WORLD HEALTH ORGANIZATION
EUROPE

Highlights on health in Belgium

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, 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.

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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DELIVERY OF HEALTH CARE
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Summary: findings and policy options

Life expectancy

People in Belgium are living longer. Women continue to have a higher life expectancy than men: 81.5 years and 75.2 years respectively. For both men and women, this is at the average for the Eur-A countries.

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.

Ageing and employment policies (OECD, 2004a)

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

Infant mortality

Belgium has a relatively high neonatal mortality rate among the Eur-A countries reporting. Belgium's infant mortality rate is also higher than the Eur-A average.

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

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

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

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

Main causes of death

Noncommunicable conditions account for 79% of all deaths in Belgium. Diseases of pulmonary circulation and other heart disease together with ischaemic heart disease are the biggest killers. Thirty-four per cent of total deaths are due to cardiovascular diseases; 29% to cancer; and about 8% to external causes (intentional and unintentional injuries).

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

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

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

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)

Excess weight

Sixty-three per cent of Belgian men and 41% of Belgian women are overweight. Fourteen per cent of men and 13% of women are obese. Eleven per cent of 15-year-old Belgian boys are pre-obese; about 2% are obese. About 8% of 15-year-old girls are pre-obese and 2% are obese. Twenty-eight per cent of men and 36% of women in Belgium are physically inactive.

Better eating habits can prevent premature death from CVD, but people's chances of 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.

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

The smoking prevalence is higher than the Eur-A average. The death rate from lung cancer is high for both sexes and is increasing among females. The incidence rate of lung cancer among Belgian men is among the highest in Eur-A and 50% over the average.

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)

Smoke-free workplace legislation implementation, Public health (tobacco) Acts 2002 and 2004, Progress Report, May 2004 (Office of Tobacco Control, 2004)

Tobacco control database [online database] (WHO Regional Office for Europe, 2004f)

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)

Mental health

Neuropsychiatric conditions have the highest burden of disease in the Belgian population due to the associated disability in daily living over the life course.

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

Pure alcohol consumption levels in Belgium are about 7% lower than the Eur-A average.

Alcohol consumption varies among countries and between different population groups within countries. The variation in drinking patterns affects 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.

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

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

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

HIV/AIDS

The AIDS incidence has continued to decline among Belgian nationals, whereas the incidence among non-Belgian nationals has remained relatively stable or increased slightly, especially for non-residents who were diagnosed shortly after arriving in the country. Since 1997, the majority of new AIDS cases in Belgium have been among non-Belgian nationals.

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.

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

AIDS: epidemic update December 2003 (UNAIDS & WHO, 2003*)*

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

Drug use and hepatitis C

In Belgium, limited local testing at needle exchange locations found that about 39% 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)

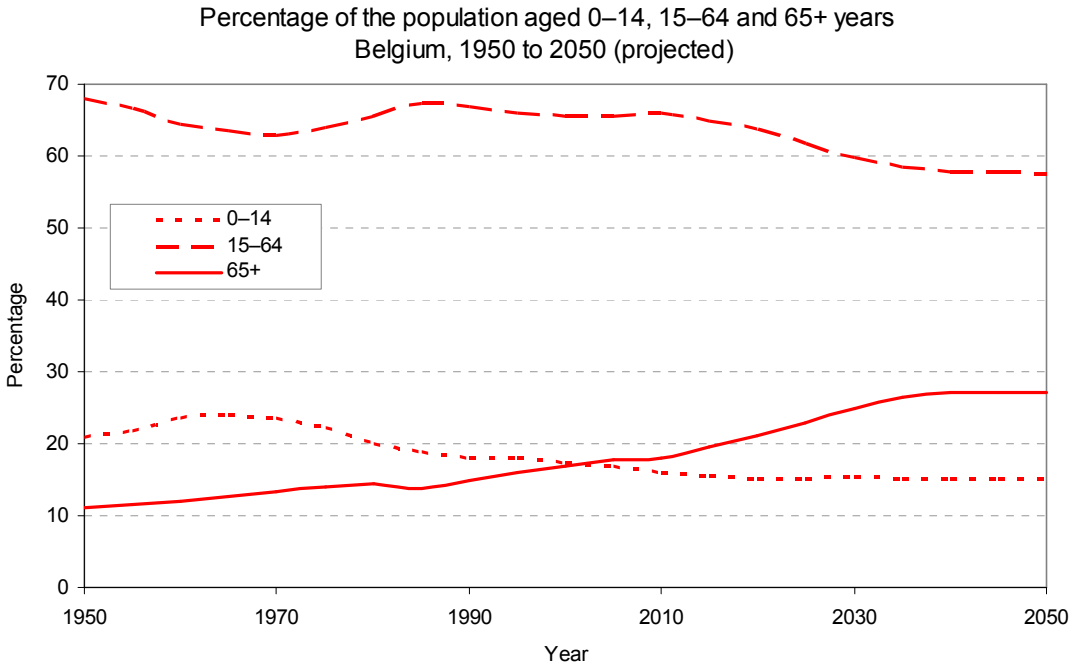
Declaration. Prison health as part of public health, Moscow, 24 October 2003 (HIPP, 2003)

Selected demographic information

Population profile

Belgium had a population of almost 10.4 million at the start of 2003. It has one of the highest percentages of urban population among the Eur-A countries.

The most striking demographic feature in Belgium, observed 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 years and older is expected to grow from about 17% of the population in 2000 (Council of Europe, 2003) to an estimated 25% in 2030 (Annex. Age pyramid).



Source: United Nations (2002).

Belgium's birth rate is at the average for the Eur-A. Since 1995, the rate has been constant, as has the Eur-A average birth rate for the same period. Nevertheless, positive net migration has caused Belgium's population to grow slightly.

Selected demographic indicators in Belgium and Eur-A, 1997 or latest available year

Indicators	Belgium	Eur-A		
	Value	Average	Minimum	Maximum
Population (in 1000s)[a]	10 355.8	–	–	–
0–14 years (%)	17.8	–	–	–
15–64 years (%)	65.9	–	–	–
65+ years (%)	16.3	–	–	–
Urban population (%)[b, c]	97.4	79.5	49.2	100.0
Live births (per 1000)[d, e]	10.8	11.3	8.7	21.2
Natural population growth (per 1000)	1.2	1.1	–2.4	15.5
Net migration (per 1000)[d, e]	4.0	3.5	–9.6	17.3

[a] As of 1 January 2003.

[b] 2001.

[c] Including Andorra and Monaco.

[d] 2002.

[e] Including Andorra.

Sources: Council of Europe (2003), WHO Regional Office for Europe (2004d); 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, Belgium has a relatively low level of income inequality overall, with a better distribution of wealth than the Eur-A average (UNDP, 2004). In the period 1987 to 1997, about 5% of Belgium's population lived below the 50% median income level, compared with an average of almost 9% for 19 Eur-A countries with estimates.

Overall unemployment in Belgium was 6.6% in 2001, versus an average of 6.5% for 25 Eur-A countries with estimates (UNSD, 2004). Unemployment among Belgians 15–24 years old was also slightly higher than the average: in 2001, unemployment was 14.3% among young men and 16.6% among young women (UNECE, 2003). More than 80% of unemployed Belgians had educational attainment of secondary education or less. Fifty-two per cent of those unemployed had been so 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. The table below gives the total population figures for various vulnerable groups of people resident in Belgium. Immigrants include nationals and foreigners from within and outside the European Region. Countries have different data sources and administrative definitions of immigrant status.

Vulnerable populations in Belgium

Population	1992	1995	1998	2001	2003 (estimate)
Immigrants	66 763	62 950		77 585	
Refugees	–	–	–	12 000	
Prison inmates (per 100 000 national population)	71	75	81	85	88

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

The table 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).

In late 2003, Belgium reported a 113% occupancy level for its prisons, based on official capacity (International Centre for Prison Studies, 2004).

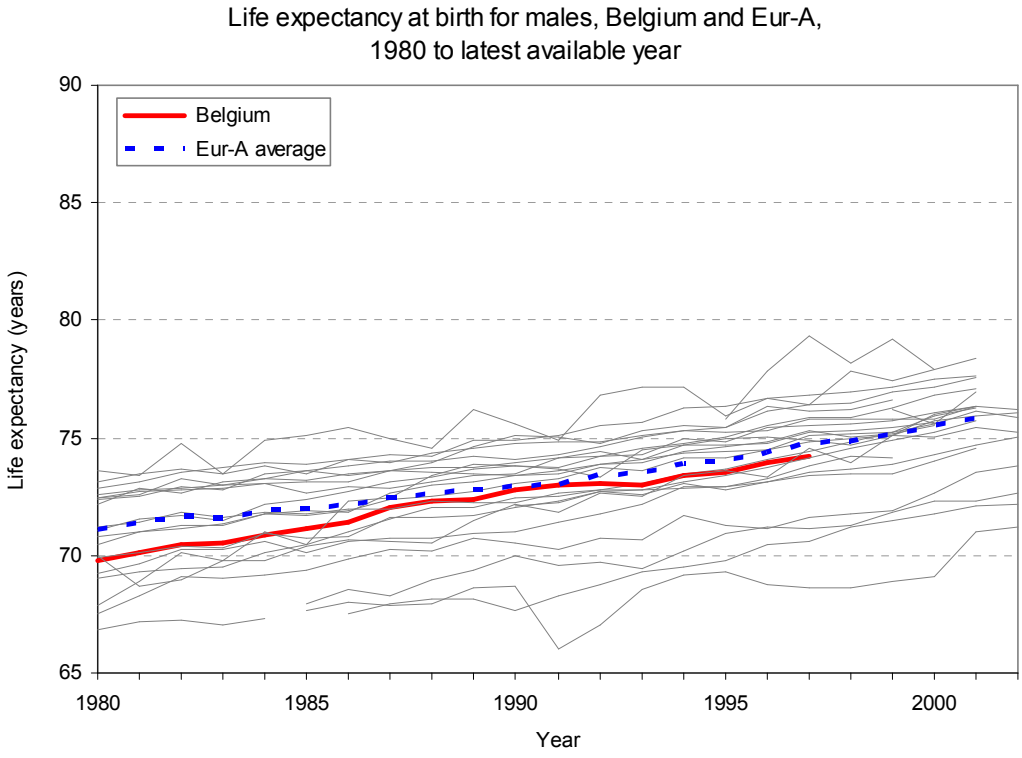
Burden of disease

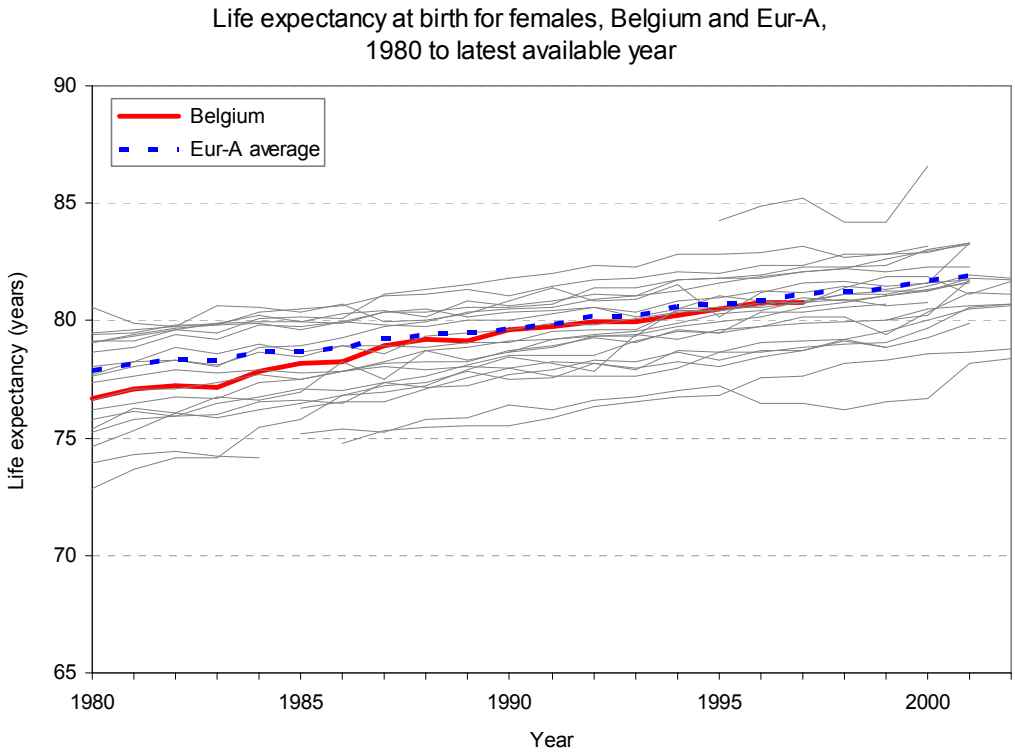
The burden of disease can be viewed as the gap between current health status and an ideal situation in which everyone lives into old age free of disease and disability. Causing the gap are premature mortality, disability and certain risk factors that contribute to illness. The analysis that follows elaborates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

Life expectancy and healthy life expectancy

A person born in Belgium in 2002 can expect to live 78.4 years on average: 81.5 years if female and 75.2 years if male, according to WHO (2003f) estimates. For both men and women, this is at the average for the Eur-A.

