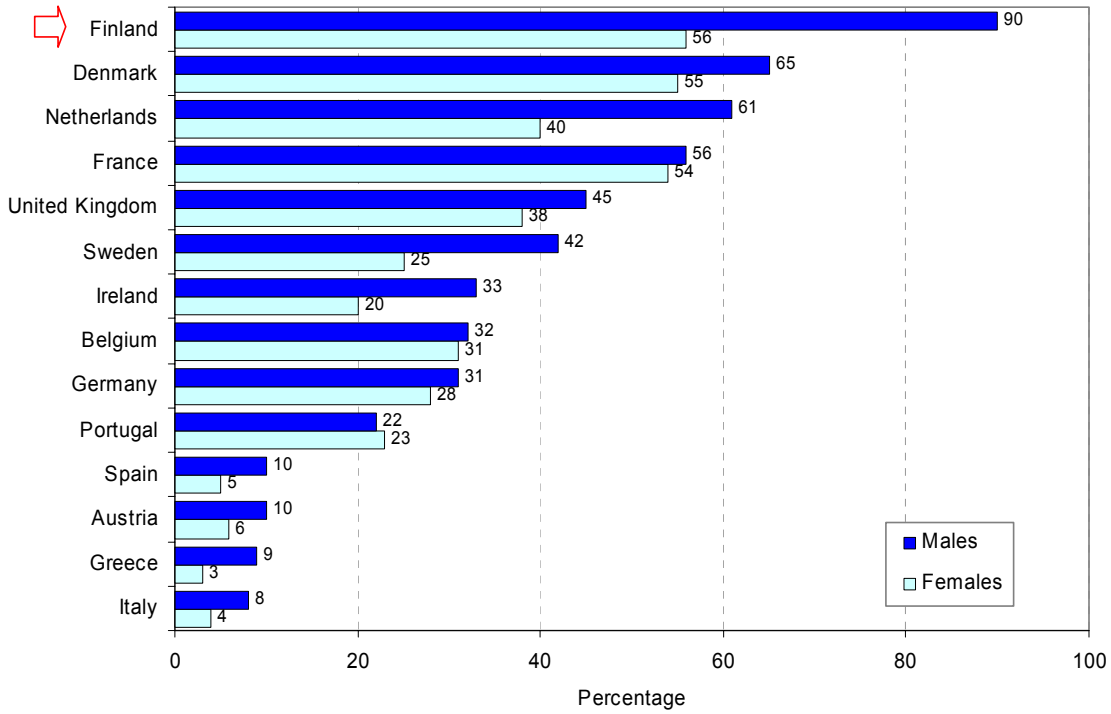
Fig. 15. SDR for chronic liver disease and cirrhosis, all ages, both sexes, Finland and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

Mortality due to cirrhosis explicitly caused by alcohol is another indicator of harm from alcohol, but variations in the coding of deaths classified as alcoholic cirrhosis make cross-country comparisons unreliable. Fig. 16 is therefore descriptive, showing where alcohol was the major risk factor in deaths due to cirrhosis in a particular country. For Finland in the period 1987–1995, alcohol accounted for 90% of all deaths from liver cirrhosis among men and 56% among women (Hemström et al., 2002).

Fig. 16. Mortality from alcoholic liver cirrhosis as a percentage of total mortality from liver cirrhosis, selected countries in Eur-A, averages for 1987–1995



Note: Data for Germany refer to the territory of the Federal Republic of Germany as up to 3 October 1990.
Source: Hemström et al. (2002).

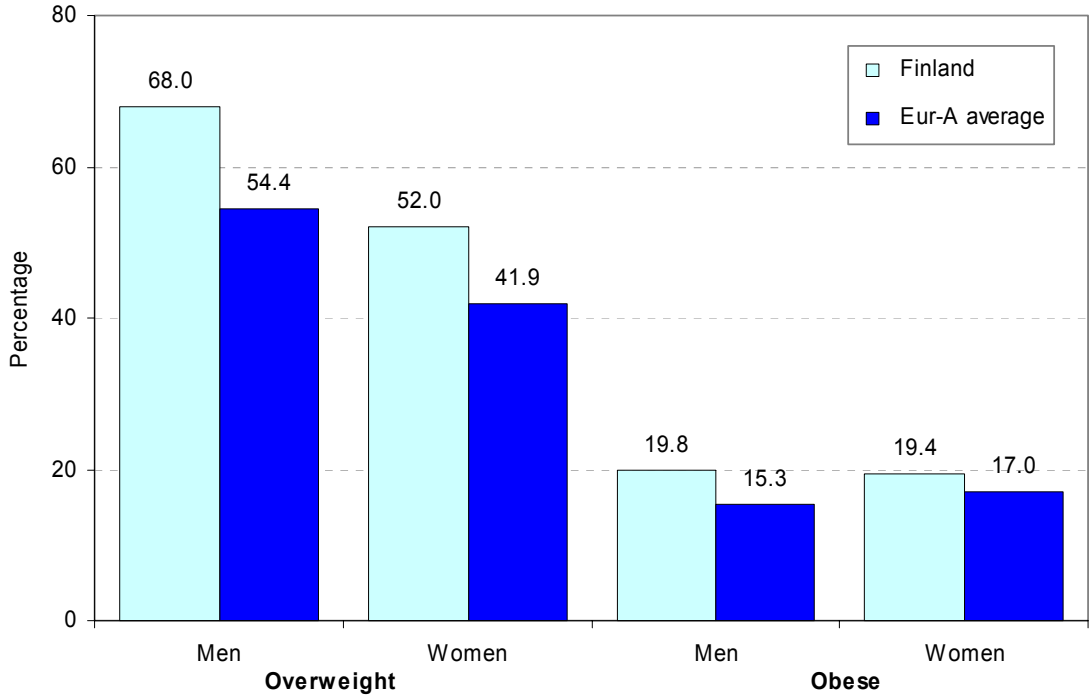
Excess weight

Studies have shown that excess weight contributes to CVD and cancer. In the 15 countries that comprised the European Union before May 2004, research suggests that the condition is responsible for 5% of all cancer cases (3% among men and 6% among women) and overall, almost 300 000 deaths annually (Banegas, 2002; Bergstrom et al., 2001). For children and adolescents, the main problem associated with excess weight, in particular, obesity, is its persistence into adult life and its association with the risk of diabetes and CVD (Stark et al., 1981).

According to the recommendations for body mass index (BMI), slightly over 68% of men in Finland and just over 52% of women are overweight (BMI of 25.0–29.9). About 20% of men and slightly less than 20% of women are obese (BMI of 30+) (Robertson et al., 2004) (Fig. 17).

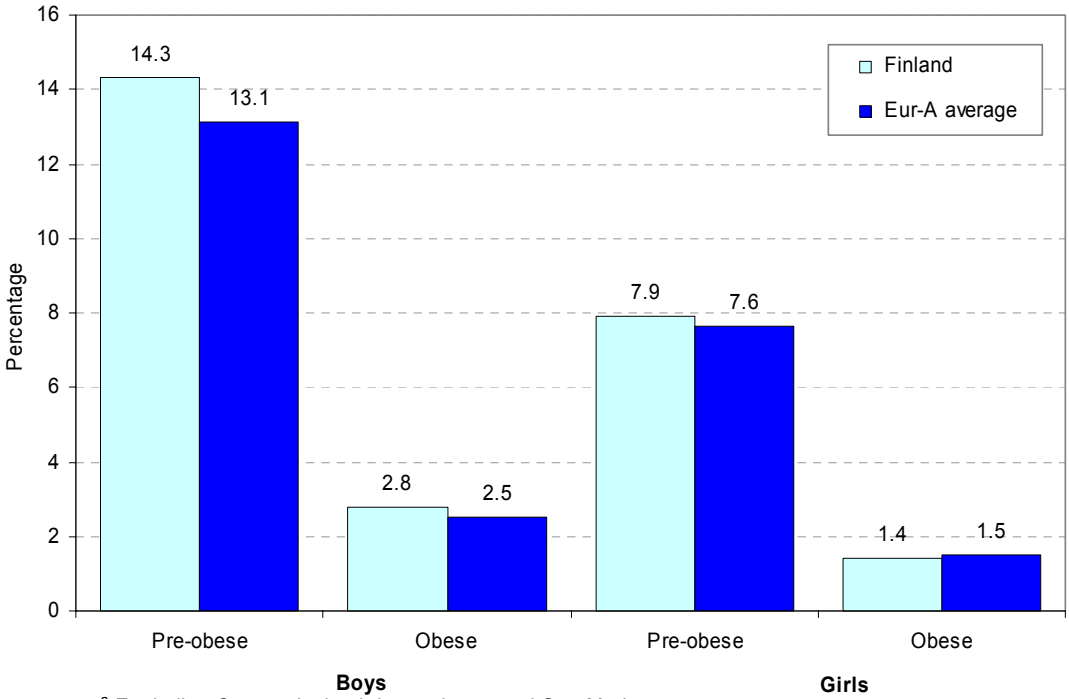
According to self-reported data on height and weight collected in schools, adjusted to correspond to adult BMI, 14% of boys 15 years of age are pre-obese and 2% are obese; 8% of girls of the same age are pre-obese and 1% are obese (Fig. 18).

