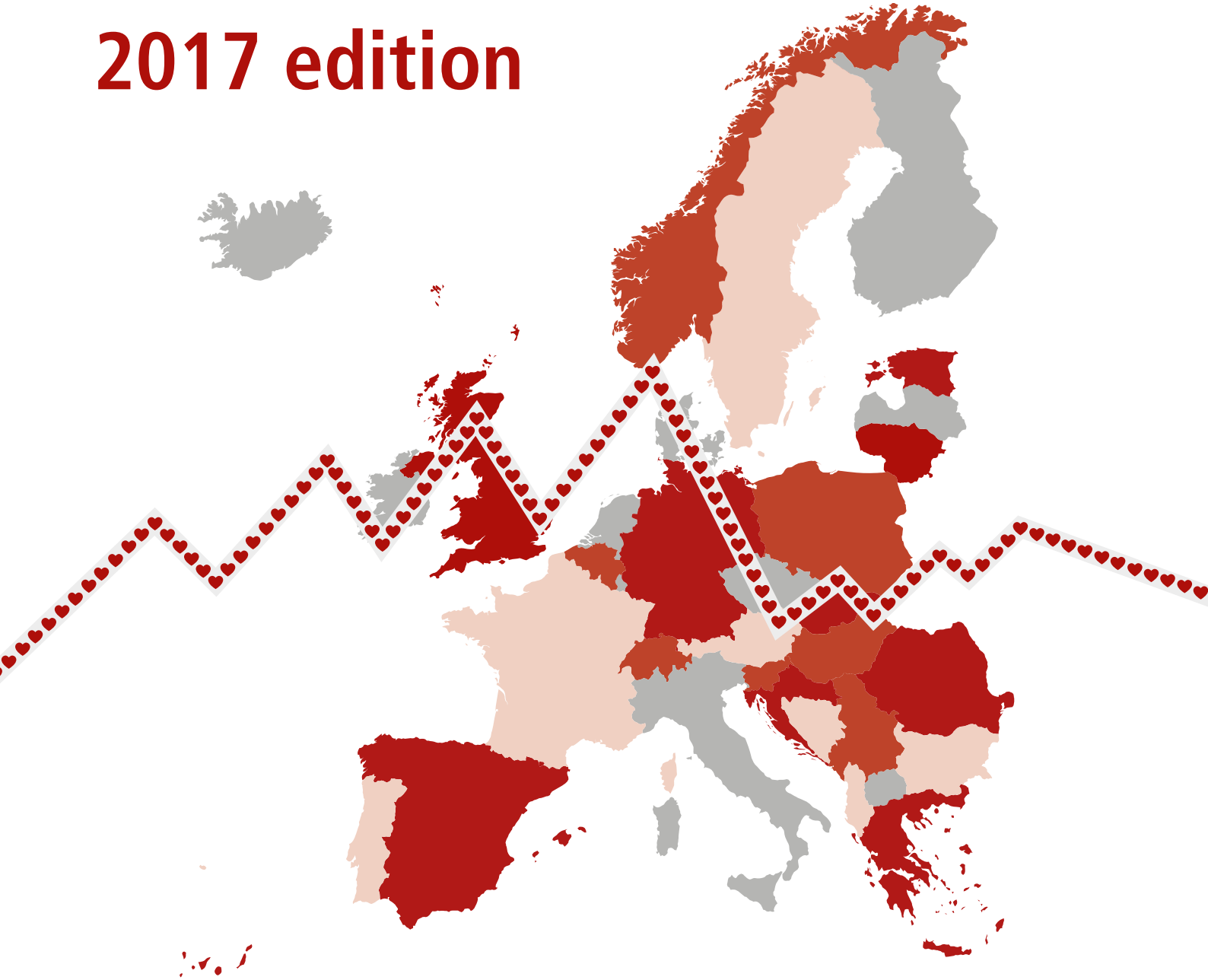
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European Cardiovascular Disease Statistics

2017 edition



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European Cardiovascular Disease Statistics