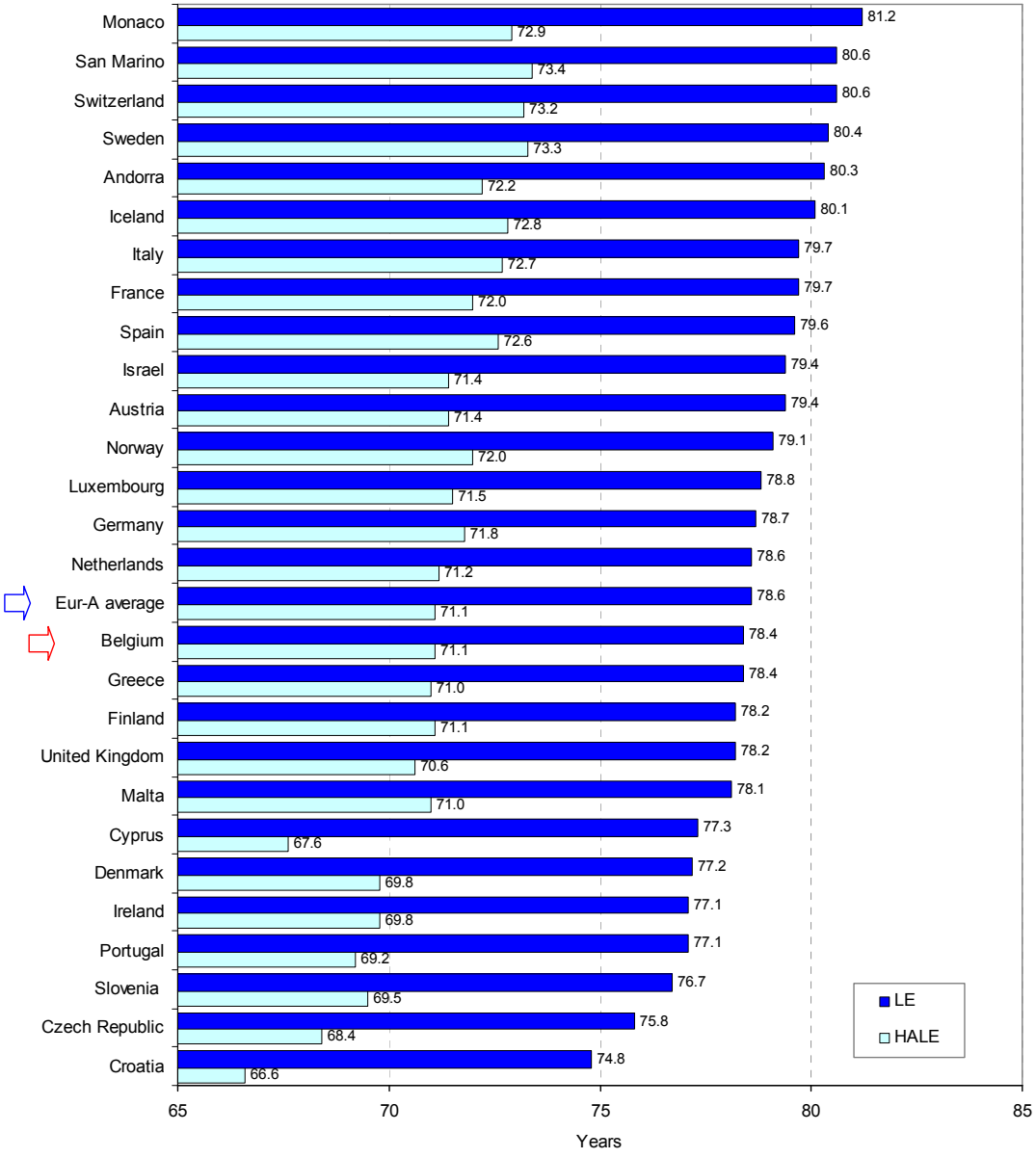
Over the last 20 years, according to estimates reported by Belgium, Belgians have gained about 5.1 years in life expectancy (LE), with men showing a greater gain than women: 5.4 years and 4.9 years, respectively.





In addition, WHO (2003f) estimates that, on average, people in Belgium can expect to be healthy for about 90% of their lives. They lose on average 7.2 years to illness – the difference between LE and healthy life expectancy (HALE). Since women live longer than men and since the possibility of deteriorating health increases with age, women lose more healthy years of life (8.2 years) than men (6.3 years). Nevertheless, a longer LE for women gives them four and a half more years of healthy life than men in Belgium.

LE and HALE, Belgium and Eur-A[a], 2002

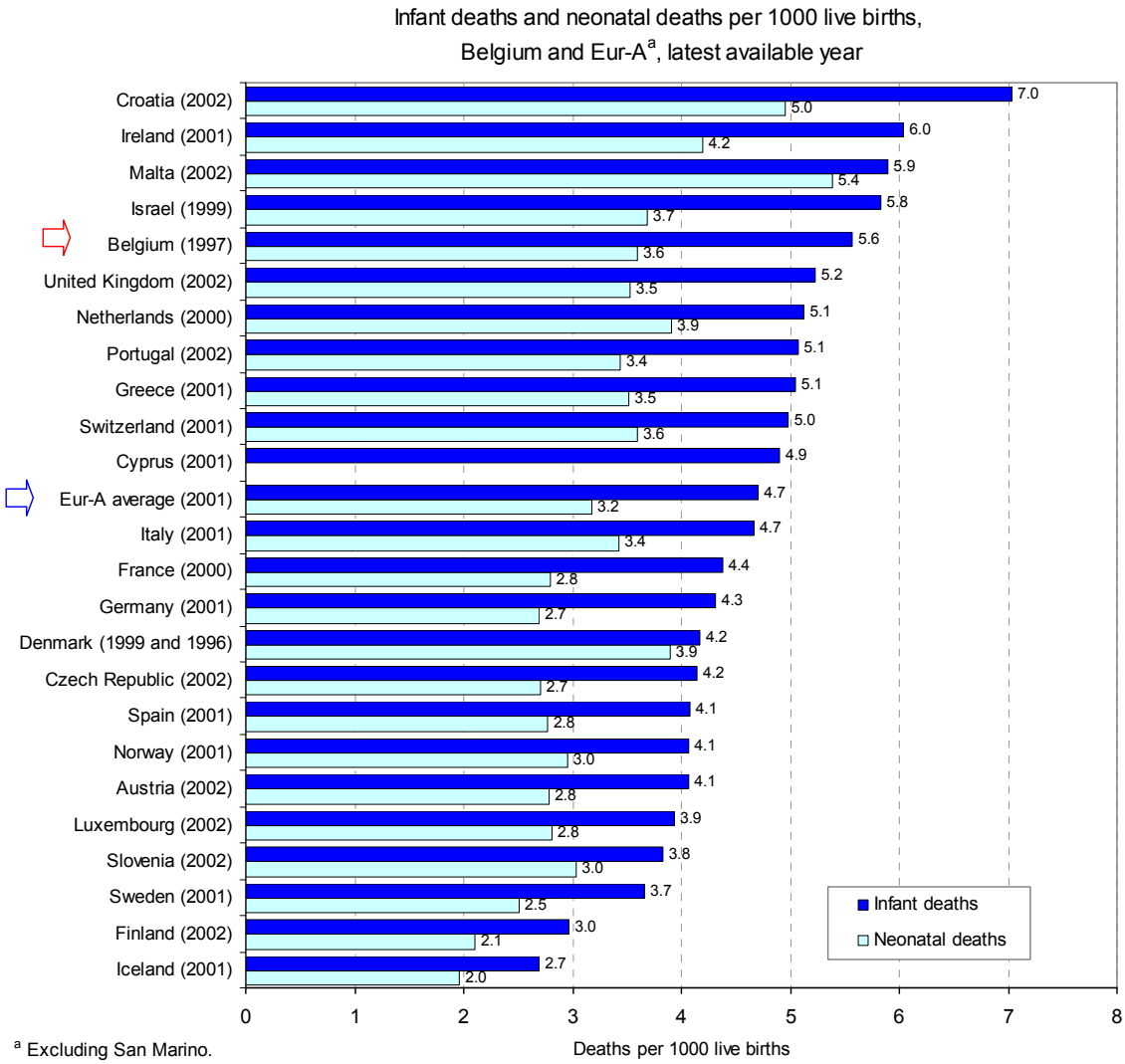


[a] Including Andorra and Monaco.
Source: WHO (2003e).

Mortality

Infant mortality and neonatal death

Belgium has a relatively high neonatal mortality rate among the Eur-A countries reporting. Belgium's infant mortality rate is also higher than the average.

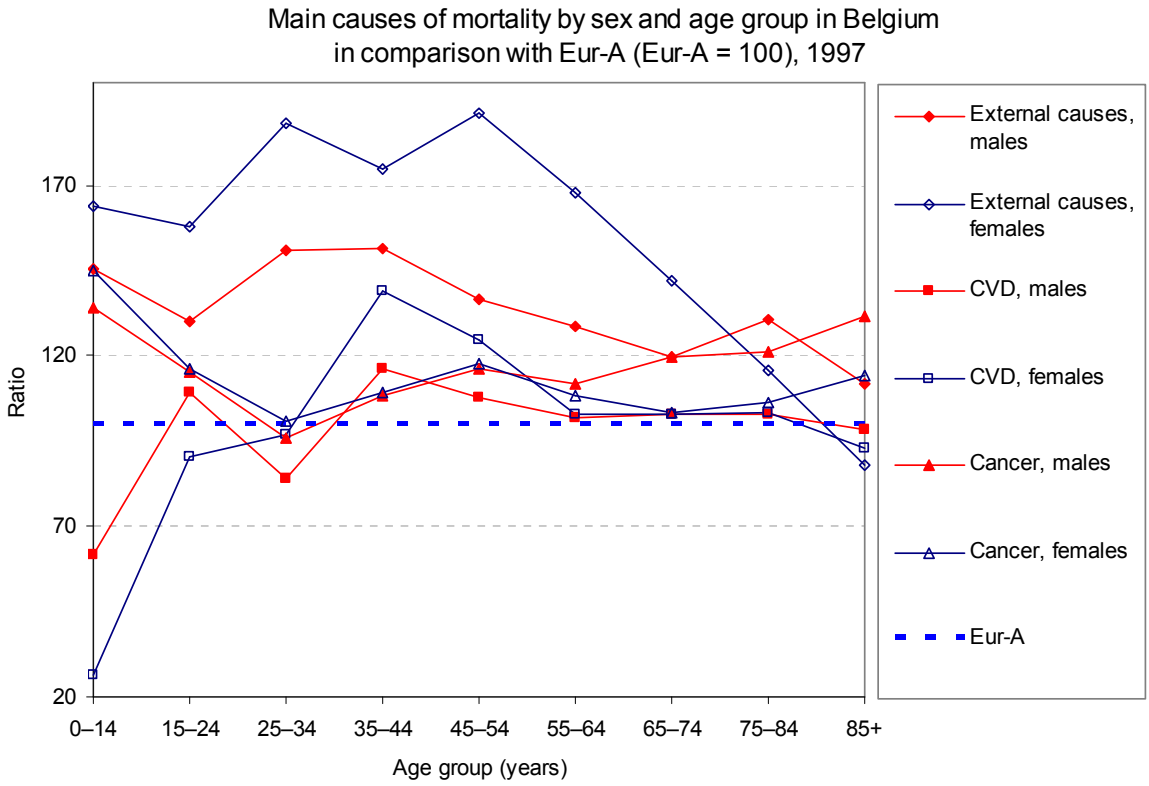


[a] Excluding San Marino.

Excess mortality

Belgian men and women have excess mortality for all ages relative to the Eur-A averages, with the most significant difference, about 25% excess, experienced by women 15–54 years old. Figure. Total mortality by sex and age group

According to age group across three main disease groups, people in Belgium have excess mortality from external causes among males at all ages and females at all ages except the oldest (85+ years) and from cancer, especially among females in most age groups compared with the average in the Eur-A. Death from cardiovascular diseases (CVD) in Belgium is lower than or at the average for all ages except for those 35–54 years old.