Fig. 17. Overweight and obese adults, Finland and Eur-A[a] average



[a] Excluding Austria, Croatia, Cyprus, Iceland, Ireland, Luxembourg, San Marino and Slovenia.
Sources: Robertson et al. (2004), the Danish Nutrition Council (2003) for data on Denmark and Israeli Center for Disease Control (2003) for data on Israel.

Fig. 18. Pre-obese and obese 15-year-olds by sex, Finland and Eur-A[a] average



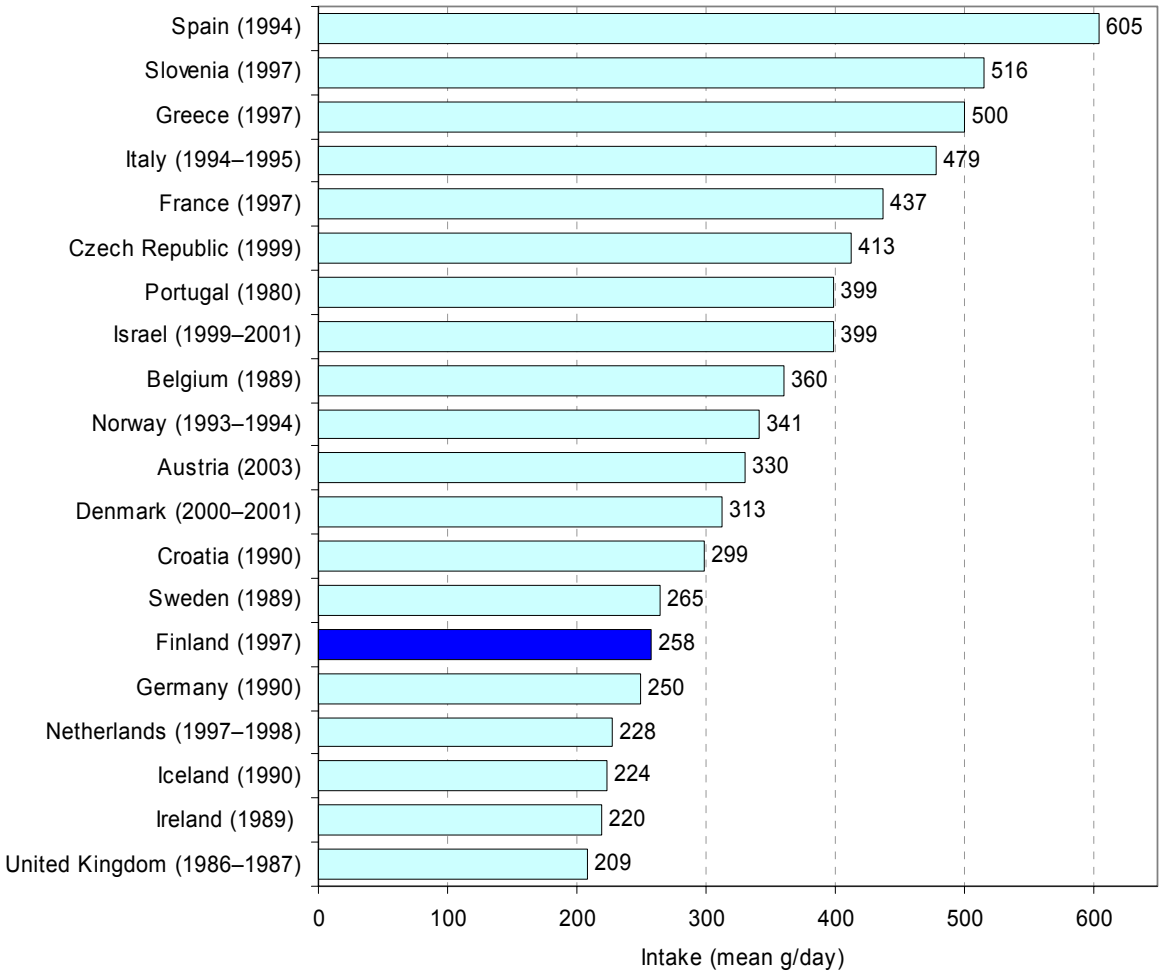
[a] Excluding Cyprus, Iceland, Luxembourg and San Marino.
Sources: Mulvihill et al. (2004) and the Danish Nutrition Council (2003) for data on Denmark.

Intake of fruits and vegetables

Both CVD and cancer have substantial dietary bases. Conservative estimates suggest that better eating habits could prevent about a third of CVD cases and a third of all cancer deaths worldwide (Robertson et al., 2004). Contributing risk factors are high blood pressure and serum cholesterol, overweight and obesity, and low intake of fruits and vegetables. For the large proportion of the population that does not smoke, diet is one of the most important modifiable determinants of cancer risk.

Low fruit and vegetable intake is estimated to cause around 18% of gastrointestinal cancer, about 28% of ischaemic heart disease and 18% of stroke in the European Region. WHO recommends an intake of more than 400 g fruits and vegetables per person per day. In 1997, a survey applying a one-day recall method found the average intake in Finland to be 258 g per day (Fig. 19). Mean consumption, however, is a poor measure of the intake distribution within a population. Data for the countries comprising the European Union before May 2004 show that people with higher incomes typically eat more fruits and vegetables than those with lower incomes (Joffe & Robertson, 2001).

Fig. 19. Vegetable and fruit intake in selected countries in Eur-A, latest available year



Sources: WHO Regional Office for Europe (2004b), Robertson et al. (2004) for data on Germany, Greece, Ireland and Spain, IFEW (2003) for data on Austria, Danish Institute of Food and Veterinary Research (2004) for data on Denmark and Israeli Center for Disease Control (2003) for data on Israel.

Physical inactivity

WHO and other international and national agencies encourage at least 30 minutes of physical activity each day, defined as any body movement that results in energy expenditure. Promoting physical activity is probably one of public health's most beneficial interventions, reducing the risk of several diseases and conditions, including CVD, non-insulin-dependent diabetes and obesity, and contributing to physical coordination, strength and mental well-being. It comprises more than sports – it is a cornerstone of a

healthy lifestyle, integrated into the routines of everyday life. In Europe, more than 30% of adults do not meet the WHO recommendation for physical activity of 30 minutes daily (Racioppi et al., 2002).

A regular health survey in Finland in 2003, involving both urban and rural populations, found that 26% of men and 20% of women 15–64 years of age had physical exercise less than twice a week and/or for less than 30 minutes during leisure (WHO, 2004a).