2017 edition

Elizabeth Wilkins, Lauren Wilson, Kremlin Wickramasinghe, Prachi Bhatnagar, Mike Rayner and Nick Townsend

British Heart Foundation Centre on Population Approaches for Non-Communicable Disease Prevention
Nuffield Department of Population Health, University of Oxford

Jose Leal, Ramon Luengo-Fernandez and Richéal Burns

Health Economics Research Centre,
Nuffield Department of Population Health, University of Oxford



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About the Publishers

The European Heart Network (EHN) is a Brussels-based alliance of heart foundations and likeminded non-governmental organisations throughout Europe, with member organisations in 25 countries.

The EHN plays a leading role in the prevention and reduction of cardiovascular diseases, in particular heart disease and stroke, through advocacy, networking, capacity-building and patient support, so that they are no longer a major cause of premature death and disability throughout Europe.

For further information contact:

European Heart Network
Rue Montoyer 31
1000 Brussels
BELGIUM

Tel + 32 2 512 91 74
Fax + 32 2 503 35 25
Email info@ehnheart.org
URL www.ehnheart.org

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Foreword

This report is the fifth edition of *European Cardiovascular Disease Statistics*. It is published and fully funded by the European Heart Network.

The data presented here show that cardiovascular diseases (CVD) remain the leading cause of mortality and a major cause of morbidity in Europe. Considerable inequalities in the burden of these diseases still exist across the region. CVD mortality, prevalence, and disability-adjusted life year (DALY) rates are, on average, lower in the European Union (EU) than outside of the EU. Furthermore, among both EU and non-EU member states, rates of CVD mortality and morbidity, as well as the prevalence of several key risk factors, tend to be higher in Central and Eastern European countries than in their Northern, Western and Southern European counterparts.

Encouragingly, statistics indicate that CVD mortality is now decreasing in nearly all European countries, including those of Central and Eastern Europe, which saw substantial increases until the beginning of the 21st century. This is consistent with downward trends in several key CVD risk factors such as smoking, alcohol consumption and levels of mean blood cholesterol, and with the observed increases in rates of CVD treatment. That said, levels of other CVD risk factors, particularly the prevalence of overweight/obesity and diabetes, have increased considerably in recent decades, raising concerns about the sustainability of the observed reduction in CVD mortality.

However, incidence and prevalence are significant. Currently, there are more than 6 million new cases of CVD in the EU and more than 11 million in Europe as a whole, every year. With almost 49 million people living with the disease in the EU, the cost to the EU economies is high at €210 billion a year.

Looking forward, continued monitoring of trends in CVD mortality, morbidity and risk factors is an imperative. It will also be important to explore in depth the determinants of the observed CVD inequalities, with a view to devising effective interventions to narrow disparities between EU/non-EU, European regions and countries. Progress in both of these areas, however, is currently impeded by the absence of region-wide, high-quality comparable data, particularly for prevalence rates, incidence rates, rates of surgical procedures, and several core risk factors. With this in mind, developing standard data collection methods or agreed procedures for calibration of locally appropriate methods is of the utmost importance for the years ahead.