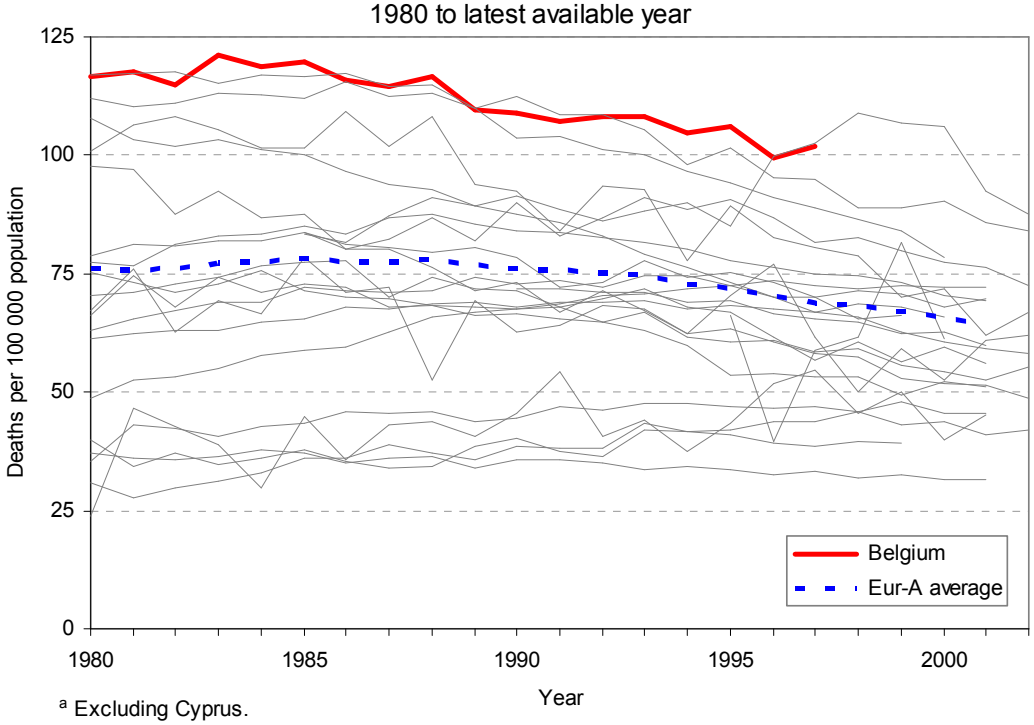
Main causes of death

In 2002, noncommunicable diseases accounted for 79% of all deaths in Belgium; external causes for about 8%; and communicable diseases for 1% (Annex. Selected mortality).

Similar to all other Eur-A countries, CVD are the number one cause of death in Belgium. Within the CVD category, diseases of pulmonary circulation and other heart disease are the single biggest killer among Belgians followed closely by ischaemic heart disease (Annex. Selected mortality).

Cancer death rates in Belgium are almost as high as CVD death rates. The overall mortality due to cancer is higher than the Eur-A average – almost 14% higher. Death rates are especially high for lung cancer, breast cancer and prostate cancer (Annex. Selected mortality). For lung cancer, Belgian men have the second highest mortality in the Eur-A (Croatia is higher), but the trend is decreasing.

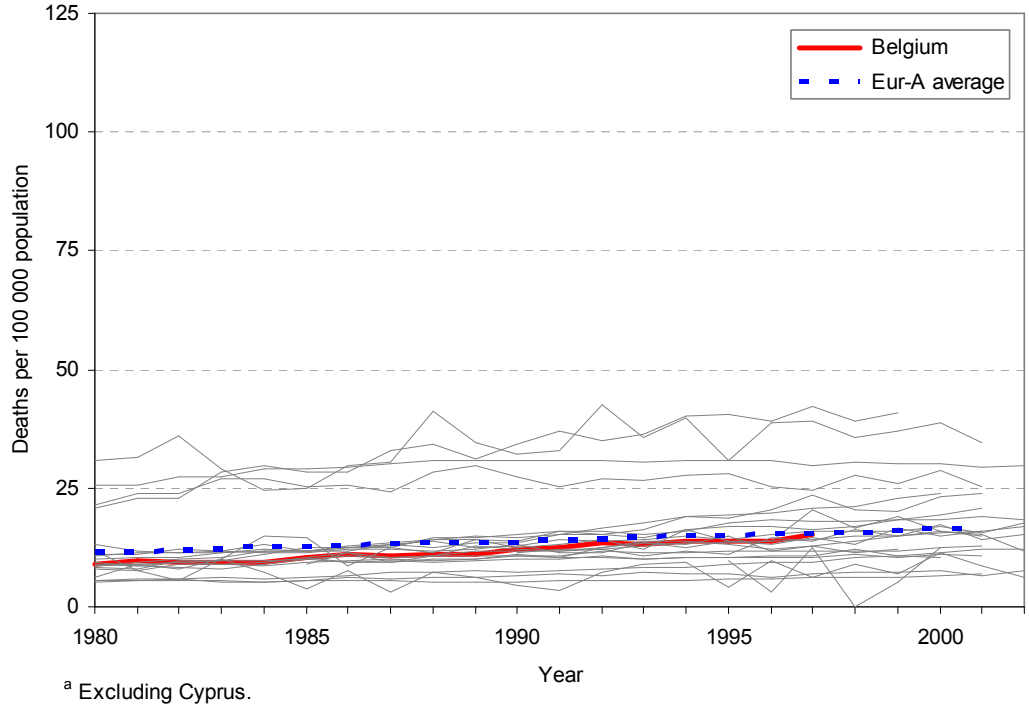
Standardized death rates (SDR) for trachea, bronchus and lung cancer in males, all ages, Belgium and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

Belgian women are at the Eur-A average for lung cancer, but this is increasing at a faster rate than the average for Eur-A women.

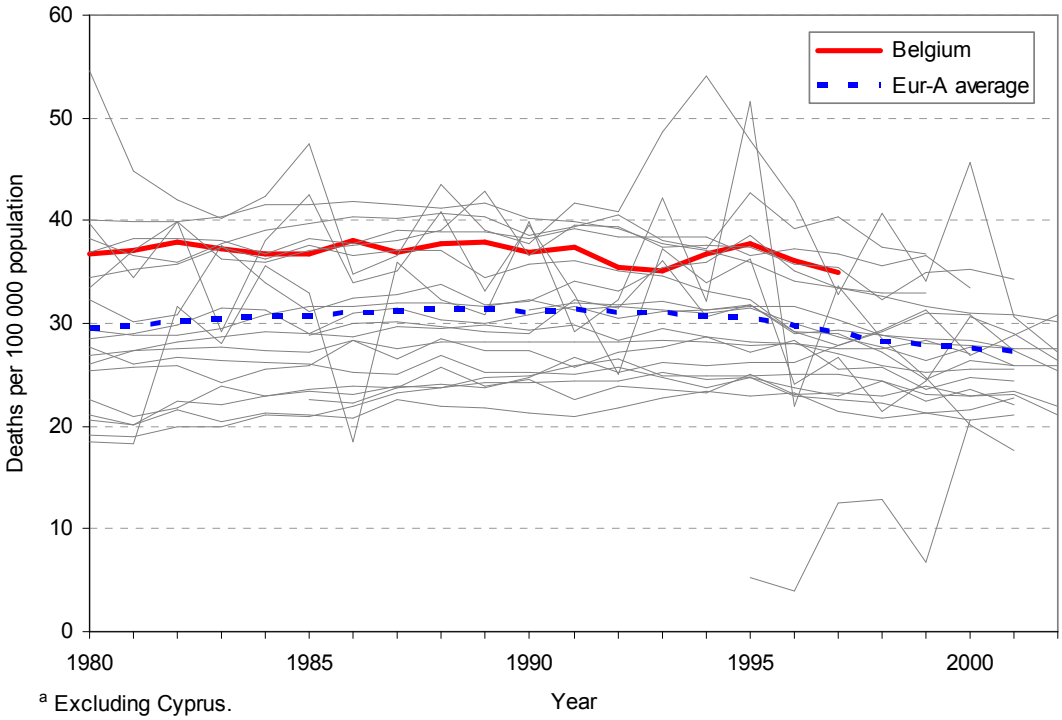
SDR for for trachea, bronchus and lung cancer in females, all ages, Belgium and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

For breast cancer mortality, Belgian women are in the top end in the Eur-A, and women 25–64 years old had the highest mortality in Eur-A (Annex. Mortality data).

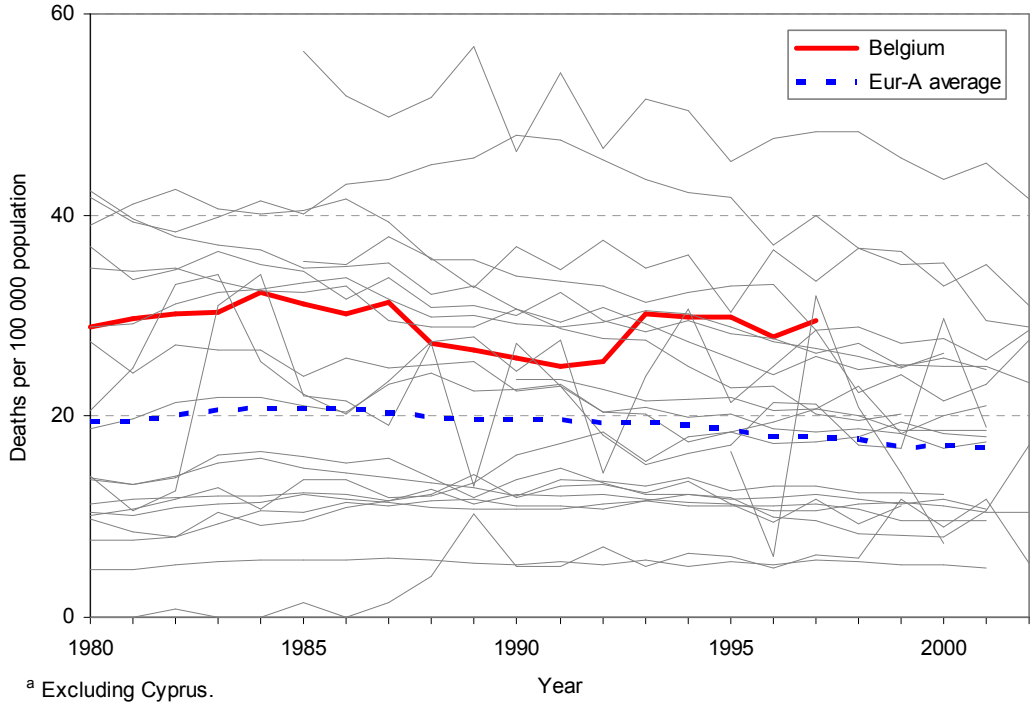
SDR for breast cancer in females, all ages,
Belgium and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

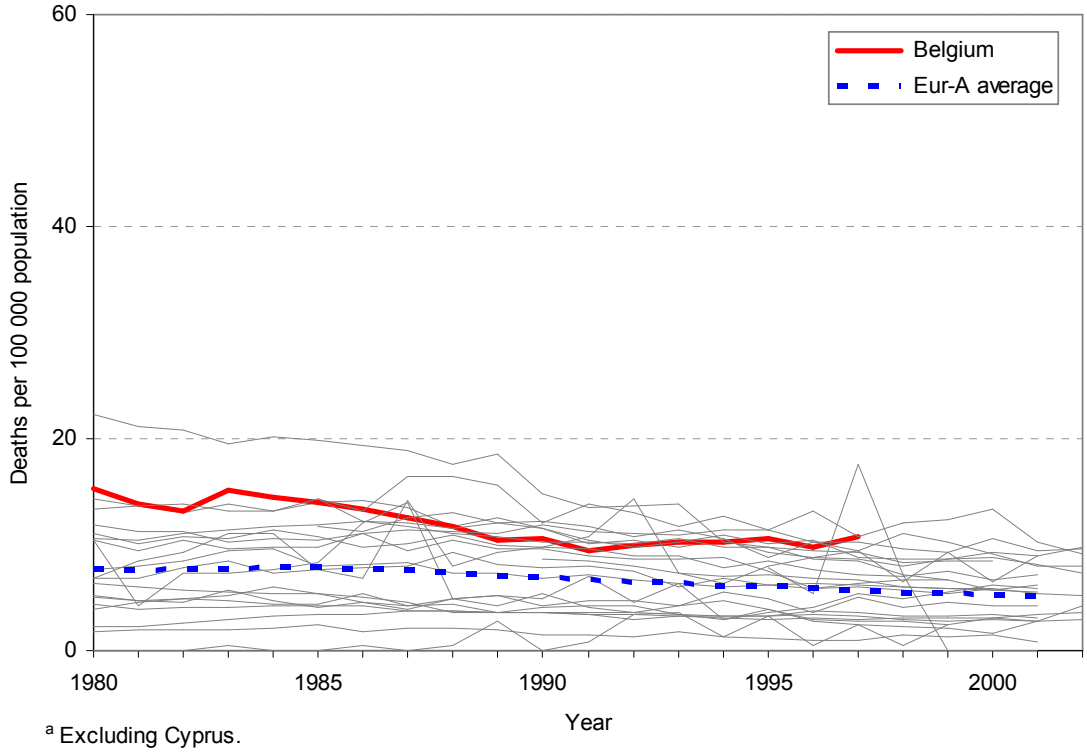
Deaths from external causes (intentional and unintentional) are relatively high and account for 8% of total deaths in Belgium. Motor vehicle traffic injuries have excess mortality compared with Eur-A (Annex. Selected mortality). Suicide rates are also high in Belgium and above the Eur-A average. Belgian women aged 25–64 years have the highest suicide rates in Eur-A (Annex. Mortality data).