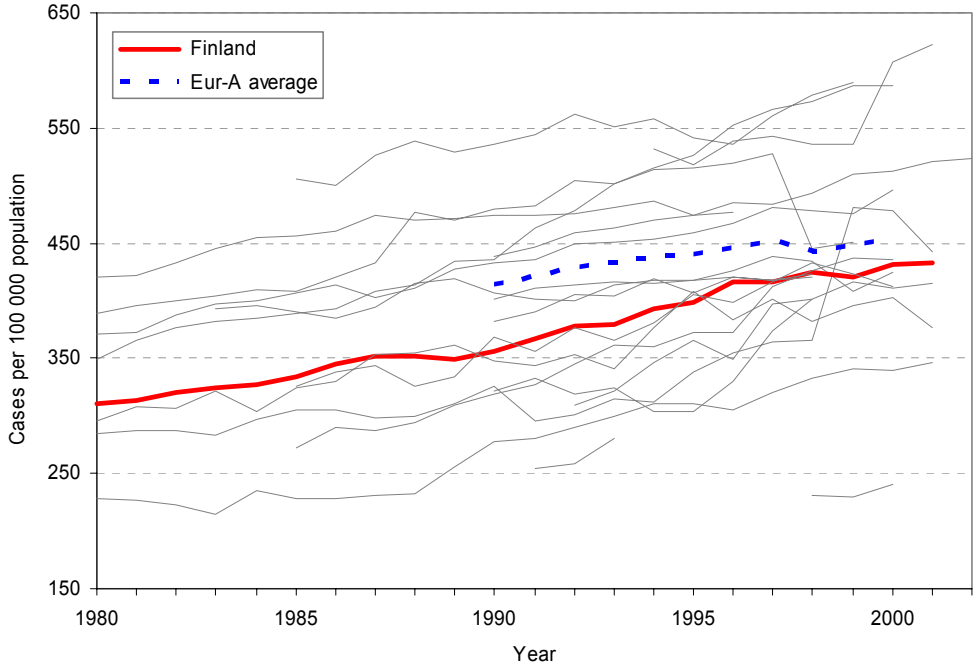
Selected causes of illness

Cancer

Cancer accounts for almost 22% of deaths in Finland. The combination of death and illness due to cancer, represented as DALYs (Table 3), accounts for 11% of the disease burden among Finnish men and 14% among women. Together the indicators show that the burden of cancer to the population is mainly attributable to death, rather than long-term illness.

From 1995 to 2001, cancer incidence increased by about 8.5% in Finland. For the period 1990–2000, for which average Eur-A incidence rates can be calculated, incidence rose 19% in Finland but about 4% in Eur-A (Fig. 20).

Fig. 20. Cancer incidence in Finland and Eur-A[a], 1980 to latest available year

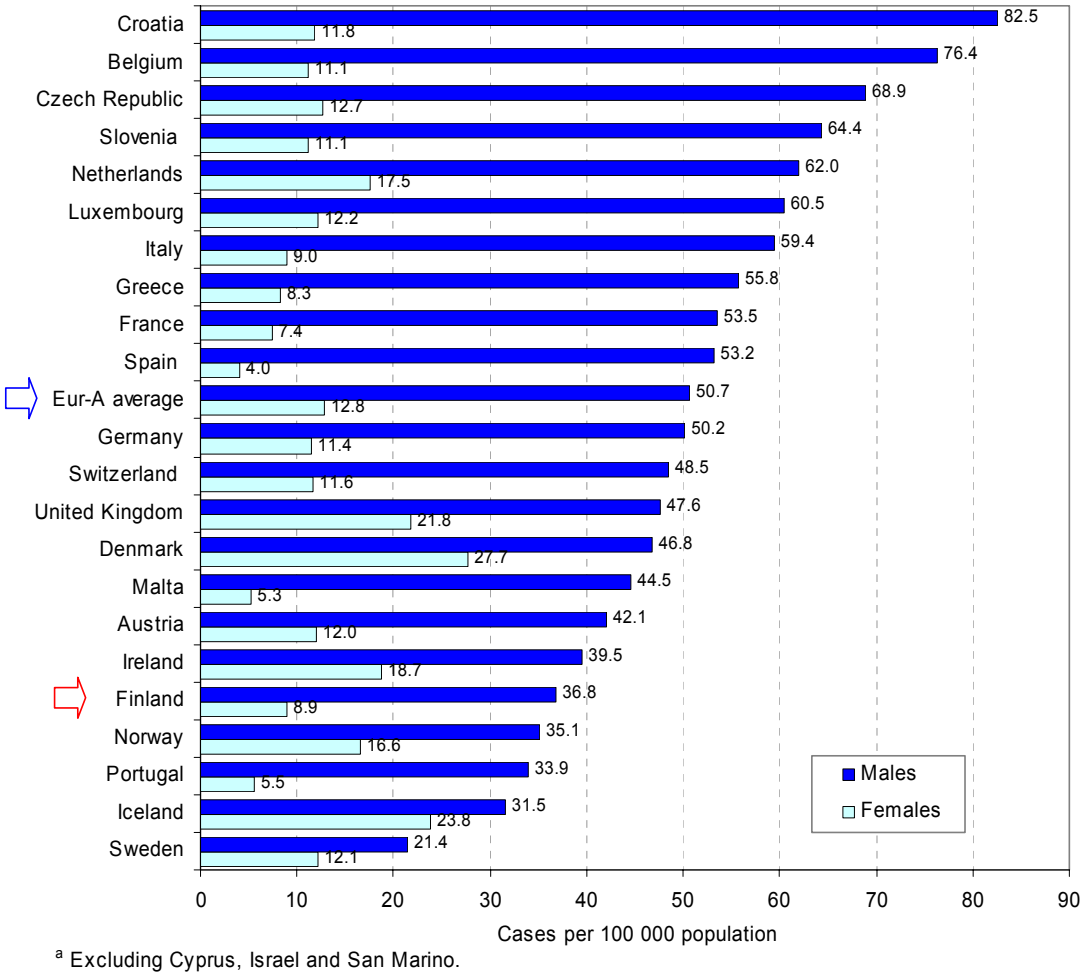


[a] Excluding Greece, San Marino, Spain and Switzerland.

Lung cancer is the most common cancer in the Region and the world. The most important risk factor is tobacco (Tyczynski et al., 2002).

In 2000, the estimated lung cancer incidence among Finnish men and women was about 70% of the average estimates for men and women in 22 of the Eur-A countries with data (Fig. 21).

Fig. 21. Estimated lung cancer incidence in Finland and Eur-A[a], 2000



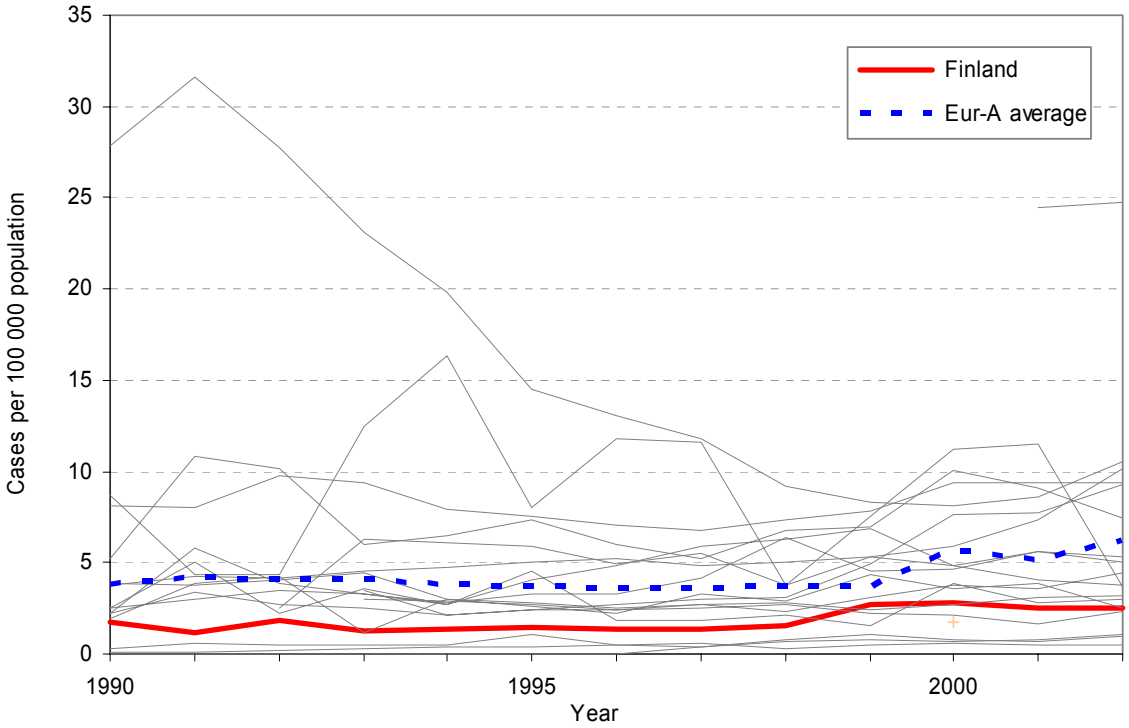
[a] Excluding Cyprus, Israel and San Marino.
Source: Tyczynski et al. (2002).