Susanne Løgstrup
Director
European Heart Network

Summary

- Each year cardiovascular disease (CVD) causes 3.9 million deaths in Europe and over 1.8 million deaths in the European Union (EU).
- CVD accounts for 45% of all deaths in Europe and 37% of all deaths in the EU.
- CVD is the main cause of death in men in all but 12 countries of Europe and is the main cause of death in women in all but two countries.
- Death rates from both ischaemic heart disease (IHD) and stroke are generally higher in Central and Eastern Europe than in Northern, Southern and Western Europe.
- CVD mortality is now falling in most European countries, including Central and Eastern European countries which saw considerable increases until the beginning of the 21st century.
- In 2015, there were just under 11.3 million new cases of CVD in Europe and 6.1 million new cases of CVD in the EU.
- In 2015, more than 85 million people in Europe were living with CVD and almost 49 million people were living with CVD in the EU.
- Over the past 25 years, the absolute number of CVD cases has increased in Europe and in the EU, with increases in the number of new CVD cases found in most countries.
- However, the age-standardised prevalence rate of CVD has fallen in most European countries, with greater decreases in Northern, Western and Southern European countries compared to those in Central and Eastern Europe.
- Although disability-adjusted life years (DALYs) due to CVD have been falling in most European countries over the last decade, CVD is responsible for the loss of more than 64 million DALYs in Europe (23% of all DALYs lost) and 26 million DALYs in the EU (19%).
- The rates of DALYs lost due to CVD are generally higher in Central and Eastern Europe than in Northern, Southern and Western Europe.
- Hospital discharge rates for CVD as a whole have increased steadily in Europe over the past 25 years. In the EU on average hospital discharge rates for CVD have plateaued since the early 2000s, following increases since 1990.
- Dietary factors make the largest contribution to the risk of CVD mortality and CVD DALYs at the population level across Europe of all behavioural risk factors. High systolic blood pressure makes the largest contribution of all the medical risk factors.

- Over the past three decades, fruit consumption has increased overall across Europe and overall in the EU, while vegetable consumption has increased slightly in Europe as a whole, but has remained relatively stable in the EU.
- Fat consumption and energy consumption in Europe have increased over the last two decades, driven mainly by trends in Eastern Europe. In the EU, consumption of fat and energy has remained relatively stable over the past two decades.
- Smoking remains a key public health issue in Europe. Smoking rates have decreased across much of Europe, although the pace of decline has slowed and rates remain stable or are rising in some countries, particularly among women.
- The highest rates of smoking among men are found in countries of the former Soviet Union, while among women smoking rates are relatively low in former Soviet states compared to those in Northern and Western European countries.
- The prevalence of smoking in the EU is lower than in Europe as a whole among men but higher than in Europe among women.
- Women are now smoking nearly as much as men in several Northern and Western European countries and girls frequently smoke more than boys.
- Few adults in European countries participate in recommended levels of physical activity, with inactivity more common among women than men.
- Over the past 30 years, average levels of alcohol consumption have decreased very gradually in Europe and in the EU.
- Age-standardised rates of mean total blood cholesterol have decreased over the last 30 years in nearly all European countries.
- Levels of obesity are high across Europe and in the EU in both adults and children, although rates vary substantially between countries.
- The prevalence of diabetes in Europe is high and has increased rapidly over the last ten years, increasing by more than 50% in many countries.
- Overall CVD is estimated to cost the EU economy €210 billion a year.
- Of the total cost of CVD in the EU, around 53% (€111 billion) is due to health care costs, 26% (€54 billion) to productivity losses and 21% (€45 billion) to the informal care of people with CVD.

Introduction

The aims of the publication

This report, the fifth edition of *European Cardiovascular Disease Statistics*, is designed for policy makers, health professionals, medical researchers and anyone else with an interest in cardiovascular diseases (CVD). It provides the most recent statistics related to the mortality, incidence, prevalence, causes and effects of these diseases.

The aim of *European Cardiovascular Disease Statistics* is to show:

i. the extent to which CVD is a major health problem in Europe;
ii. where in Europe this problem is greatest;
iii. the variability in efforts to treat CVD across Europe;
iv. the variability in levels of CVD risk factors, and their relative importance, across Europe;
v. changes in CVD mortality, morbidity, treatment and risk factors over time;
vi. the economic costs of CVD in the European Union.

European Cardiovascular Disease Statistics is divided into 13 sections. The first two sections on mortality and morbidity deal with the burden of CVD in Europe, while the third section discusses CVD treatment. Section 4 examines the percentage of the population-level CVD burden attributable to four main behavioural risk factors (smoking, diet, physical activity and alcohol consumption) and four main pathophysiological risk factors (raised blood pressure, raised blood cholesterol, overweight/obesity and diabetes). The following eight sections discuss these eight major CVD risk factors in more detail, while the final section provides information about the economic costs of CVD in the European Union (EU). Each section contains a set of tables and graphs and a brief description of the data presented.