SDR for suicide and self-inflicted injury in males, all ages,
Belgium and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

SDR for suicide and self-inflicted injury in females, all ages, Belgium and Eur-A[a], 1980 to latest available year



[a] Excluding Cyprus.

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. The table lists the top 10 conditions affecting males and females in Belgium in terms of DALYs. These conditions contribute to about 90% of the total disease burden in Belgium. Neuropsychiatric conditions have the highest burden of disease among both Belgian males and females. Because mortality from these conditions is minor in comparison to that from other diseases, disability comprises the bulk of their burden on the health of the population. Cancer, CVD and respiratory diseases follows as the most burdensome diseases among Belgians.

Ten leading disability groups as percentages of total DALYs for both sexes in Belgium

Rank	Males		Females	
	Disability groups	**Total DALYs (%)**	**Disability groups**	**Total DALYs (%)**
1	Neuropsychiatric conditions	23.1	Neuropsychiatric conditions	30.4
2	Malignant neoplasms	17.6	Malignant neoplasms	15.5
3	Cardiovascular diseases	16.6	Cardiovascular diseases	14.0
4	Respiratory diseases	8.4	Respiratory diseases	7.8
5	Unintentional injuries	7.9	Musculoskeletal diseases	5.1
6	Digestive diseases	5.2	Sense organ diseases	4.9
7	Intentional injuries	4.7	Digestive diseases	4.9
8	Sense organ diseases	4.1	Unintentional injuries	3.8
9	Musculoskeletal diseases	3.1	Intentional injuries	2.2
10	Respiratory infections	1.5	Endocrine disorders	1.7

Source: Background data from WHO (2003e).

Main risk factors

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

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

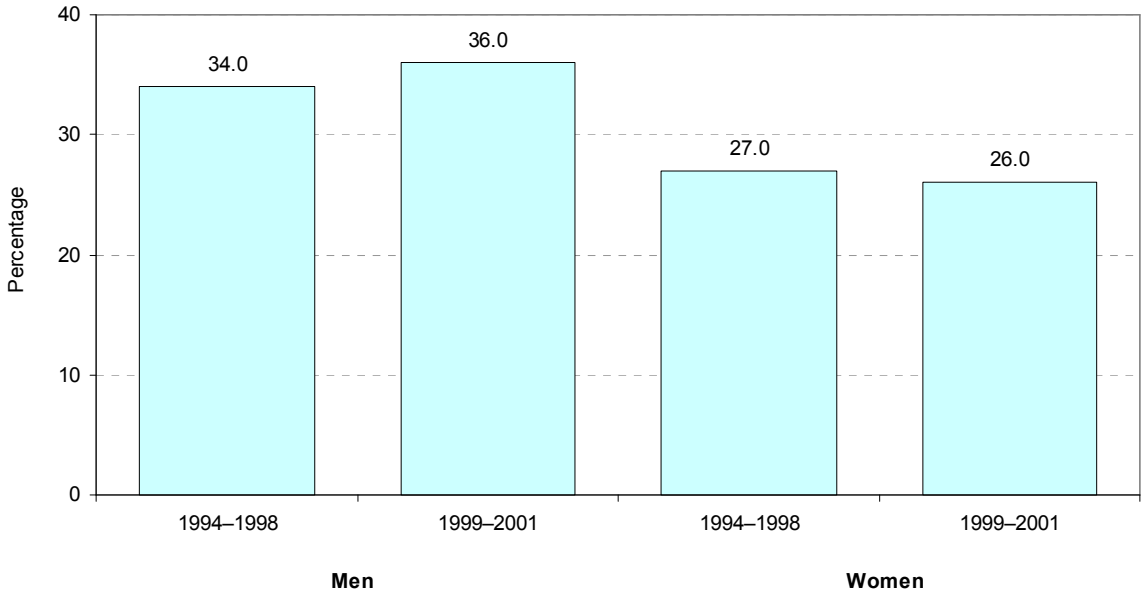
Source: WHO (2002).

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).

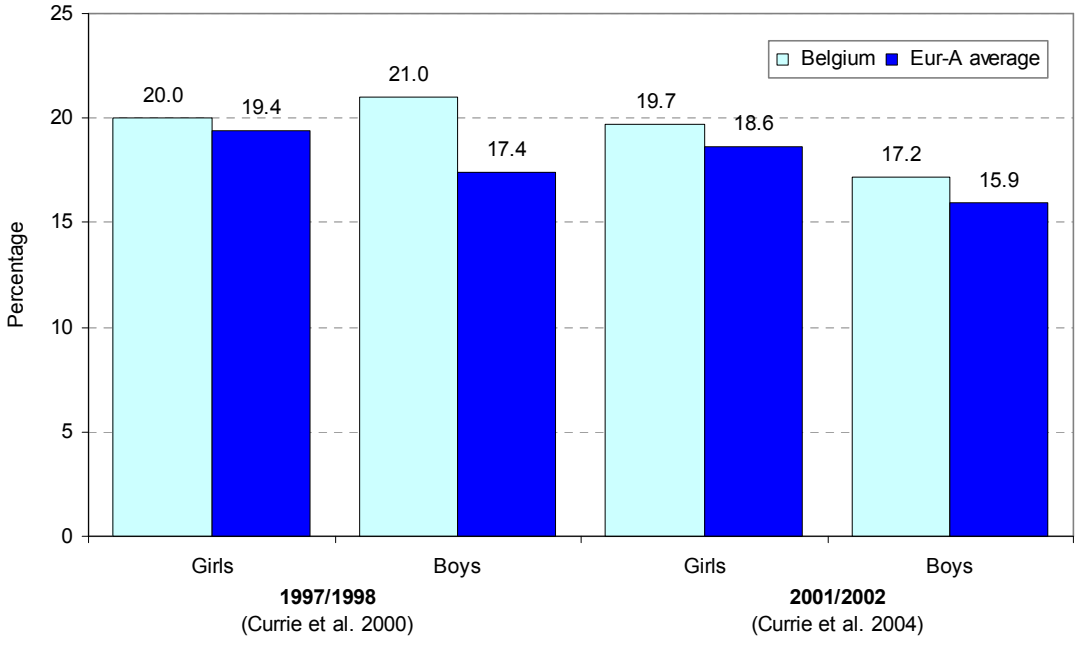
In 2000, Belgians consumed about 5% fewer cigarettes per person than the Eur-A average based on official statistics for production, import and export. (Not included is consumption of additional cigarettes available unofficially, for example, through smuggling across borders and bootlegging.). The smoking prevalence is 36% for men; this has increased since 1994 while decreasing slightly to 26% for women. The smoking prevalence among males and females 15 years old has decreased since 1997/1998 but is still slightly higher than the Eur-A average.

Smoking prevalence among adults in Belgium



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

Fifteen-year-olds who smoke every day, Belgium and Eur-A[a] average



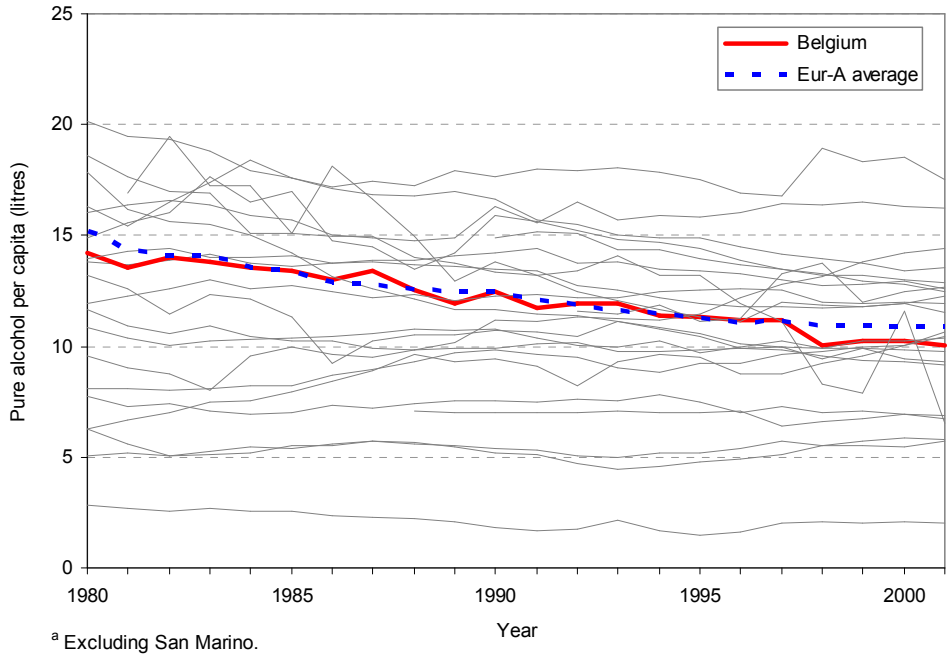
[a] Excluding Cyprus, Iceland, Luxembourg and San Marino.

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 2001, pure alcohol consumption levels in Belgium were about 7% less than in the Eur-A as a whole.

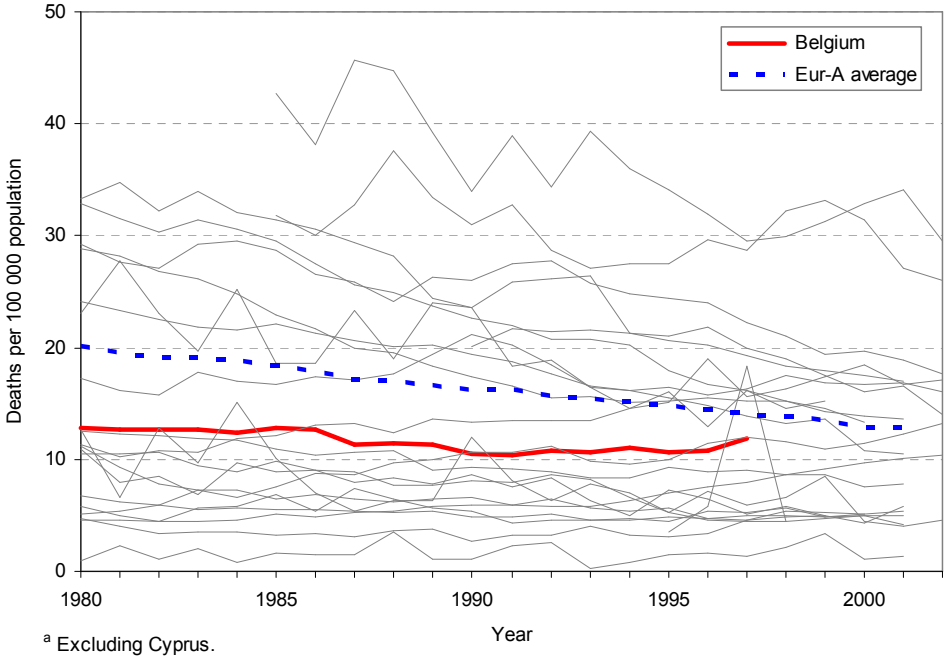
Alcohol consumption in the group aged 15+ years,
Belgium and Eur-A[a], 1980 to latest available year



[a] Excluding San Marino.

Mortality from liver cirrhosis is the classic indicator of harm from chronic excessive drinking. Belgium has a lower death rate from chronic liver disease and cirrhosis than the Eur-A but seems to be approaching the average.

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

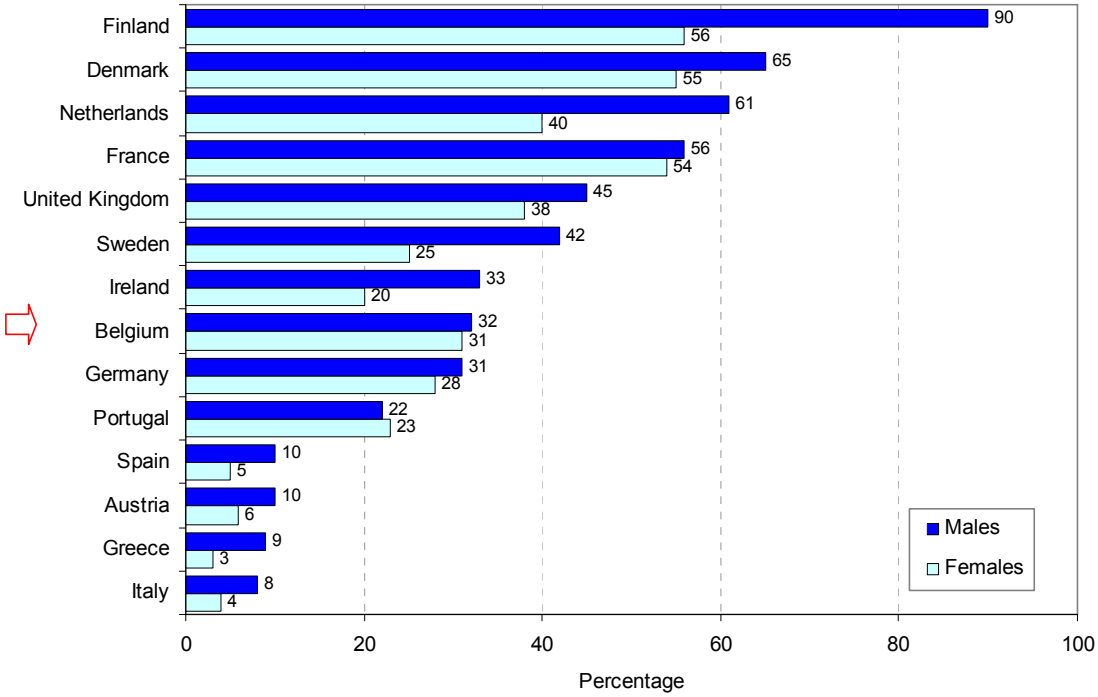


[a] Excluding Cyprus.