HIV

Increased trade and population movement within the European Region have facilitated the spread of infectious diseases. Surveillance of communicable diseases in western Europe remains incomplete, particularly testing for and reporting HIV. Data on newly diagnosed HIV infections and especially comparisons of rates in countries should be interpreted with caution (EuroHIV, 2003a).

New HIV infection rates in Finland have typically been 35–40% of the Eur-A average since 1995. In 2002, Finland had the fifth lowest rate among the 19 Eur-A countries reporting (EuroHIV, 2003a,b) (Fig. 22).

Fig. 22. New registered cases of HIV, Finland and Eur-A[a], 1990 to latest available year



[a] Excluding Austria, Cyprus, France, Italy, the Netherlands and Spain.

From the start of the epidemic to December 2003, 1625 people were diagnosed with HIV in Finland: 75% are men and 25% women. Foreigners account for 26% of all reported HIV cases. Of those cases with a reported mode of transmission *(*1427*)*, the majority were transmitted by heterosexual (40%) or homosexual/bisexual contact (20%), and a further 20% by injecting drug use.

Of cases with heterosexual transmission, 60% are in people from countries with generalized HIV epidemics and a further 7% in people with sexual partners from such countries.

Up until 1996, the annual incidence of HIV was relatively low and stable, with a small peak in 1992 when 93 new cases were reported, declining to 69 cases in 1996. From 1996 to 2000, however, new cases increased rapidly, peaking in 2000 at 145. In part this was a result of an outbreak among injecting drug users, which peaked in 1999 with 86 cases: 60% of the total reported that year.

Since the peak in 1999, cases in injecting drug users have declined, while those resulting from homosexual or bisexual transmission have increased. This resulted in a slight upturn in the number of new cases in 2002 (130 cases) and 2003 (133 cases) (UNAIDS & WHO, 2004).

Hepatitis C

Since the introduction of screening of blood and blood products for hepatitis C in the countries of the European Union before May 2004, transmission of the virus has fallen dramatically. Injecting drug users are now the group at greatest risk, accounting for up to 60–90% of new infections. Young and new injectors are at high risk of contracting the virus shortly after they begin injecting.

Wherever injecting drug use is likely to increase, new epidemics of hepatitis C are likely to emerge. Social exclusion is a factor in and a characteristic of the spread of infection (EMCDDA, 2004). Hepatitis C is predicted to have considerable long-term effects in terms of both health care spending and personal suffering.

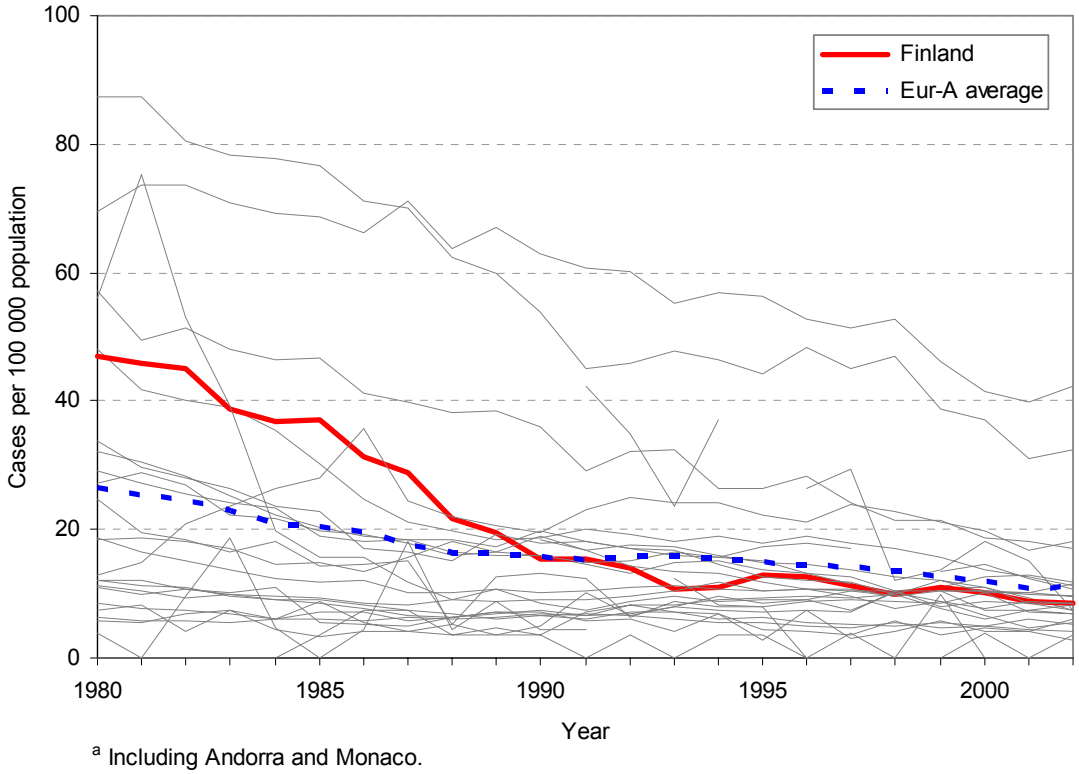
In Finland in 2002, limited local testing at needle exchange locations found that 30–52% of injecting drug users were infected with hepatitis C (EMCDDA, 2003).

Tuberculosis

Between 1995 and 2001, TB notification rates decreased overall in western Europe. Drug resistance remains relatively low in reporting countries, indicating that TB control is in general effective (EuroTB, 2003). Higher rates are typically found in pockets of risk populations (such as immigrants and refugees from areas with high TB incidence) and among the indigenous poor, homeless people and prison inmates. Higher rates are also associated with HIV.

Since 1995, the incidence of TB has dropped by 33% in Finland and 26% in Eur-A. In 2002, the rate for Finland (8.6 per 100 000 population) was 20% less than the Eur-A average (10.9 per 100 000 population) (Fig. 23).