In *European Cardiovascular Disease Statistics* we aim only to describe and not to explain. So, although there may be relationships between various geographical and temporal patterns observed, we have made no attempt to draw any conclusions about the strength of these relationships or about causality.

Sources and scope of the data

In compiling the first 12 sections of *European Cardiovascular Disease Statistics* we have only consulted international sources: that is the World Health Organization (WHO), the Global Burden of Disease (GBD) Project, the Organisation for Economic Co-operation and Development (OECD), the European Society of Cardiology, the European Commission, the Food and Agriculture Organization of the United Nations (FAO). In the final section on economic costs, we have also consulted national sources. It should be noted that the data presented are variable in quality and are only a selection of those available. Commonly, international sources are updated through routine and administrative data collections and generally rely on individual countries to provide the data they collate. In some cases individual countries are yet to provide the most up-to-date statistics, therefore the data we obtain from these central sources, in order to be consistent between countries, might not be as up to date as could be obtained from the databases of some individual countries. The original sources can be consulted for further information.

We also investigated several sources of data from which we have not extracted statistics: either because the data provided were similar but less comprehensive or less recent than those we have included, or were not directly relevant to the focus of the publication.

There are many different definitions of 'Europe'. We have chosen to use the 53 member states of the World Health Organization's European Region as our definition of 'Europe'. Throughout the report, data relating to the 28 European Union (EU) member states are highlighted, and where possible, aggregated data for Europe and for the EU are provided. In some sections, aggregated data are also presented for different geographical regions within Europe. Two regional classification systems are employed here, based on the availability of data: the GBD Project uses Western Europe, Central Europe, Eastern Europe, and Central Asia as its regions, while the UN uses Northern Europe, Western Europe, Southern Europe and Eastern Europe. The member states of the WHO's European Region, the EU, and the geographic regions according to the GBD and UN classification systems are listed in the Appendix along with a map. The availability of data varies across Europe, however, and for some sections, data are provided for only a selection of countries.

1. Mortality

This chapter reports on cardiovascular disease (CVD) mortality in Europe. All data come from the WHO Mortality Database, which collates data reported by national authorities based on their civil registration systems. Data are available for 50 of the 53 European countries, with no data available for Andorra, Monaco or Tajikistan.

Total mortality

Diseases of the heart and circulatory system (CVD) are the leading cause of mortality in Europe as a whole, responsible for over 3.9 million deaths a year, or 45% of all deaths[1]. In men, CVD accounts for 1.8 million deaths (40% of all deaths), while in women it is responsible for 2.1 million deaths (49% of all deaths). By comparison, cancer – the next most common cause of death – accounts for just under 1.1 million deaths (24%) in men and just under 900,000 deaths (20%) in women respectively (Table 1.1, Figures 1.1a and 1.1b).

The main forms of CVD are ischaemic heart disease (IHD) and stroke[2]. IHD is the leading single cause of mortality in Europe, responsible for 862,000 deaths a year (19% of all deaths) among men and 877,000 deaths (20%) among women each year. Stroke is the second most common single cause of death in Europe, accounting for 405,000 deaths (9%) in men and 583,000 (13%) deaths in women each year (Table 1.1, Figures 1.1a and 1.1b).

CVD is also the leading cause of mortality in the EU, where it causes just over 1.8 million deaths each year – around 800,000 deaths in men and 1 million deaths in women (Table 1.1). Interestingly, the share of all deaths attributable to CVD in the EU is slightly lower than that in the continent as a whole, with CVD responsible for 37% of all EU deaths – 34% among men and 40% among women. Cancer, the next most common cause of death in the EU, accounts for 748,000 deaths (30%) in men and more than 590,000 deaths (24%) in women (Table 1.1, Figures 1.1c and 1.1d)

As in Europe, IHD and stroke are, respectively, the first and second most common single causes of death in the EU. IHD is responsible for over 335,000 deaths (14%) among men and for over 297,000 deaths (12%) among women in the EU, while stroke accounts for over 176,000 (7%) male deaths and just under 250,000 (10%) female deaths (Table 1.1, Figures 1.1c and 1.1d). Again, these proportions are lower than the comparable figures for Europe as a whole.