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. The figure below is therefore descriptive, showing where alcohol was the major risk factor in

deaths due to cirrhosis in a particular country. For Belgium in the period 1987–1995, alcohol accounted for 32% of all deaths from liver cirrhosis among men and 31% among women (Hemström et al., 2002).

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



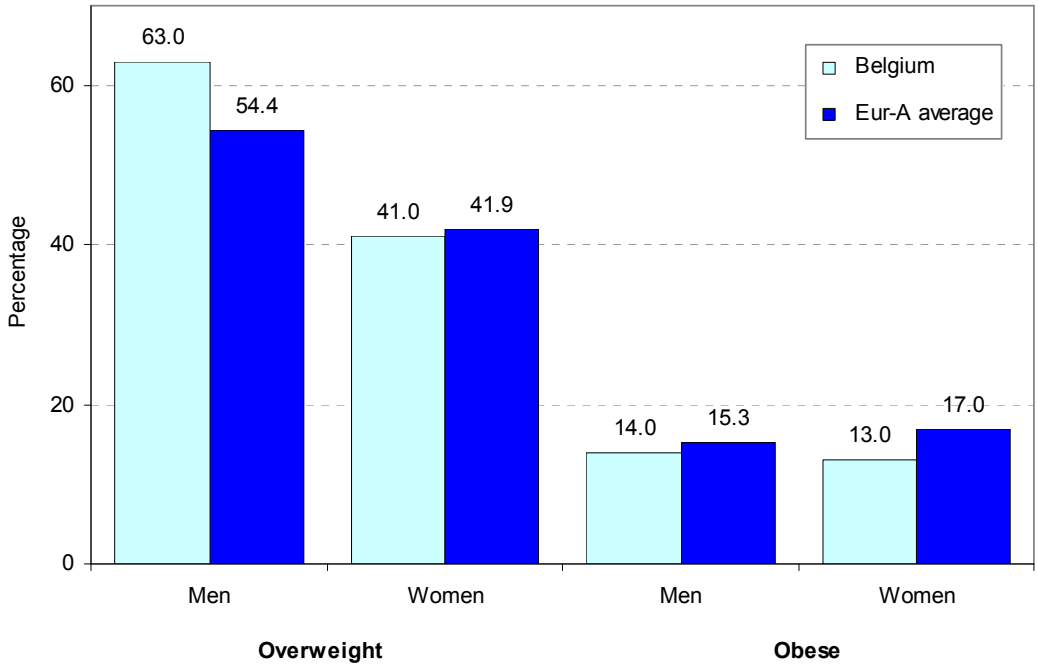
Note: Data for Germany refer to the territory of the Federal Republic of Germany as up to 3 October 1990.
Source: Hemström et al. (2002).

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).

In Belgium, 63% of men and 41% of women are overweight according to the recommended BMI. For males this is well above the Eur-A average and for women slightly below. About 14% of men and 13% of women are obese (Robertson et al., 2004).

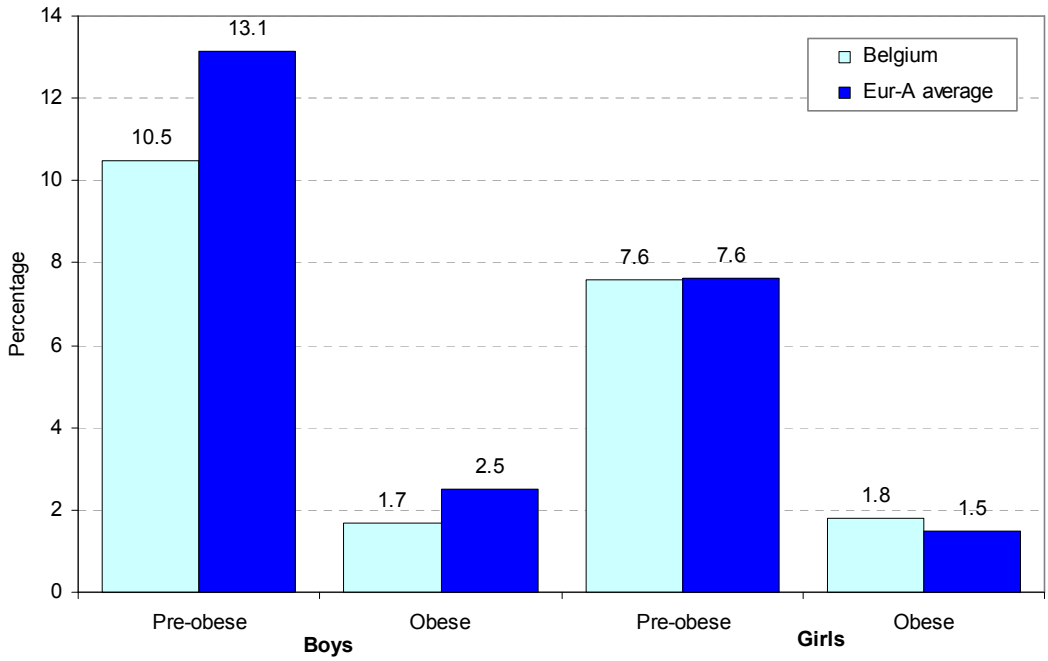
Overweight and obese adults, Belgium and Eur-A[a] average



[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.

According to self-reported data on height and weight collected in schools, adjusted to correspond to adult BMI, among 15-year-olds in Belgium, 11% of boys are pre-obese and 2% are obese; 8% of girls are pre-obese and 2% are obese.

Pre-obese and obese 15-year-olds by sex, Belgium and Eur-A[a] average

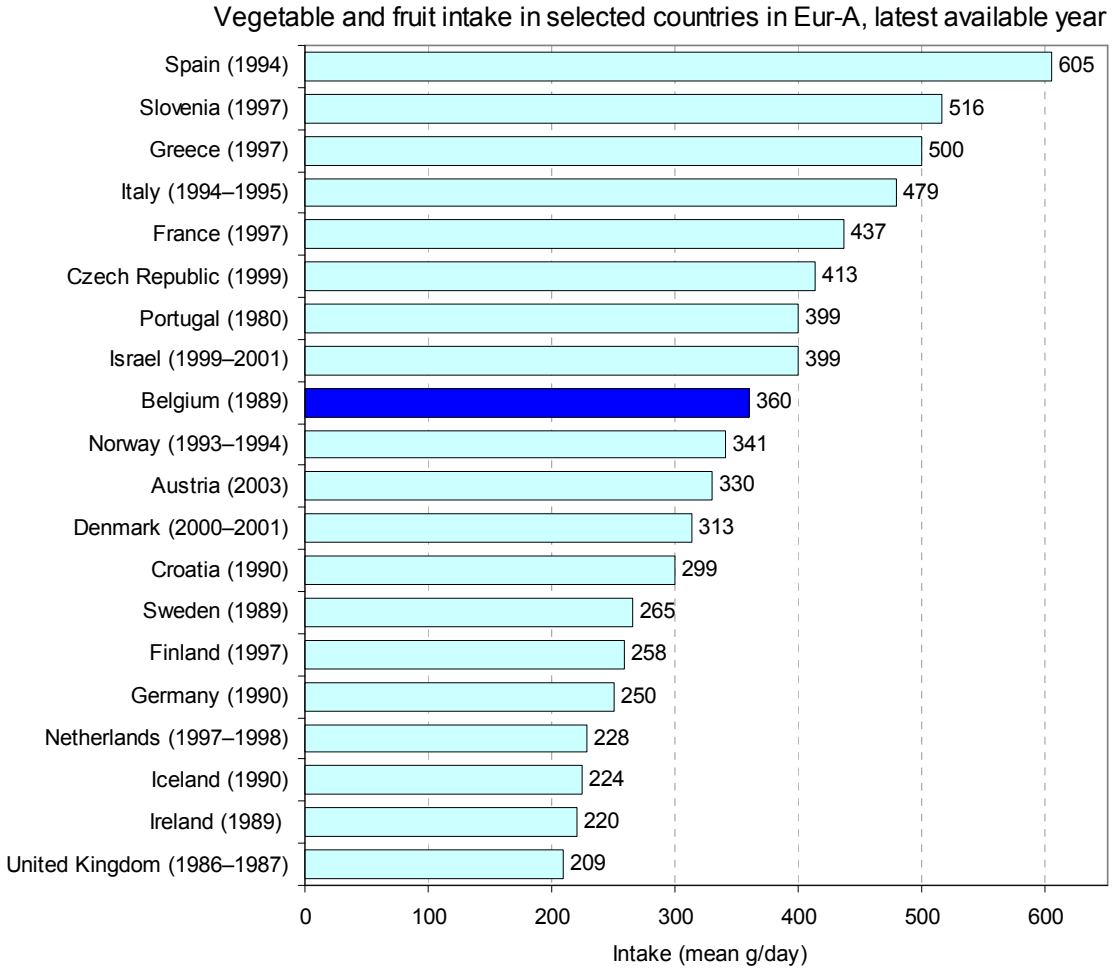


[a] Excluding Cyprus, Iceland, Luxembourg and San Marino.
Sources: Mulvihill et al. (2004) and the Danish Nutrition Council (2003) for data on Denmark.

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. The average intake in Belgium is 360 g. 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).



Sources: WHO Regional Office for Europe (2004c), 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).

The Health Interview Survey of Belgium in 2001 found that 28% of males and 36% of females 15 years of age and over were sedentary. For people 65 years and older, the figures were 37% for men and 56% for women (CenStat, 2001; WHO, 2004a).

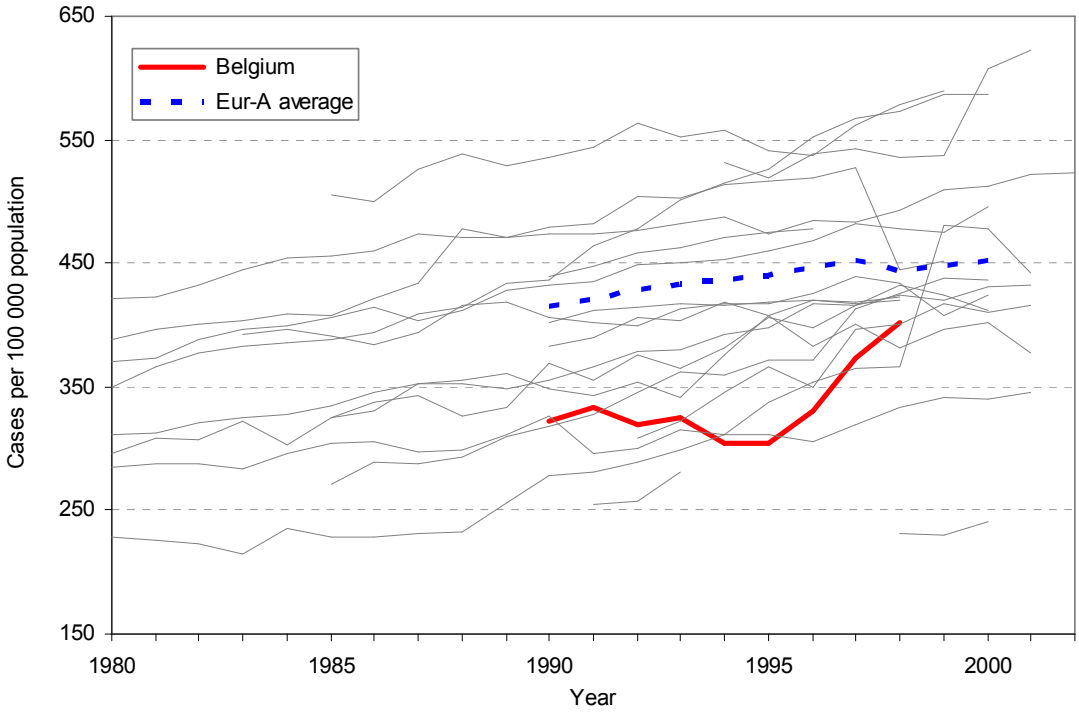
Selected causes of illness

Cancer

Cancer accounts for 29% of deaths in Belgium, whereas the combination of death and illness due to cancer, represented as DALYs (see table on disability groups), accounts for 16–18% of the disease burden among Belgian males and females. Together the indicators show that the burden of cancer to the population is mainly attributable to death as opposed to long-term illness.