Fig. 23. TB incidence in Finland and Eur-A[a], 1980 to latest available year



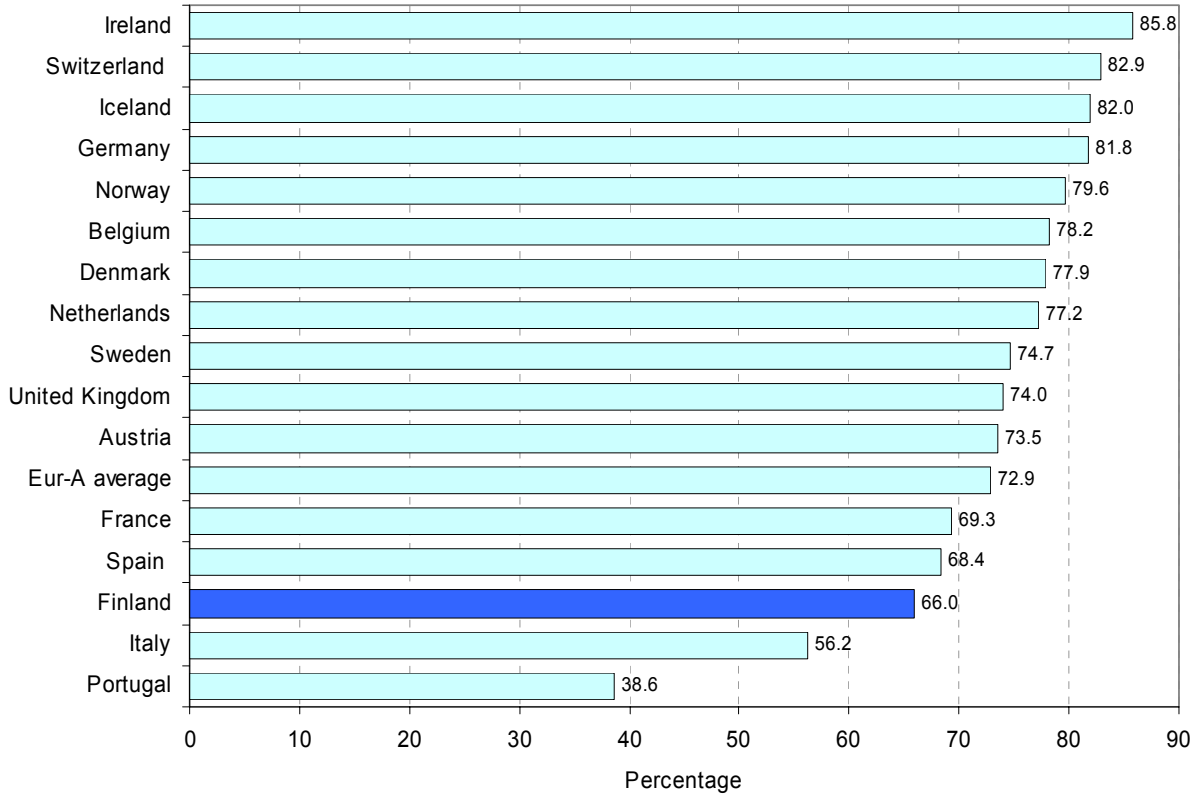
[a] Including Andorra and Monaco.

Self-reported health

People are usually well informed about their health status, the positive and negative effects of their behaviour on their health and their use of health care services. Yet their perceptions of their health can differ from what administrative and examination-based data show about levels of illness within populations. Thus, survey results based on self-reporting at the household level complement other data on health status and the use of services.

In Finland, 66% of adults rate their health as good or reasonably good: 64% of men and 67% of women (Kasmel et al., 2004). Typically, more men than women report their health to be good (Fig. 24).

Fig. 24. People who perceive their health as good or very good, selected countries in Eur-A, 1997–2000



Sources: European Commission (2003) and Kasmel et al. (2004) for data on Finland.

Health system[1]

Organizational structure of the health system

Finland has a compulsory, tax-based health care system, which provides comprehensive coverage for the entire resident population.

The central government and municipalities are the main players in the organization of health care. At the national level, the Ministry of Social Affairs and Health issues framework legislation on health and social care policy and monitors implementation. At the local level, the municipal health committee, council and executive board make decisions on the planning and organization of care. Municipalities (444 in 2004) are also responsible for health promotion and disease prevention, primary medical care, medical rehabilitation and dental care. The country is divided into 20 hospital districts, each of which is a federation of municipalities responsible for arranging and coordinating specialized care within their area.

Health care financing and expenditure

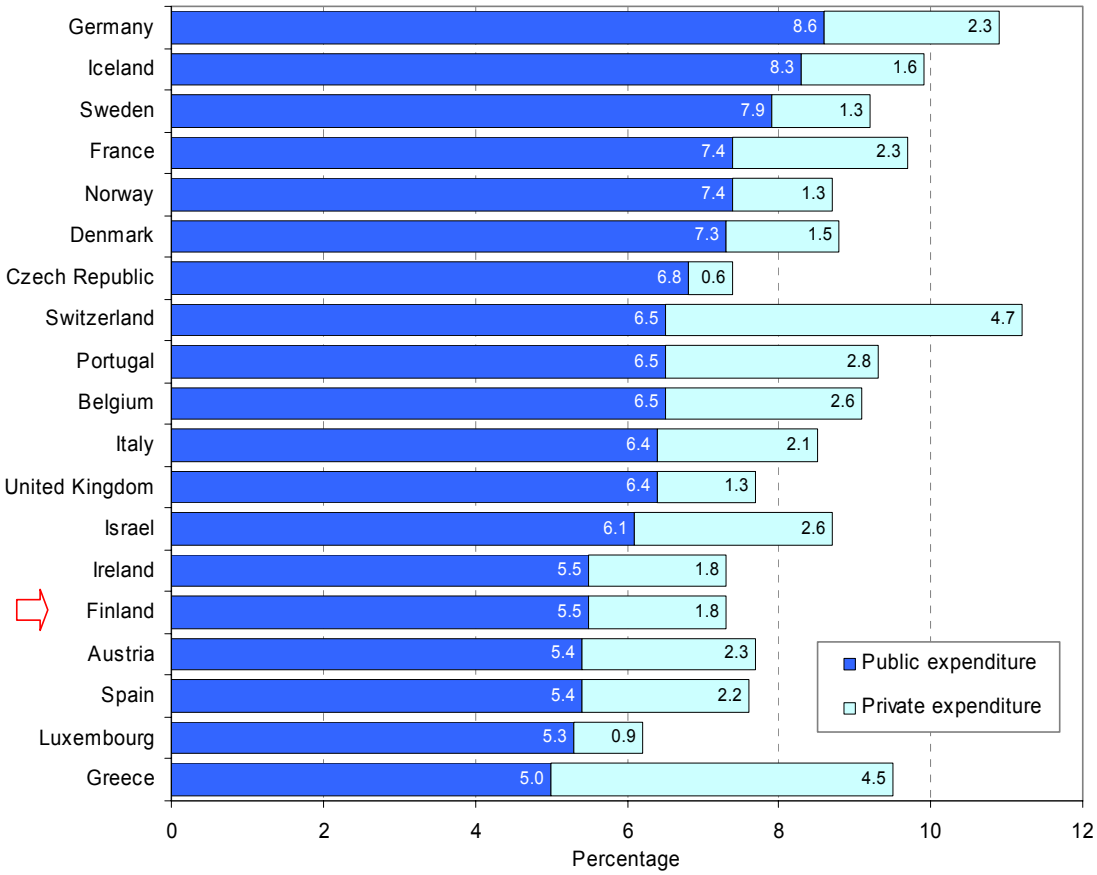
The state and municipalities levy taxes for health care. In 2002 about 43% of total health care costs were financed by the municipalities, 17% by the state (mainly through state subsidies), 16% by the national health insurance (NHI) and about 24% by private sources.

Private financing has increased in absolute and relative terms, from 20.4% of total health expenditure in 1980 to 24.3% in 2002. This is accounted for by increases in user charges for municipal services, the abolition of tax deductions for drugs and other medical treatment costs, and reductions in the reimbursement of pharmaceuticals by the NHI.

In 2002, total health expenditure comprised 7.3% of the gross domestic product (GDP) in Finland (Fig. 25): the lowest level among the Nordic countries and lower than the Eur-A average. In the same year, health expenditure accounted for US$ 1943 (purchasing power parity) per capita (Annex 4). Public expenditure on health comprised 75.3% of total health expenditure.

[1] This section is based on publications of the European Observatory on Health Care Systems (2002a–d); Järvelin (2002) and Mossialos et al., (2004).

Fig. 25. Total public and private expenditure on health as share of GDP in selected countries in Eur-A, 2002



Sources: OECD (2004b); data for Israel are 2001 estimates from WHO (2004b).

Hospitals receive their revenue from municipalities according to the services used by their inhabitants. Hospital doctors and most doctors in municipal health centres are salaried employees. Under the personal doctor system, doctors are paid a combination of a basic salary (about 60%), a capitation payment (20%), fees for services (15%) and local allowances (5%).

Health care provision

Multidisciplinary teams, working in primary health care centres, provide primary curative and preventive care and public health services. These centres are publicly owned, are the responsibility of municipalities and play an important role in guiding patients through the different levels of care. The personal doctor system (in which doctors are obliged to accommodate consultations of their patients within three days, their salary becoming more workload-related) was introduced in the 1980s. It resulted in improved access to general practitioners (GPs) and reduced waiting times. Public health policy has been particularly successful in reducing mortality and risk factors related to CVD.