Comparing the CVD mortality burden across individual European countries reveals substantial variation, with a higher burden typically found in Central and Eastern European countries compared to that in Northern, Southern and Western countries. This is evident across both EU and non-EU member states. Within the EU, the proportion of all deaths due to CVD ranges from 23% in France[3] to 60% in Bulgaria among men, while in women, the burden ranges from 25% in Denmark to 70% in Bulgaria. Outside the EU, the CVD mortality burden varies from 24% in Israel to 59% in Ukraine among men, and from 25% in Israel to 75% in Ukraine among women. Interestingly, cancer is a more common cause of death than CVD among men in 12 countries, most of which are in the EU: Belgium, Denmark, France, Israel, Italy, Luxembourg, the Netherlands, Norway, Portugal, Slovenia, Spain and the UK. In women, the number of cancer deaths exceeds that of CVD in two countries: Denmark and Israel (Table 1.1).

Premature mortality

Premature deaths are of interest since many are deemed to be preventable through reduced exposure to behavioural risk factors plus timely and effective treatment. There is no standard definition of premature mortality; rather, what counts as ‘premature’ varies for different countries according to their average life expectancy at birth. Within this chapter, two definitions of premature mortality are employed to reflect the range of life expectancies within Europe: deaths before the age of 75 years and deaths before the age of 65 years.

CVD is the leading cause of mortality under 75 years in Europe as a whole, accounting for more than 1.3 million deaths (35% of all deaths under 75 years) each year. By comparison, cancer – the second most common cause of mortality – is responsible for around 1.1 million deaths (29%) under 75 years each year. In men under 75 years in Europe, CVD causes just under 900,000 deaths (35%), compared to around 655,000 deaths (26%) attributable to cancer. In women of the same age in Europe, CVD is responsible for around 480,000 deaths (35%), compared to 459,000 (33%) due to cancer (Table 1.2, Figures 1.2a and 1.2b). IHD is the leading single cause of death under 75 years in Europe in both men (450,000 deaths, 18%) and women (214,000 deaths, 16%), while stroke is the second

most common single cause in women (137,000 deaths, 10%) and the third most common in men (183,000 deaths, 7%) after IHD and lung cancer (Table 1.2, Figures 1.2a and 1.2b).

In contrast to Europe as a whole, in the EU CVD is the second largest cause of mortality in those under 75 years, resulting in more than 436,000 deaths (26%), compared to 681,000 deaths (40%) from cancer. Among men under 75 years in the EU, CVD causes 298,000 deaths (27%) compared to 402,000 (37%) due to cancer, while in women it accounts for around 139,000 deaths (23%) compared to 279,000 (46%) from cancer (Table 1.2, Figures 1.2c and 1.2d).

CVD is the leading cause of mortality under 65 years in Europe as a whole, where it accounts for around 667,000 deaths (29% of all deaths under 65 years) each year compared to 607,000 deaths (26%) from cancer. Among men in Europe, CVD is the most common cause of death under 65 years, responsible for around 479,000 deaths (31%), compared to around 351,000 (22%) from cancer. By contrast, in women under 65 years, CVD is the second largest single cause of mortality, accounting for 188,000 deaths (26%), compared to 256,000 (35%) from cancer. IHD is the leading single cause of premature mortality under 65 years in both men (248,000, 16%) and women (76,121, 11%) in Europe. Stroke is, joint with breast cancer, the most common single cause of death under 65 years in women (51,000, 7%), and the third most common cause of death in men (90,000, 6%), after IHD and lung cancer (Table 1.3, Figures 1.3a and 1.3b).