For the period 1990 to 1998, for which an average Eur-A incidence rate can be calculated, Belgium experienced a 25% increase, whereas the average Eur-A incidence rose by about 4%.

Cancer incidence in Belgium and Eur-A[a], 1980 to latest available year

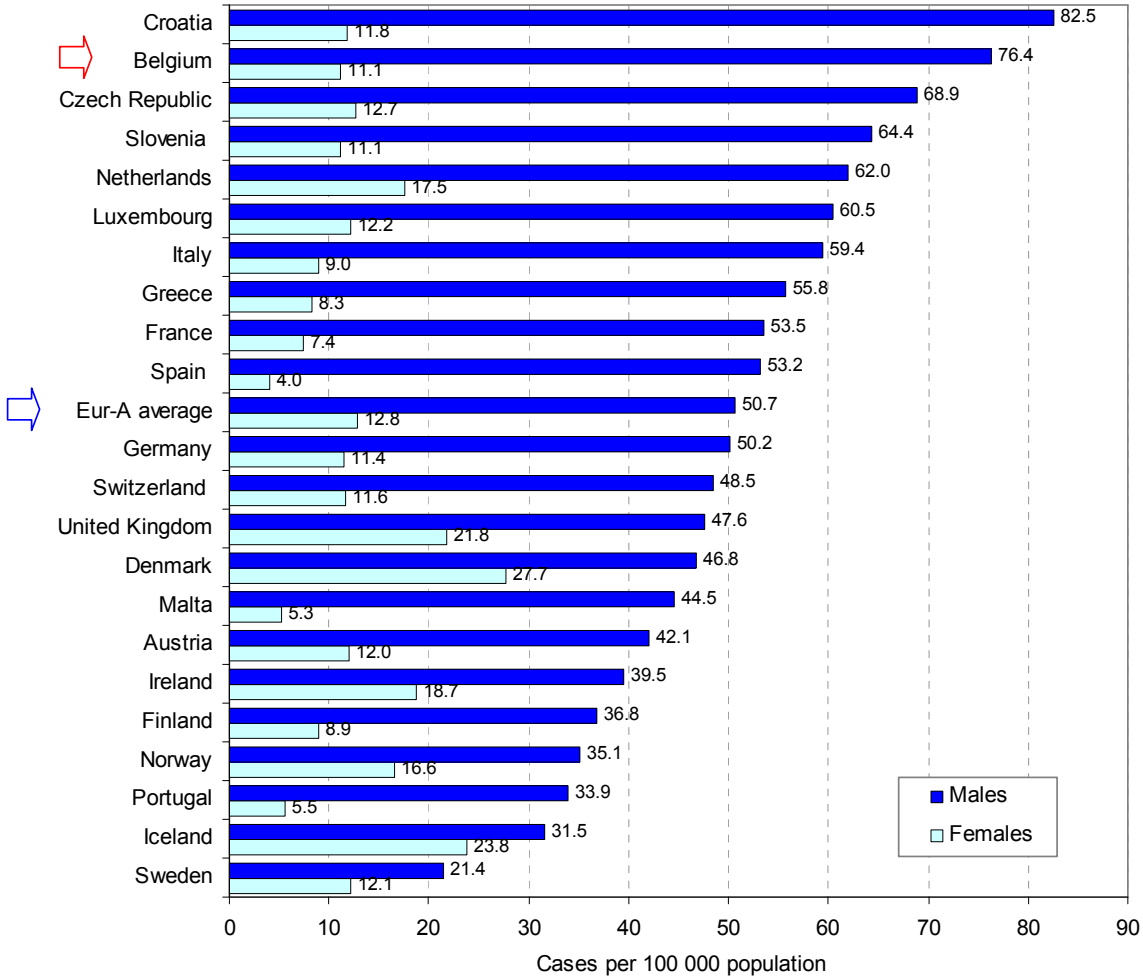


[a] Excluding Greece, San Marino, Spain and Switzerland.

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 Belgian men was the second highest in Eur-A, more than 50% over the average level. For Belgian women, the estimated incidence of lung cancer was at about the same level as the average estimate for Eur-A women.

Estimated lung cancer incidence in Belgium and Eur-A[a], 2000

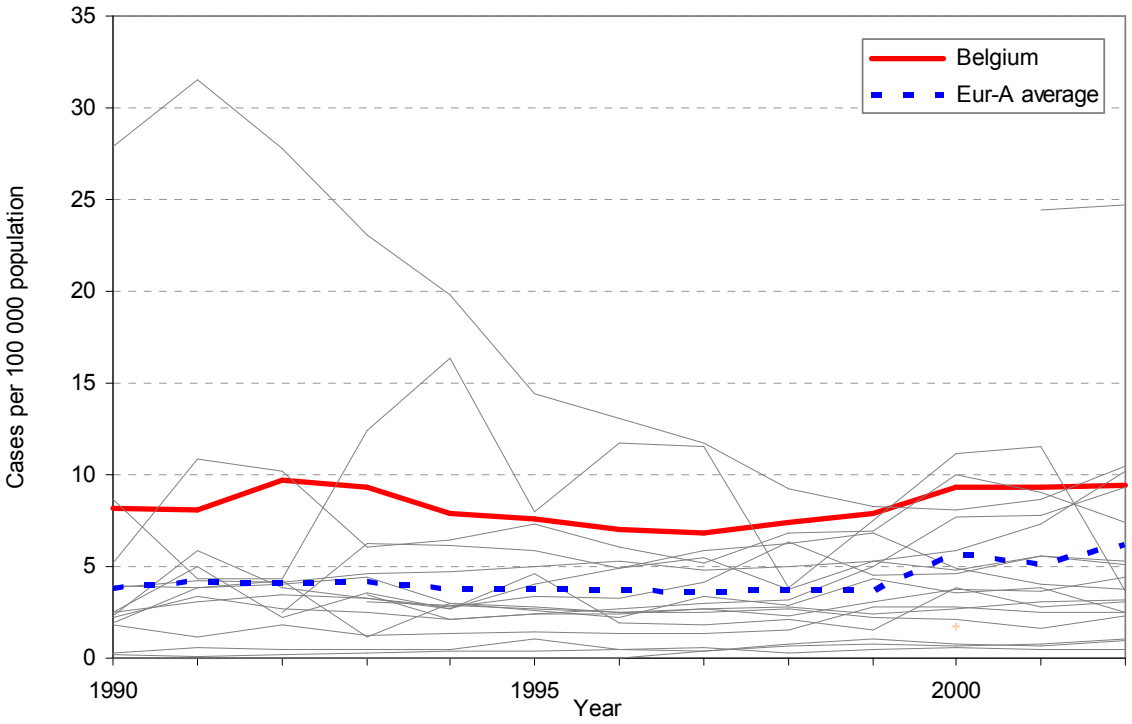


[a] Excluding Cyprus, Israel and San Marino.
Source: Tyczynski et al. (2002).

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, b).

New registered cases of HIV, Belgium and Eur-A[a], 1990 to latest available year



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

The HIV infection rate in Belgium has been relatively stable in the past few years but is still high compared with the Eur-A rate. In 2002, the rate of newly diagnosed HIV infection was 9.4 per 100 000 population in Belgium (EuroHIV, 2003b).

As of 30 June 2003, 16 371 people had been diagnosed with HIV since the start of the epidemic. The annual incidence of new HIV cases has been relatively stable, with peaks in 1987 (928 cases), 1992 (977 cases) and most recently in 2002 (981 cases). The recent increases are particularly notable. Following a steady decline in the number of new cases between 1992 and 1997, the number of new cases increased by 42% between 1997 and 2002. The number of new cases reported in 2003 is the highest number of annual cases since reporting began.

Of those with a known transmission group (9686), most cases are heterosexual (57%) or homosexual and bisexual (29%). A further 6% are injecting drug users.

Analysis of transmission, sex and nationality reveals that, among men who are Belgian nationals, 67% of cases are acquired through homosexual or bisexual transmission and 5% through drug injection. Among women who are Belgian nationals, 76% of cases are heterosexual transmission.

Among both men and women who are not Belgian nationals, most cases are heterosexual (62% for men and 86% for women). Overall, of the cases with known nationality (11 075), 60% are non-Belgian nationals. The majority of these originate from sub-Saharan Africa.

Although the incidence of AIDS has continued to decline among Belgian nationals, the incidence among non-Belgian nationals has remained relatively stable or increased slightly, especially for non-residents who were diagnosed shortly after arriving in the country. Since 1997, most new AIDS cases have been among non-Belgian nationals.

This suggests two distinct epidemics – one that is relatively stable or declining among Belgian nationals and another that appears to be increasing among non-Belgian nationals (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.

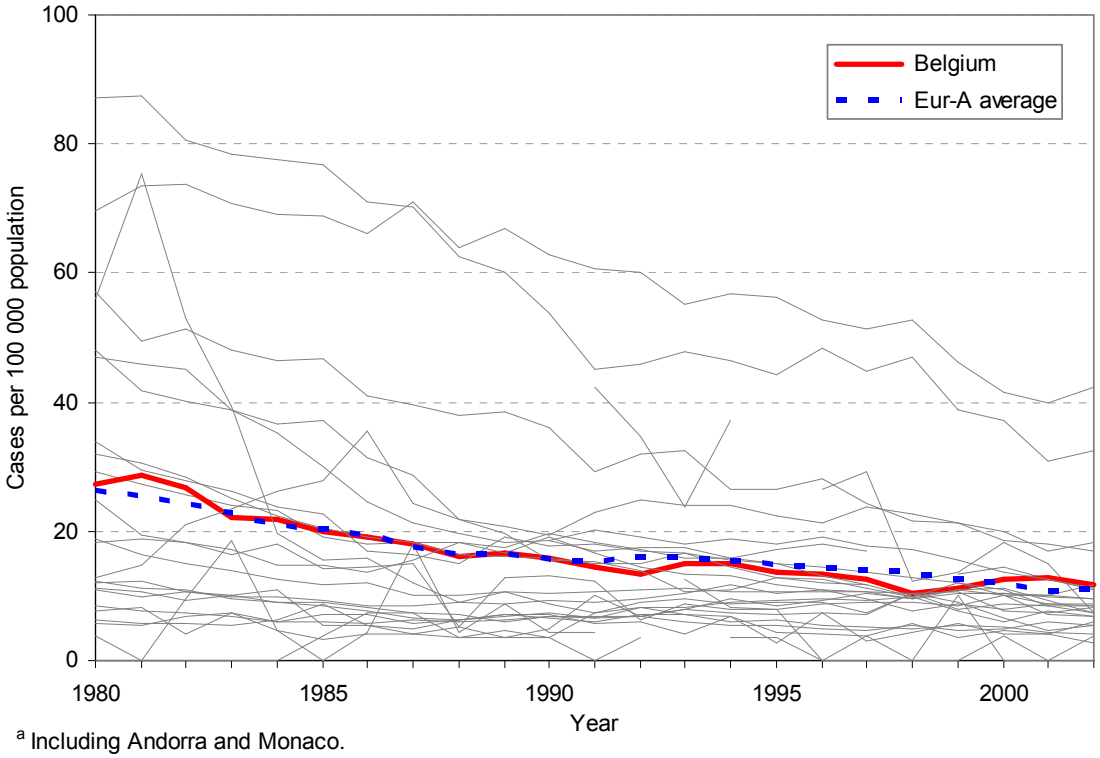
In Belgium, limited local testing at needle exchange locations found that about 39% of injecting drug users were infected with hepatitis C (EMCDDA, 2003).

TB

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.

The incidence of TB in Belgium has dropped by 14% since 1995 versus a 26% decline in the Eur-A countries overall. In 2002, the rate for Belgium was close to the average for the Eur-A: 11.7 versus 10.9 per 100 000 population, respectively.