Secondary and tertiary care is provided in public hospitals, through outpatient and inpatient departments. The number of beds in acute hospitals was 2.3 per 1000 population in 2002 (Annex 5).

In 2002, the number of doctors per 1000 population in Finland was 3.2 (the Eur-A average was 3.4), while the number of nurses (21.7 per 1000 population versus 8.2 in Eur-A) was the highest among Eur-A countries reporting data (Annex 5). Demand is expected to rise with an ageing population, which will increase the perceived shortage of doctors and other health personnel.

Developments and issues

During recent decades, Finland's health care system has in many ways been very successful. In general, it

provides high-quality care; it is fairly efficient compared with systems in other countries, and the Finns are satisfied with it.

Reforms intend to solve specific problems, rather than promote major structural changes. The introduction of the personal doctor system can be regarded as an attempt to address increasing waiting times to see health centre doctors. In response to rising pharmaceutical costs, cost-containing measures have been implemented since 1997. In 2001, quality guidelines for mental health care services were negotiated and approved to facilitate the development of community care in parallel with rapid reductions of capacity in the hospital sector. In the same year, a national programme of health promotion was approved: it sets guidelines for the next 15 years based on the WHO policy for health for all. A recent development is the emergence of a number of local projects and pilot tests, experimenting with the integration of primary and secondary care providers, for example.

Some challenges that need to be further addressed include increasing access to care and the system's responsiveness to patients' preferences, addressing the limited freedom to choose GP and hospital, improving the coordination between primary and secondary health care, and addressing the shortage of personnel and increase in out-of-pocket payments.

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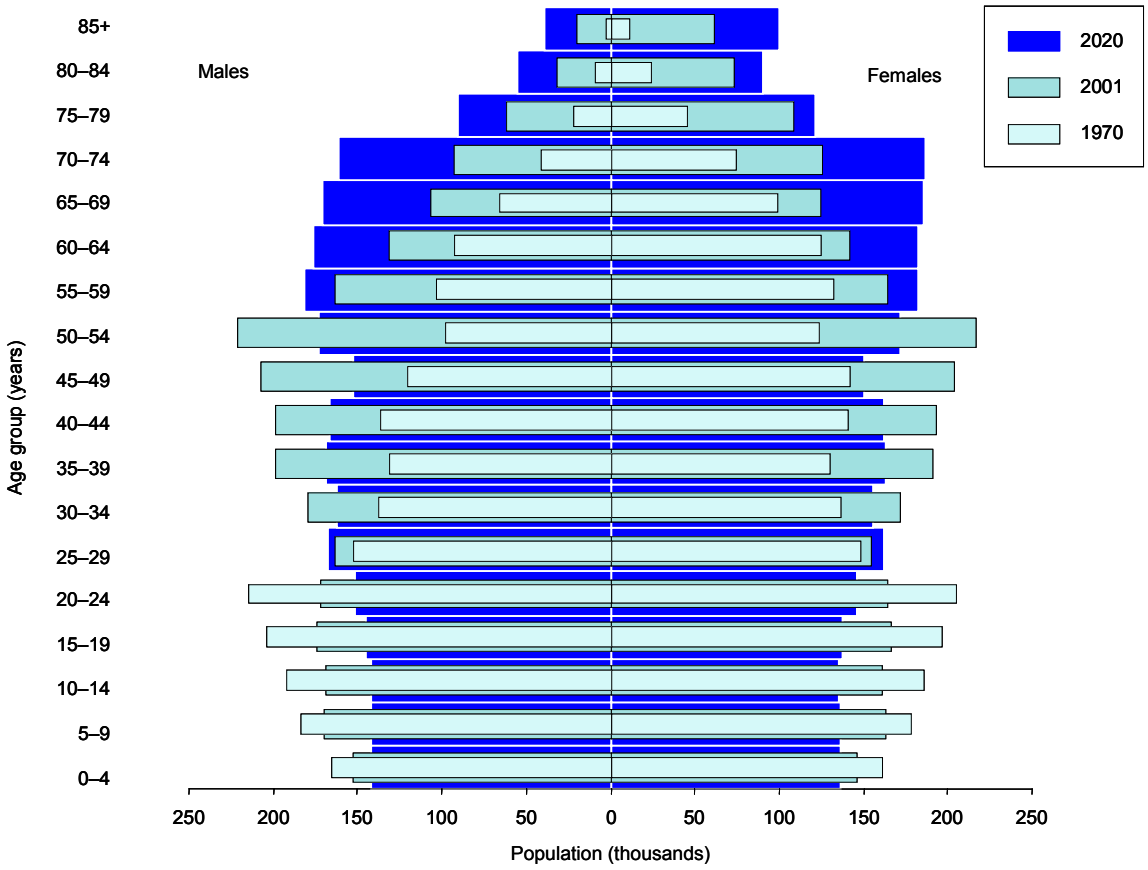
Annex 1

Annex 1. Age pyramid for Finland



Sources: WHO Regional Office for Europe (2004c) and United Nations (2002).

Annex 2

Annex 2. Selected mortality in Finland compared with Eur-A averages

Condition	SDR per 100 000		Excess mortality in Finland (%)	Total deaths in Finland (%)	Total deaths in Eur-A (%)
	Finland (2002)	Eur-A average (2001)			
Selected noncommunicable conditions	540.5	519.5	4.0	80.0	79.9
Cardiovascular diseases	275.0	246.3	11.7	40.7	37.9
Ischaemic heart disease	165.2	97.3	69.7	24.4	15.0
Cerebrovascular disease	62.1	62.0	0.1	9.2	9.5
Diseases of pulmonary circulation and other heart disease	26.5	57.0	– 53.5	3.9	8.8
Malignant neoplasms	145.9	181.8	– 19.7	21.6	28.0
Trachea/bronchus/lung	26.9	37.0	– 27.3	4.0	5.7
Female breast	21.0	27.1	– 22.4	3.1	4.2
Colon/rectal/anal	13.9	20.7	– 32.9	2.1	3.2
Prostate	30.4	25.0	21.4	4.5	3.8
Respiratory diseases	49.4	47.7	3.6	7.3	7.3
Chronic lower respiratory diseases	15.4	20.0	– 22.8	2.3	3.1
Pneumonia	29.9	16.5	81.7	4.4	2.5
Digestive diseases	29.9	30.7	– 2.8	4.4	4.7
Chronic liver disease and cirrhosis	13.2	12.8	3.2	2.0	2.0
Neuropsychiatric disorders	40.3	13.0	210.5	6.0	2.0
					0.0
Selected communicable conditions	5.2	8.1	– 35.4	0.8	1.2
HIV/AIDS	0.1	0.9	– 85.4	0.0	0.1
External causes	68.1	39.5	72.5	10.1	6.1
Selected unintentional causes	22.7	16.1	41.1	3.4	2.5
Motor vehicle traffic injuries	7.5	10.0	– 25.1	1.1	1.5
Falls	15.2	6.1	150.1	2.2	0.9
Selected intentional causes	22.5	11.4	96.9	3.3	1.8
Self-inflicted (suicide)	19.9	10.5	90.4	2.9	1.6
Violence (homicide)	2.6	1.0	167.7	0.4	0.1
Ill-defined conditions	4.4	21.3	– 79.3	0.7	3.3
All causes	675.9	650.1	4.0	100.0	100.0