Within the EU, CVD is the second largest cause of mortality in those under 65 years, responsible for around 192,000 (22% of deaths under 65 years) per year, compared to around 339,000 (38%) from cancer. Among men under 65 years in the EU, CVD causes around 142,000 deaths (24%), compared to 194,000 (33%) from cancer. Among women it causes just over 50,000 deaths (17%) each year, compared to just over 144,000 deaths (48%) from cancer (Table 1.3, Figures 1.3c and 1.3d).

Potential Years of Life Lost (PYLL) provides a third indicator of premature mortality. PYLL is calculated by summing the deaths occurring at each age and then multiplying this by the number of years to live up to a selected age limit (75 years for the data presented here). In this way, PYLL weights the deaths occurring at younger ages, which should be preventable. Data from the WHO Mortality Database show that CVD makes a sizeable contribution to PYLL in Europe, although considerable variation exists between countries. Within the EU, the contribution of CVD to PYLL among men ranges from 11% in France to 39% in Bulgaria; among women in the EU, the contribution ranges from 7% in Luxembourg to 33% in Bulgaria. Outside of the EU, CVD in men contributes to between 10% of PYLL in Israel and 33% in Montenegro, and in women to between 7% of PYLL in Iceland and Israel and 31% of PYLL in Montenegro (Table 1.4).

Mortality rates

Table 1.5 presents age-standardised[4] mortality rates for IHD for different European, including all EU, countries from 1980 to 2015, while Table 1.6 shows the same for stroke. Age-standardisation adjusts crude mortality rates to remove the influence of different population age structures, and hence allows more meaningful comparisons to be made between countries and over time[5].

In all European countries for which data are available, age-standardised mortality rates for IHD are higher in males than in females. In addition, strong geographical disparities are apparent, with relatively high rates observed in Eastern and Central Europe (particularly post-Soviet states) and lower rates in Northern, Western and Southern Europe. For example, for both sexes in the EU, the age-standardised death rate for IHD in the latest available year is lowest in France (77 deaths per 100,000 in males; 32 deaths per 100,000 in females) and highest in Lithuania (700 deaths per 100,000 in males; 429 deaths per 100,000 in females). Outside the EU, the lowest death rates are found in Israel (115 deaths per 100,000 in males; 67 deaths per 100,000 in females) whilst the highest rates are found in Ukraine (1,102 deaths per 100,000 in males; 727 deaths per 100,000 in females) (Table 1.5, Figures 1.5a, 1.5b).

Age-standardised death rates for stroke are also higher in males than females for all European countries in the latest available year. Moreover, death rates for stroke are higher in Eastern and Central regions than in Northern, Southern and Western regions. For example, among EU countries, they range from 53 per 100,000 in France and Luxembourg to 353 per 100,000 in Bulgaria in males and from 42 per 100,000 in France to 281 per 100,000 in Bulgaria in females. Outside the EU, the lowest death rates from stroke are found in Switzerland (51 deaths per 100,000 in males; 47 deaths per 100,000 in females) while the highest rates are found in TFYR Macedonia[6] (383 deaths per 100,000 in males; 345 deaths per 100,000 in females) (Table 1.6, Figures 1.6a, 1.6b).

Over the past 30 years, mortality rates from IHD have been declining in most Northern and Western European countries in both males and females. Long-term trends in Central and Eastern countries have been less consistent however, with sharp decreases followed by increases and then further decreases in countries such as Ukraine and Russia, and more gradual increases followed by decreases in other countries such as Romania (Table 1.5, Figures 1.5c, 1.5d). Since around 2000 to 2005, age-standardised death rates from IHD have been falling in the majority of European countries, including those in Central and Eastern regions. Comparing the percentage difference in death rates from 2003 and the latest available year, the rate of decline among men in EU countries varied from 13% in the Czech Republic to 54% in the Netherlands and from 8% in the Czech Republic to 57% in Estonia among women. In non-EU countries, declines in age-standardised death rates from IHD between 2003 and the most recent year ranged from 12% among both men and women in Ukraine to 76% and 79% among men and women respectively in Kazakhstan. Only in Kyrgyzstan were death rates from IHD higher in the most recent year (2012) than in 2003 (Table 1.5, Figures 1.5c, 1.5d).