TB incidence in Belgium and Eur-A[a], 1980 to latest available year

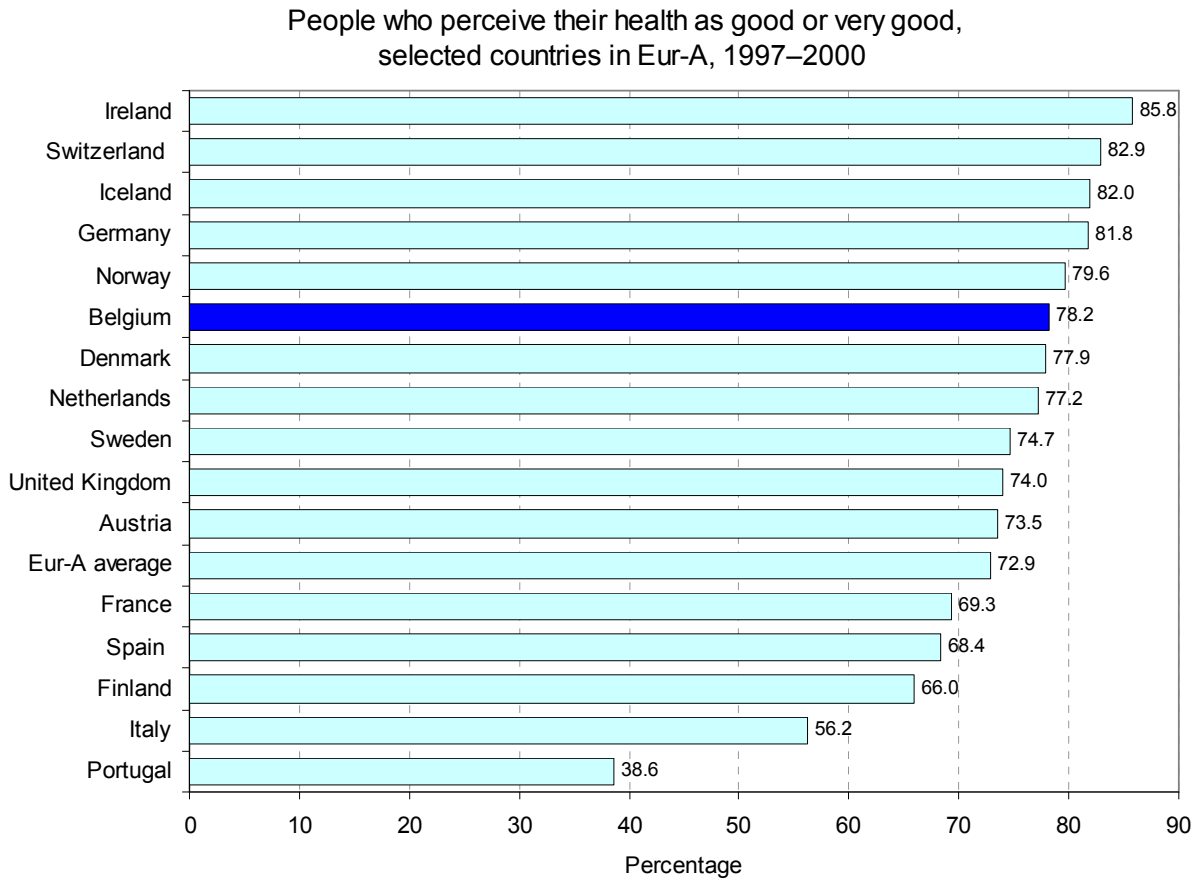


[a] Including Andorra and Monaco.

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.

Self-reported health status in Belgium showed that 78% of adults rated their health as being good or reasonably good versus 73% in the Eur-A (Kasmel et al., 2004).



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

Health system[1]

Organizational structure of the health system

Belgium has a compulsory health care system based on the social health insurance model. Health care is publicly funded and mainly privately provided. The National Institute for Sickness and Disability Insurance oversees the general organization of the health care system, transferring funds to the not-for-profit and privately managed sickness funds. Patients have free choice of provider, hospital and sickness fund.

A comprehensive benefit package is available to 99% of the population through compulsory health insurance. Reimbursement by individual sickness funds depends on the nature of the service, the legal status of the provider and the status of the insured person. A distinction is made between those receiving standard reimbursement and those benefiting from increased reimbursement (vulnerable social groups).

Substitutive health insurance covers 80% of self-employed people for minor risks. Sickness funds offer the insured people complementary health insurance. Private for-profit insurance remains very small in terms of market volume but has also risen steadily as compulsory insurance coverage has declined.

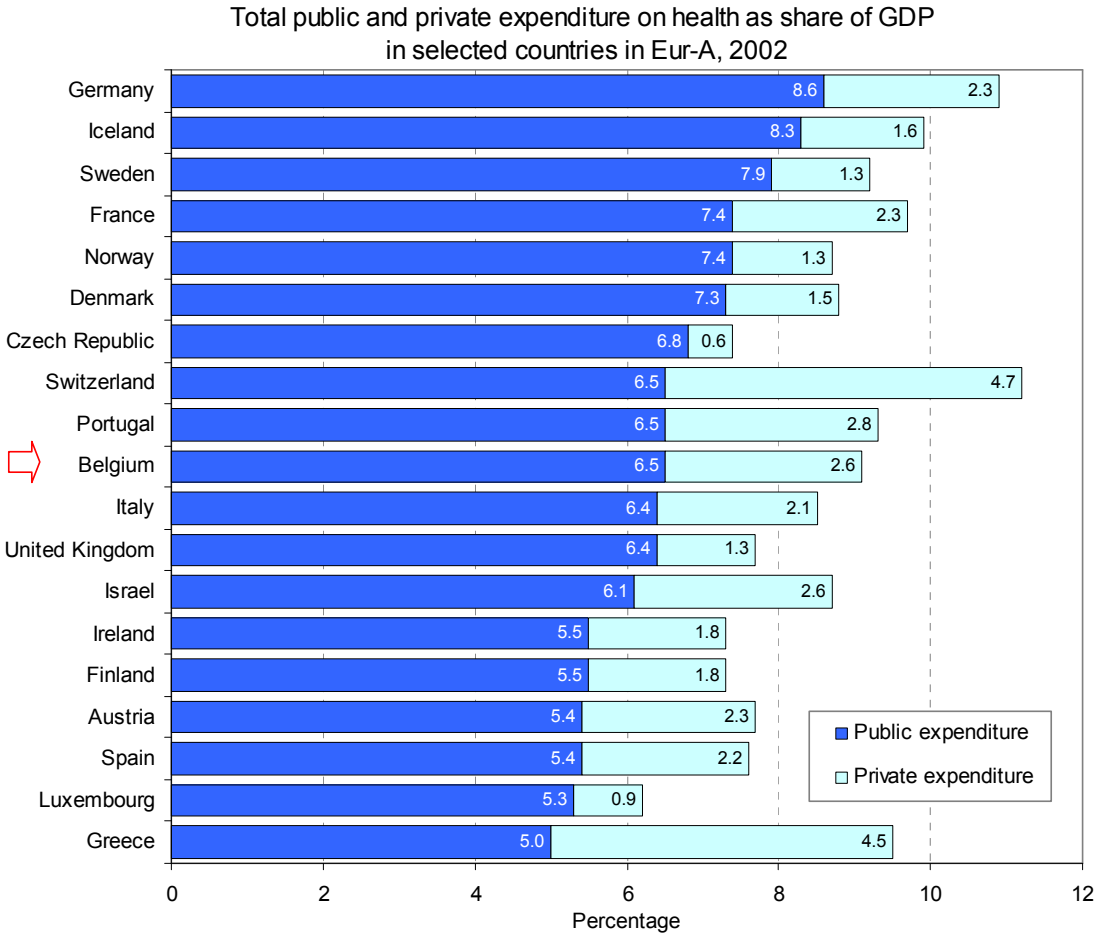
The federal government regulates and supervises all sectors of the social security system, including health insurance. However, responsibility for almost all preventive care and health promotion has been transferred to the communities and regions.

Health care financing and expenditure

Statutory health insurance is mainly financed through employer and employee income contributions. Different schemes exist for salaried workers and self-employed people, although these will merge by July 2006. Currently, extra funding from part of the revenue from the value-added tax is distributed between these two schemes. Sickness funds are funded partly through a risk-adjusted prospective budget as well as retrospectively based on their individual share of total expenditure. Further state subsidies are allocated to cover administrative costs. Patients finance 19.1% of health expenditure, mainly through out-of-pocket payments but also through voluntary health insurance premiums.

In 2002, total health expenditure was above the Eur-A average and accounted for 9.1% of GDP, 71% coming from public sources. Calculated in purchasing power parity in United States dollars, health care expenditure amounted to US$ 2515 per capita (Annex. Total expenditure on health).

[1] This section is based on publications of the European Observatory on Health Care Systems and Policies (2000, 2002a–c).



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

A fixed annual budget for compulsory health insurance and sectoral target budgets are set at the federal and community level. Delivery of health care in Belgium is mainly private. Most doctors, dentists, pharmacists and physiotherapists are self-employed and paid on a fee-for-service basis. The fees are negotiated at the national level between the National Committee of Sickness Funds and the provider representatives. Other health care professionals are mainly salaried. Hospitals are mostly financed through a dual structure: a fixed prospective lump-sum is allocated for accommodation services and fee-for-service payment exists for medical and technical services.

Health care provision

Primary care is mainly privately delivered by solo general practitioners and specialists. There is no referral system. In 2002, the average number of physician contacts per person was relatively high, 7.3, versus the average for the 15 countries that comprised the European Union before May 2004 of 6.2.

In 2001, Belgium had 5.8 acute hospital beds per 1000 population, above the Eur-A average of 4.1. In 2003 there were 218 not-for-profit hospitals: 149 general hospitals and 69 psychiatric hospitals. The majority of hospitals (147) are private. The hospital legislation and financing mechanism are the same in both the public and private sector. Between 1980 and 2003, the number of hospitals dropped from 521 to 218 and the average capacity of a hospital rose from 177 to 325 beds. Of the 218 hospitals, 55% were located in the Flemish region, 30% in the Walloon region and 15% in the Brussels region.

The Communities are responsible for health promotion and preventive services, except for national preventive measures. Different public health policies and services are provided in the French and Flemish Community.

In 2002, there were 4.5 physicians per 1000 population (Annex. Selected health care resources). In the last 30 years, the number of personnel in most health care professions in Belgium has doubled or even

tripled due mainly to a lack of supply-side control. Until recently, there was no limit on the entry of trainees into these professions, resulting in very high ratios of doctors to population and nurses to population compared with the rest of western Europe.

Developments and issues

The Belgian health system provides comprehensive health care coverage to almost the whole population while maintaining a wide degree of choice for the insured people and the providers.

Cost containment and improving access to health care services have been the two main objectives for the Belgium government since the 1980s.

In the hospital sector, a change in the financing system from per diem rates to a prospective diagnosis-related group payment scheme has been quite successful in controlling costs. Hospital financing, previously based on structural features such as the number of accredited beds, now takes the "justified activity of the hospital" into account. This justified activity is based on the case-mix of the hospital and the average national length of stay per diagnosis-related group. To stimulate day care, one day of hospitalization is integrated into the calculation of the justified activity.

In pharmaceutical policy, the reimbursement procedures were simplified, the revision process for new and existing medicines was improved using scientific methods and a reference reimbursement system was introduced to promote generics.

The efficiency gains from giving greater financial responsibility to sickness funds has been constrained, since they are not allowed to contract with providers, leaving sickness funds with limited influence over providers' behaviour.

Other measures introduced have consisted mainly of tariff cuts, supply restrictions and increases in co-payment. Nevertheless, these have not yet resulted in successfully curbing public expenditure. In this context, the division of power between the federal and regional government is regarded as an additional challenge.

To improve access to health care, a system of preferential reimbursement and social and fiscal exemptions was introduced. Because the social exemption only applies to certain social categories and the fiscal exemption provides only for reimbursement after a period of two years on average, the system of a "maximum invoice" was introduced. The maximum invoice aims to improve access by limiting, for example, a family's out-of pocket payments for health care to a maximum amount. This varies in accordance with family income or the social category to which the entitled person belongs.

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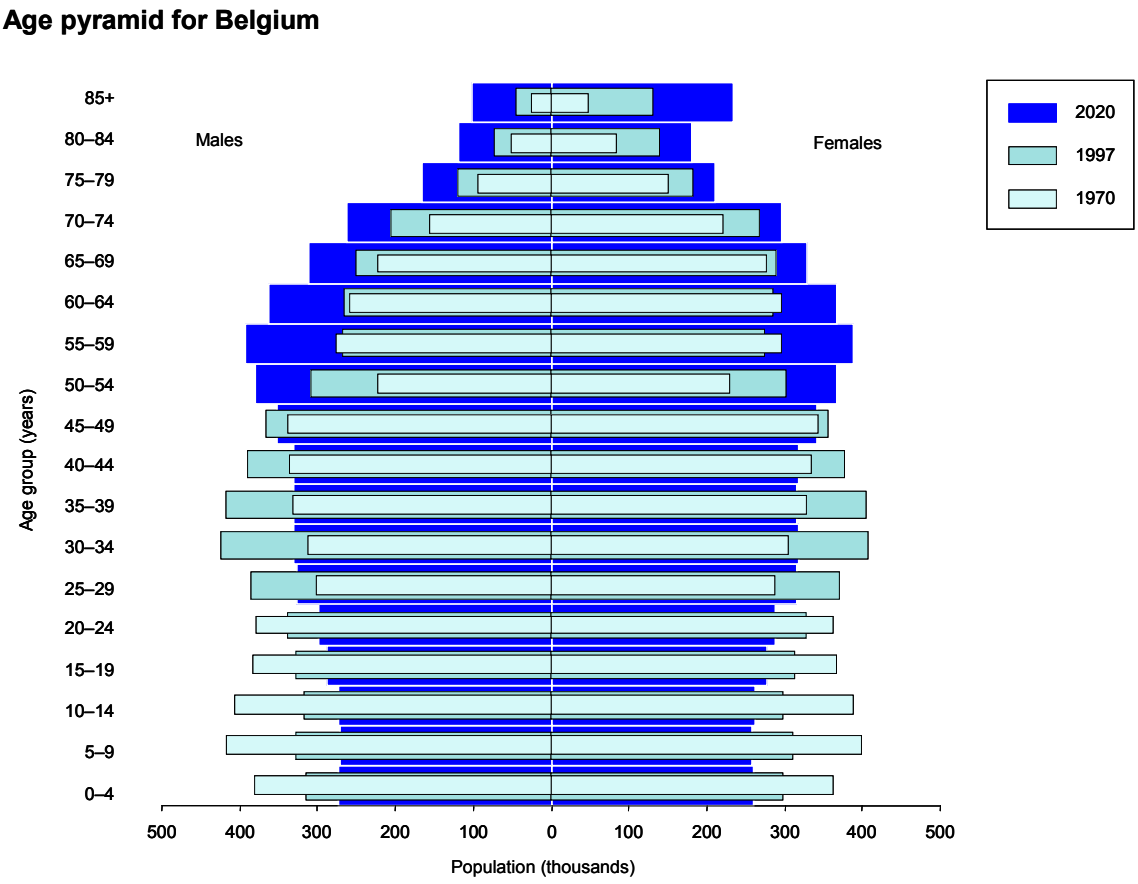
Annexes