Annex 3

Annex 3. Mortality data

Table 1. Selected mortality data for the group aged 1–14 years by sex in Finland and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Finland (2002)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	Both	13.38	– 28.4	17.0	– 20.4	12.9	28.2
	M	16.02	– 22.7	19.2	– 20.3	12.6	32.2
	F	10.62	– 35.9	14.8	– 20.4	4.9	24.1
Cardiovascular diseases	M	0.62	– 43.6	0.9	– 26.0		1.8
	F			1.0	– 21.8		1.6
Ischaemic heart disease	M				– 75.0		0.6
	F				– 66.7		0.2
Cerebrovascular disease	M			0.2	– 44.4		0.4
	F			0.2	– 39.4		0.7
Malignant neoplasms	M	4.06	14.0	3.3	– 15.4		5.1
	F	2.24	– 41.4	2.7	– 10.4		4.9
Lung cancer	M				– 80.0		0.2
	F						0.3
Breast cancer	F				– 100.0		0.1
Respiratory diseases	M	0.21	– 52.3	0.8	– 13.7		3.0
	F	0.28	– 39.1	0.7	– 11.9		2.4
Digestive diseases	M			0.3	– 21.6		0.7
	F			0.2	– 25.0		2.6
External causes	M	7.89	– 8.0	6.4	– 30.7	3.5	20.3
	F	4.86	13.0	4.0	– 24.3		7.0
Motor vehicle traffic injuries	M	2.20	– 39.2	2.7	– 30.3		8.0
	F	1.93	– 0.0	1.8	– 29.3		4.1
Suicide	M	0.62	– 23.5	0.4	– 11.9		0.7
	F			0.1	0.0		0.6

NA = not applicable. Blank = rate < 0.1

Annex 3 contd

Table 2. Selected mortality data for the group aged 15–24 years by sex in Finland and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Finland (2002)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	59.8	– 1.6	53.1	– 13.2	37.4	69.7
	M	88.1	– 5.9	77.8	– 13.0	59.4	110.2
	F	30.1	13.9	27.7	– 13.2	13.9	34.8
Cardiovascular diseases	M	2.7	10.7	3.3	– 12.1		5.7
	F	2.2	65.9	1.8	– 13.1		2.9
Ischaemic heart disease	M	0.3		0.3	– 15.0		1.6
	F	0.3		0.1	– 7.7		0.7
Cerebrovascular disease	M	0.6	– 3.2	0.7	– 13.6		1.4
	F	0.6	85.3	0.4	– 24.1		1.4
Malignant neoplasms	M	4.2	– 8.1	5.4	– 7.9		15.5
	F	4.1	24.5	3.7	– 7.9		7.0
Lung cancer	M	0.0		0.1	– 50.0		0.3
	F	0.0		0.0	– 33.3		0.3
Breast cancer	F	0.0		0.1	– 16.7		0.3
Respiratory diseases	M	1.5	141.9	1.1	– 25.7		4.5
	F	0.3		0.8	– 18.8		2.0
Digestive diseases	M	0.6	– 6.3	0.5	– 28.8		1.2
	F	0.3		0.3	– 30.4		1.1
External causes	M	71.7	– 5.3	54.9	– 12.0	33.0	96.5
	F	18.5	– 0.5	14.3	– 14.8	6.9	23.5
Motor vehicle traffic injuries	M	18.6	4.2	30.2	– 9.3	14.9	71.1
	F	5.3	4.3	8.1	– 10.7	2.6	14.3
Suicide	M	29.1	– 21.4	11.2	– 11.5		36.7
	F	7.2	– 16.2	2.5	– 24.3		7.5

NA = not applicable. Blank = rate < 0.1

Annex 3 contd

Table 3. Selected mortality data for the group aged 25–64 years by sex in Finland and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Finland (2002)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	334.8	– 14.9	315.4	– 13.1	218.8	449.7
	M	467.5	– 17.5	425.4	– 14.3	276.0	661.7
	F	203.4	– 9.6	208.4	– 11.0	128.0	322.5
Cardiovascular diseases	M	144.5	– 27.3	110.6	– 20.8	72.2	225.0
	F	38.7	– 20.8	38.2	– 21.3	23.4	74.7
Ischaemic heart disease	M	88.0	– 32.7	59.8	– 24.6	35.2	108.6
	F	15.4	– 24.5	13.6	– 28.0	5.4	28.6
Cerebrovascular disease	M	23.1	– 24.2	17.4	– 22.0	7.5	56.6
	F	13.9	– 19.7	10.5	– 20.2	5.2	27.0
Malignant neoplasms	M	97.9	– 14.4	148.8	– 9.8	91.0	217.2
	F	84.4	– 9.6	102.4	– 7.7	76.1	155.2
Lung cancer	M	25.2	– 25.2	43.9	– 12.8	18.5	71.0
	F	9.3	16.4	13.3	11.7	6.9	32.8
Breast cancer	F	21.9	– 20.6	27.5	– 14.3	14.7	37.2
Respiratory diseases	M	19.9	– 3.0	15.8	– 19.2	8.5	29.7
	F	6.8	– 8.8	7.9	– 12.3	3.7	22.6
Digestive diseases	M	39.8	5.8	31.8	– 9.6	3.1	67.0
	F	13.4	29.3	13.4	– 7.5	4.2	26.2
External causes	M	119.3	– 23.3	59.9	– 10.5	28.2	120.7
	F	33.1	– 14.8	17.8	– 10.6		33.1
Motor vehicle traffic injuries	M	10.7	5.7	15.8	– 7.8	6.5	34.0
	F	3.6	8.2	4.3	– 14.4		7.4
Suicide	M	41.1	– 29.1	21.2	– 9.0	6.6	56.4
	F	14.1	– 15.5	6.8	– 11.1		15.8

NA = not applicable. Blank = rate < 0.1

Annex 3 contd

Table 4. Selected mortality data for the group aged 65+ years by sex in Finland and Eur-A: SDR per 100 000 population and percentage changes from 1995 to latest available year

Causes of death	Sex	Finland (2002)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	4387.1	– 11.5	4199.5	– 11.5	3714.4	6010.0
	M	5698.0	– 13.2	5328.5	– 13.2	4658.1	7580.8
	F	3590.1	– 11.5	3460.2	– 11.5	2937.7	5088.6
Cardiovascular diseases	M	2579.3	– 23.4	2232.9	– 23.4	1614.4	4272.2
	F	1712.2	– 21.7	1613.4	– 21.7	1027.5	3314.3
Ischaemic heart disease	M	1702.7	– 20.3	948.2	– 20.3	517.5	1702.7
	F	974.3	– 17.4	539.5	– 17.4	244.7	1084.7
Cerebrovascular disease	M	497.4	– 35.9	536.2	– 35.9	324.8	1302.3
	F	450.0	– 32.6	457.0	– 32.6	170.4	1018.5
Malignant neoplasms	M	1267.4	– 12.1	1482.9	– 12.1	1175.1	1900.6
	F	654.7	– 9.4	749.8	– 9.4	589.1	1088.5
Lung cancer	M	321.7	– 22.0	371.8	– 22.0	196.0	615.4
	F	64.2	15.6	81.7	15.6	13.8	213.2
Breast cancer	F	85.6	– 10.1	113.9	– 10.1	83.3	164.1
Respiratory diseases	M	627.0	– 13.6	545.9	– 13.6	371.8	1115.6
	F	263.4	– 13.9	266.5	– 13.9	157.9	716.3
Digestive diseases	M	172.9	– 10.5	205.0	– 10.5	117.8	342.9
	F	120.6	– 20.3	143.3	– 20.3	77.8	196.0
External causes	M	268.1	2.0	152.6	2.0	80.6	282.8
	F	122.5	0.7	91.0	0.7	41.3	157.3
Motor vehicle traffic injuries	M	24.0	– 15.3	20.4	– 15.3	8.7	46.0
	F	8.0	5.4	7.9	5.4	0.0	15.5
Suicide	M	44.7	– 13.5	34.3	– 13.5	8.8	86.1
	F	9.8	– 17.6	9.9	– 17.6	1.1	23.6

Annex 4. Total public and private expenditure on health per capita, in selected countries in Eur-A, 2002

Country	Expenditure (US$ purchasing power parity)
Austria	2220
Belgium	2515
Czech Republic	1118
Denmark	2580
Finland	1943
France	2736
Germany	2817
Greece	1814
Iceland	2807
Ireland	2367
Israel	1622
Italy	2166
Luxembourg	3065
Netherlands	2643
Norway	3083
Portugal	1702
Spain	1646
Sweden	2517
Switzerland	3445
United Kingdom	2160
Eur-A average	2348

Sources: OECD (2004b) and WHO Regional Office for Europe (2004c) for 2001 data on Israel.