Similar trends in age-standardised mortality rates are seen for stroke, with steady declines occurring since the 1980s in most Northern, Southern and Western European countries compared to more recent decreases in Central and Eastern European countries. Within the EU, the percentage difference in age-standardised mortality rates between 2003 and the latest available year ranged from 14% in Bulgaria to 73% in Estonia among men and from 11% in Ireland to 75% in Estonia among women. In non-EU countries, the percentage difference over the same period varied from 4% in Albania to 56% in Armenia among men and from 6% in Macedonia to 75% in Kazakhstan among women. Only in Azerbaijan in both sexes and Albania in women was the age-standardised death rate from stroke in the most recent year higher than that in 2003 (Table 1.6, Figures 1.6c, 1.6d).

Mortality rates under 65 years for IHD and stroke show similar patterns to those for all ages, with higher death rates among males than females and higher death rates in Central and Eastern regions compared to Northern, Southern and Western parts (Tables 1.7, 1.8; Figures 1.7a, 1.7b, 1.8a, 1.8b). Trends in IHD and stroke mortality under 65 years are also similar to those for all ages, with consistent decreases in Northern, Southern and Western states, and more volatile trends in Central and Eastern countries from 1980 to the early 2000s, followed by widespread mortality declines more recently (Tables 1.7, 1.8, Figures 1.7c, 1.7d, 1.8c, 1.8d).

1 When we state, in this section, that CVD is the main cause of death we are comparing 'Diseases of the circulatory system' (Chapter IV 10th Revision) of the International Classification of Diseases, with other chapters (e.g. Chapter II 'Neoplasms'). When we state that IHD is the most common cause of death we are comparing IHD (Chapter IX, I20-I25, 10th Revision) with all diseases within all chapters (e.g. with lung cancer, Chapter II, C33-C34, 10th Revision).

2 The following ICD codes have been used for collating mortality data in this chapter, and where available, elsewhere in this report: CVD (ICD-10 codes I00-I99; ICD-9 codes 3900-4599; ICD-8 codes 3900-4589) IHD (ICD-10 codes I20-I25; ICD-9 and ICD-8 codes 4100-4149) Stroke (ICD-10 codes I60-I69; ICE-9 and ICD-8 codes 4300-4380). For externally collated data, see source for details.

3 Data from the WHO MONICA project suggest that official mortality statistics in France under-report deaths from CVD compared to other countries. MONICA data from the French populations included in the MONICA Project (Lille, Strasbourg and Toulouse) show an underestimate of CHD deaths of over 75%. (See WHO Monica Project (2003) MONICA Monograph and Multimedia Sourcebook: World's largest study of heart disease stroke, risk factors and population trends 1979-2002. Edited by Hugh Tunstall-Pedoe for the WHO MONICA Project. WHO: Geneva). Table 1.1 also highlights that doctors in France have a much higher rate of reporting deaths from "all other causes". Together these suggest that the true numbers and proportions of deaths from CVD and CHD in France are likely to be higher than those reported in Table and Figures 1.1.

4 Mortality rates are standardised to the 2013 European standard population.

5 It should be noted that the mortality rates presented here are standardised for population age structure only. Differences between countries and over time in migration and other aspects of population composition may still confound comparisons.

6 Note that the most recent mortality data for TFYR Macedonia relate to the year 2010, which is older than that for most other countries.