Annex. Age pyramid



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

Annex. Selected mortality

Selected mortality in Belgium compared with Eur-A averages

Condition	SDR per 100 000		Excess mortality in Belgium (%)	Total deaths in Belgium (%)	Total deaths in Eur-A (%)
	Belgium (1997)	Eur-A average (2001)			
Selected noncommunicable conditions	569.7	519.5	9.7	79.1	79.9
Cardiovascular diseases	246.4	246.3	0.0	34.2	37.9
Ischaemic heart disease	82.1	97.3	– 15.7	11.4	15.0
Cerebrovascular disease	59.9	62.0	– 3.3	8.3	9.5
Diseases of pulmonary circulation and other heart disease	85.0	57.0	49.2	11.8	8.8
Malignant neoplasms	206.6	181.8	13.6	28.7	28.0
Trachea/bronchus/lung	52.4	37.0	41.8	7.3	5.7
Female breast	35.0	27.1	29.2	4.9	4.2
Colon/rectal/anal	22.1	20.7	6.8	3.1	3.2
Prostate	34.6	25.0	38.5	4.8	3.8
Respiratory diseases	68.6	47.7	43.7	9.5	7.3
Chronic lower respiratory diseases	33.0	20.0	64.7	4.6	3.1
Pneumonia	20.7	16.5	25.5	2.9	2.5
Digestive diseases	32.6	30.7	5.9	4.5	4.7
Chronic liver disease and cirrhosis	11.8	12.8	– 7.4	1.6	2.0
Neuropsychiatric disorders	15.5	13.0	19.6	2.2	2.0
					0.0
Selected communicable conditions	9.0	8.1	12.0	1.3	1.2
HIV/AIDS	0.8	0.9	– 7.9	0.1	0.1
External causes	54.3	39.5	37.5	7.5	6.1
Selected unintentional causes	22.4	16.1	39.4	3.1	2.5
Motor vehicle traffic injuries	13.6	10.0	36.3	1.9	1.5
Falls	8.8	6.1	44.3	1.2	0.9
Selected intentional causes	21.3	11.4	86.9	3.0	1.8
Self-inflicted (suicide)	19.6	10.5	87.6	2.7	1.6
Violence (homicide)	1.7	1.0	80.2	0.2	0.1
Ill-defined conditions	20.4	21.3	– 4.3	2.8	3.3
All causes	720.0	650.1	10.8	100.0	100.0

Annex. Mortality data

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

Causes of death	Sex	Belgium (1997)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	Both	18.3	– 22.0	17.0	– 20.4	12.9	28.2
	M	20.5	– 21.5	19.2	– 20.3	12.6	32.2
	F	16.0	– 22.6	14.8	– 20.4	4.9	24.1
Cardiovascular diseases	M	1.0	– 37.9	0.9	– 26.0		1.8
	F	0.4	– 45.8	1.0	– 21.8		1.6
Ischaemic heart disease	M	0.0			– 75.0		0.6
	F	0.0			– 66.7		0.2
Cerebrovascular disease	M	0.1	– 81.0	0.2	– 44.4		0.4
	F	0.3	8.7	0.2	– 39.4		0.7
Malignant neoplasms	M	4.6	56.7	3.3	– 15.4		5.1
	F	3.7	34.7	2.7	– 10.4		4.9
Lung cancer	M	0.0			– 80.0		0.2
	F	0.0					0.3
Breast cancer	F	0.1			– 100.0		0.1
Respiratory diseases	M	0.7	94.4	0.8	– 13.7		3.0
	F	0.4	– 59.8	0.7	– 11.9		2.4
Digestive diseases	M	0.2	– 31.4	0.3	– 21.6		0.7
	F	0.3	8.0	0.2	– 25.0		2.6
External causes	M	9.3	– 24.7	6.4	– 30.7	3.5	20.3
	F	6.2	– 23.6	4.0	– 24.3		7.0
Motor vehicle traffic injuries	M	3.4	– 34.9	2.7	– 30.3		8.0
	F	2.9	– 17.6	1.8	– 29.3		4.1
Suicide	M	0.7	– 39.6	0.4	– 11.9		0.7
	F	0.0		0.1	0.0		0.6

NA = not applicable. Blank = rate < 0.1

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

Causes of death	Sex	Belgium (1997)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	63.2	– 6.8	53.1	– 13.2	37.4	69.7
	M	90.9	– 5.3	77.8	– 13.0	59.4	110.2
	F	34.8	– 10.7	27.7	– 13.2	13.9	34.8
Cardiovascular diseases	M	3.6	7.2	3.3	– 12.1		5.7
	F	1.6	– 49.1	1.8	– 13.1		2.9
Ischaemic heart disease	M	0.3	106.7	0.3	– 15.0		1.6
	F	0.0		0.1	– 7.7		0.7
Cerebrovascular disease	M	1.4	14.8	0.7	– 13.6		1.4
	F	0.5	– 22.2	0.4	– 24.1		1.4
Malignant neoplasms	M	6.2	52.0	5.4	– 7.9		15.5
	F	4.3	2.1	3.7	– 7.9		7.0
Lung cancer	M	0.2		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	0.9	– 38.8	1.1	– 25.7		4.5
	F	0.7	– 58.6	0.8	– 18.8		2.0
Digestive diseases	M	0.2	– 86.0	0.5	– 28.8		1.2
	F	0.2	– 66.0	0.3	– 30.4		1.1
External causes	M	71.6	– 7.1	54.9	– 12.0	33.0	96.5
	F	22.5	– 6.0	14.3	– 14.8	6.9	23.5
Motor vehicle traffic injuries	M	38.2	– 6.0	30.2	– 9.3	14.9	71.1
	F	11.9	– 6.3	8.1	– 10.7	2.6	14.3
Suicide	M	19.1	– 9.8	11.2	– 11.5		36.7
	F	5.4	– 11.6	2.5	– 24.3		7.5

NA = not applicable. Blank = rate < 0.1

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

Causes of death	Sex	Belgium (1997)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	351.8	– 4.8	315.4	– 13.1	218.8	449.7
	M	465.1	– 5.9	425.4	– 14.3	276.0	661.7
	F	240.9	– 2.9	208.4	– 11.0	128.0	322.5
Cardiovascular diseases	M	115.4	– 3.5	110.6	– 20.8	72.2	225.0
	F	42.7	– 3.7	38.2	– 21.3	23.4	74.7
Ischaemic heart disease	M	60.9	– 5.0	59.8	– 24.6	35.2	108.6
	F	14.7	– 12.2	13.6	– 28.0	5.4	28.6
Cerebrovascular disease	M	18.5	9.6	17.4	– 22.0	7.5	56.6
	F	12.7	14.2	10.5	– 20.2	5.2	27.0
Malignant neoplasms	M	167.3	– 7.2	148.8	– 9.8	91.0	217.2
	F	113.9	– 4.4	102.4	– 7.7	76.1	155.2
Lung cancer	M	64.6	– 8.5	43.9	– 12.8	18.5	71.0
	F	13.8	4.9	13.3	11.7	6.9	32.8
Breast cancer	F	37.2	– 7.0	27.5	– 14.3	14.7	37.2
Respiratory diseases	M	25.0	– 8.7	15.8	– 19.2	8.5	29.7
	F	11.4	0.4	7.9	– 12.3	3.7	22.6
Digestive diseases	M	29.9	13.6	31.8	– 9.6	3.1	67.0
	F	15.4	8.2	13.4	– 7.5	4.2	26.2
External causes	M	85.2	– 4.8	59.9	– 10.5	28.2	120.7
	F	32.1	4.2	17.8	– 10.6		33.1
Motor vehicle traffic injuries	M	21.5	– 13.0	15.8	– 7.8	6.5	34.0
	F	6.5	– 3.1	4.3	– 14.4		7.4
Suicide	M	39.1	1.2	21.2	– 9.0	6.6	56.4
	F	15.8	10.3	6.8	– 11.1		15.8

NA = not applicable. Blank = rate < 0.1

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

Causes of death	Sex	Belgium (1997)		Eur-A (2001)			
		Rate	Change (%)	Average	Change (%)	Minimum	Maximum
All causes	All	4654.5	– 2.5	4199.5	– 11.5	3714.4	6010.0
	M	6202.1	– 3.1	5328.5	– 13.2	4658.1	7580.8
	F	3706.1	– 2.0	3460.2	– 11.5	2937.7	5088.6
Cardiovascular diseases	M	2275.6	– 5.2	2232.9	– 23.4	1614.4	4272.2
	F	1586.3	– 4.7	1613.4	– 21.7	1027.5	3314.3
Ischaemic heart disease	M	812.0	– 4.2	948.2	– 20.3	517.5	1702.7
	F	409.7	– 4.4	539.5	– 17.4	244.7	1084.7
Cerebrovascular disease	M	515.3	– 4.6	536.2	– 35.9	324.8	1302.3
	F	435.3	– 2.4	457.0	– 32.6	170.4	1018.5
Malignant neoplasms	M	1819.2	– 2.1	1482.9	– 12.1	1175.1	1900.6
	F	802.7	– 2.1	749.8	– 9.4	589.1	1088.5
Lung cancer	M	615.4	– 1.5	371.8	– 22.0	196.0	615.4
	F	72.1	12.7	81.7	15.6	13.8	213.2
Breast cancer	F	138.9	– 7.1	113.9	– 10.1	83.3	164.1
Respiratory diseases	M	907.1	0.9	545.9	– 13.6	371.8	1115.6
	F	328.4	6.8	266.5	– 13.9	157.9	716.3
Digestive diseases	M	210.6	– 5.3	205.0	– 10.5	117.8	342.9
	F	167.2	3.4	143.3	– 20.3	77.8	196.0
External causes	M	185.9	– 0.2	152.6	2.0	80.6	282.8
	F	101.1	– 6.7	91.0	0.7	41.3	157.3
Motor vehicle traffic injuries	M	28.0	– 0.4	20.4	– 15.3	8.7	46.0
	F	11.2	– 10.0	7.9	5.4	0.0	15.5
Suicide	M	54.7	– 2.7	34.3	– 13.5	8.8	86.1
	F	14.3	– 21.1	9.9	– 17.6	1.1	23.6

Annex. Total expenditure on health per capita

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 (2004d) for 2001 data on Israel.

Annex. Selected health care resources

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 (2004d) and OECD (2004b) for data on physicians and acute hospital beds for the United Kingdom.

Technical notes

Calculation of averages

In general, the average annual or ten-year percentage changes have been estimated using linear regression. This gives a clearer indication of the underlying changes than estimates based on the more straightforward percentage change between two fixed points over a period.

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.

Data sources

To make the comparisons as valid as possible, data for each indicator have, as a rule, been taken from one common international source or from the Statistical Office of the European Communities (EUROSTAT) to ensure that they have been harmonized in a reasonably consistent way. Unless otherwise noted, the source of data for figures and tables is the January 2004 version of the WHO Regional Office for Europe's European health for all database.

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: ICD9 and ICD10, 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.

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

Ranking

A special case of comparison gives each country a rank order. Although useful as a summary measure, ranking can be misleading and should be interpreted with caution, especially if used alone, as the rank is sensitive to small differences in the value of an indicator. Also, when used to assess trends (as in the table at the start of the section on health status), ranking can hide important absolute changes in the level of an individual country. Graphs have usually been used to show time trends from 1970 onwards. These graphs present the trends for all the reference countries and for the EU-15, as appropriate. Only the country in focus and the appropriate 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.

Reference groups for comparison

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 such as the European Union (EU), the newly independent states or the central Asian republics.

The fifteen-member EU (EU-15) is the reference group comprising Austria, Belgium, Denmark, Germany, Greece, Finland, France, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

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.

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 owing to premature mortality. One DALY can be thought of as one lost year of healthy life.
GINI index	The 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].
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.

[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).