Annex 5

Annex 5. Selected health care resources per 100 000 population in Eur-A, latest available year

Eur-A	Nurses		Physicians		Acute hospital beds	
	Number	Year	Number	Year	Number	Year
Andorra	316.1	2002	304.2	2002	283.2	2002
Austria	587.4	2001	332.8	2002	609.5	2002
Belgium	1075.1	1996	447.8	2002	582.9	2001
Croatia	501.6	2002	238.3	2002	367.3	2002
Cyprus	422.5	2001	262.3	2001	406.6	2001
Czech Republic	971.1	2002	350.5	2002	631.3	2002
Denmark	967.1	2002	364.6	2002	340.2	2001
Finland	2166.3	2002	316.2	2002	229.9	2002
France	688.6	2002	333.0	2002	396.7	2001
Germany	973.1	2001	335.6	2002	627.0	2001
Greece	256.5	1992	453.3	2001	397.1	2000
Iceland	898.2	2002	363.6	2002	368.2	1996
Ireland	1676.2	2000	238.3	2001	299.5	2002
Israel	598.4	2002	371.3	2002	218.0	2002
Italy	296.2	1989	612.1	2001	397.9	2001
Luxembourg	779.3	2002	259.3	2002	558.7	2002
Malta	551.1	2002	267.2	2002	348.8	2002
Monaco	1621.4	1995	664.3	1995	1553.6	1995
Netherlands	1328.2	2001	314.9	2002	307.4	2001
Norway	2055.7	2001	364.5	2002	308.9	2001
Portugal	384.0	2001	322.9	2001	330.8	1998
San Marino	507.7	1990	251.7	1990	–	–
Slovenia	717.9	2002	224.2	2002	414.3	2002
Spain	367.2	2000	324.3	2000	296.4	1997
Sweden	975.1	2000	304.1	2000	228.3	2002
Switzerland	830.0	2000	361.6	2002	398.3	2002
United Kingdom	497.2	1989	210.0	2002	390.0	2002
Eur-A average	819.8	2001	354.1	2002	409.6	2001

Sources: WHO Regional Office for Europe (2004c) and OECD (2004b) for data on physicians and acute hospital beds for the United Kingdom.

Technical notes

Calculation of averages

Averages for the reference group, when based on data in the European health for all database of the WHO Regional Office for Europe, are weighted by population. Some countries with insufficient data may be excluded from the calculation of averages. Otherwise, for data from other sources, simple averages were calculated where required.

To smooth out fluctuations in annual rates caused by small numbers, three-year averages have been used, as appropriate. For example, maternal mortality, usually a small number, has three-year moving averages calculated for all countries. When extreme fluctuations are known to be due to population anomalies, data have been deleted, as appropriate.

Data sources

To make the comparisons as valid as possible, data for each indicator have, as a rule, been taken from one source to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data for figures and tables in this report is the June 2004 version of the European health for all database of the WHO Regional Office for Europe. The health for all database acknowledges the various primary sources of the data.

Disease coding

Case ascertainment, recording and classification practices (using the ninth and tenth revisions of the International Statistical Classification of Diseases and Related Health Problems: ICD-9 and ICD-10, respectively), along with culture and language, can influence data and therefore comparability across countries.

Healthy life expectancy (HALE) and disability-adjusted life-years (DALYs)

HALE and DALYs are summary measures of population health that combine information on mortality and non-fatal health outcomes to represent population health in a single number. They complement mortality indicators by estimating the relative contributions of different causes to overall loss of health in populations.

DALYs are based on cause-of-death information for each WHO region and on regional assessments of the epidemiology of major disabling conditions. The regional estimates were disaggregated to Member State level for the highlights reports.

National estimates of HALE are based on the life tables for each Member State, population representative sample surveys assessing physical and cognitive disability and general health status, and on detailed information on the epidemiology of major disabling conditions in each country.

More explanation is provided in the statistical annex and explanatory notes of The world health report 2003[1].

Household surveys

Household surveys are currently the only source of evidence of health status at the individual level. The information generated is subjective and self reported. It complements the official aggregated statistics on death rates, life expectancy and morbidity. Tools are available for both designing the surveys and analytically estimating health, adjusted for differences in cultural norms and expectations of health, so that survey results become comparable across populations and groups.

Limitations of national-level data

National-level averages, particularly when they indicate relatively good positions or trends in health status, as is the case in most developed countries, hide pockets of problems. Unless the health status of a small population is so dramatically different from the norm that it influences a national indicator, health risks and poorer health outcomes for small groups will only become evident through subnational data.

Reference groups for comparison

[1]WHO (2003). *The world health report 2003 – shaping the future.* Geneva, World Health Organization (http://www.who.int/whr/2003/en, accessed 25 May 2004).

When possible, international comparisons are used as one means of assessing a country's comparative strengths and weaknesses and to provide a summary assessment of what has been achieved so far and what could be improved in the future. Differences between countries and average values allow the formulation of hypotheses of causation or imply links or remedies that encourage further investigation.

The country groups used for comparison are called reference groups and comprise:

- countries with similar health and socioeconomic trends or development; and/or
- geopolitical groups.

The 27 European countries with very low child mortality and very low adult mortality, designated Eur-A by WHO[1], are the reference group used in this report. Eur-A comprises Andorra, Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Germany, Greece, Finland, France, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom. However, data for most indicators are unavailable for two of the 27 countries: Andorra and Monaco. Therefore, unless otherwise indicated, Eur-A and averages for Eur-A refer to the 25 countries for which data are available.

Comparisons should preferably refer to the same point in time, but the countries' latest available data are not all for the same year. This should be kept in mind, as a country's position may change when more up-to-date data become available.

Graphs have usually been used to show time trends from 1980 onwards. These graphs present the trends for all the reference countries as appropriate. Only the country in focus and the group average are highlighted and identified in the legend. This enables the country's trends to be followed in relation to those of all the reference countries, and performance in relation to observable clusters and/or the main trend or average to be recognized more easily.

[1] WHO (2004). *The world health report 2004 – changing history*. Geneva, World Health Organization (http://www.who.int/whr/en, accessed 26 August 2004).

Glossary

Causes of death	ICD-10 code
Cerebrovascular diseases	I60–I69
Chronic liver disease and cirrhosis	K70, K73, K74, K76
Chronic obstructive pulmonary disease	J40–J47
Colon/rectal/anal cancer	C18–C21
Diseases of pulmonary circulation and other heart disease	I26–I51
Falls	W00–W19
Female breast cancer	C50
Ischaemic heart disease	I20–I25
Pneumonia	J12–J18
Prostate cancer	C61
Neuropsychiatric disorders	F00–99, G00–99, H00–95
Road traffic injuries	V02–V04, V09, V12–V14, V19–V79, V82–V87, V89
Self-inflicted (suicide)	X60–X84
Trachea/bronchus/lung cancer	C33–C34
Violence	X85–Y09

Technical terminology

Disability-adjusted life-year (DALY)	The DALY combines in one measure the time lived with disability and the time lost due to premature mortality. One DALY can be thought of as one lost year of healthy life.
GINI index	Measures inequality over the entire distribution of income or consumption. A value of 0 represents perfect equality; a value of 100, perfect inequality. Low levels in the WHO European Region range from 23 to 25; high levels range from 35 to 36.[1]

[1]WHO Regional Office for Europe (2002). *The European health report 2002.* Copenhagen, WHO Regional Office for Europe:156 (http://www.euro.who.int/europeanhealthreport, accessed 28 May 2004).

Healthy life expectancy (HALE)	HALE summarizes total life expectancy into equivalent years of full health by taking account of years lived in less than full health due to diseases and injuries.
Income poverty line (50% of median income)	The percentage of the population living below a specified poverty line: in this case, with less than 50% of median income.
Life expectancy at birth	The average number of years a newborn infant would live if prevailing patterns of mortality at the time of birth were to continue throughout the child's life.
Natural population growth	The birth rate less the death rate
Neuropsychiatric conditions	Mental, neurological and substance use disorders
Population growth	(The birth rate less the death rate) + (immigration less emigration)
Standardized death rate (SDR)	The age-standardized death rate calculated using the direct method: that is, it represents what the crude rate would have been if the population had the same age distribution as the standard European population.