Table 1.1 Total numbers of deaths by cause and sex, latest available year, Europe

Males

	Year	All causes	Ischaemic heart disease	Stroke	Other CVD	Stomach cancer	Colo-rectal cancer	Lung cancer	Breast cancer	Other cancer	Respiratory disease	Injuries and poisoning	All other causes
Albania	2009	8,525	1,658	1,589	1,349	194	58	480	4	948	265	688	1,292
Armenia	2014	14,219	4,442	1,090	890	286	215	967	8	1,704	981	875	2,761
Austria*	2014	37,424	7,041	1,904	5,019	493	1,175	2,450	14	7,025	2,054	2,644	7,605
Azerbaijan	2007	26,517	3,380	3,959	6,195	379	105	428	8	1,896	1,579	1,745	6,843
Belarus	2014	61,274	24,096	5,810	2,765	1,124	1,089	2,550	6	5,387	1,508	7,588	9,351
Belgium*	2013	53,908	4,783	2,841	6,800	458	1,507	4,597	19	9,428	6,032	3,974	13,469
Bosnia and Herzegovina	2014	18,360	2,082	1,893	4,345	315	527	1,468	10	2,249	822	805	3,844
Bulgaria*	2013	54,827	6,944	9,316	16,834	780	1,549	2,959	21	5,625	2,158	2,153	6,488
Croatia*	2014	24,965	4,912	3,016	2,384	464	1,237	2,074	15	4,273	1,344	1,616	3,630
Cyprus*	2013	2,888	438	165	365	35	67	202	1	457	235	205	718
Czech Republic*	2014	53,740	12,603	3,885	6,001	631	2,041	3,588	10	8,982	3,520	3,860	8,619
Denmark*	2012	25,695	2,426	1,499	2,517	259	981	1,960	9	5,017	2,637	1,286	7,104
Estonia*	2014	7,465	1,495	363	1,484	170	215	533	2	1,140	372	754	937
Finland*	2014	25,864	5,532	1,786	2,178	244	646	1,381	4	4,201	1,149	2,318	6,425
France*	2013	280,064	19,445	13,082	31,710	2,986	9,047	22,192	126	57,720	18,996	21,344	83,416
Georgia	2014	24,851	2,943	2,592	4,145	289	175	780	14	1,874	767	1,400	9,872
Germany*	2014	422,223	64,467	22,012	62,059	5,545	13,580	29,560	134	76,301	31,744	20,845	95,976
Greece*	2012	60,136	7,312	6,674	9,444	835	1,470	5,474	41	9,480	5,733	2,659	11,014
Hungary*	2014	61,992	14,589	5,269	7,784	904	2,848	5,456	26	8,763	3,794	3,936	8,623
Iceland	2009	1,033	204	75	102	13	41	63	0	200	71	79	185
Ireland*	2013	14,958	2,707	803	1,281	179	592	1,074	9	2,888	1,685	1,064	2,676
Israel	2013	20,479	2,179	1,064	1,576	287	676	1,242	12	3,238	1,607	1,164	7,434
Italy*	2012	295,831	37,958	23,951	37,752	5,811	10,406	24,885	133	58,559	23,603	13,783	58,990
Kazakhstan	2015	71,389	7,218	5,804	5,123	1,267	783	2,202	15	4,478	10,127	11,308	23,064
Kyrgyzstan	2013	19,714	5,575	2,417	1,027	401	115	361	2	930	1,280	2,437	5,169
Latvia*	2014	13,557	3,551	1,717	1,431	252	336	760	3	1,922	476	1,419	1,690
Lithuania*	2014	20,110	6,248	1,973	1,230	413	496	1,076	8	2,604	820	2,571	2,671
Luxembourg*	2014	1,919	205	85	253	31	66	171	0	383	132	146	447
Malta*	2014	1,655	352	116	109	27	60	142	0	303	171	75	300
Montenegro	2009	3,012	256	203	1,059	22	34	208	0	240	165	167	658
Netherlands*	2013	68,360	5,354	3,747	8,925	811	2,625	6,215	21	14,094	6,312	3,555	16,701
Norway	2014	19,685	2,220	1,114	2,143	179	784	1,198	6	3,722	1,865	1,547	4,907
Poland*	2014	195,791	21,044	13,365	44,408	3,379	6,423	15,847	49	29,557	11,611	16,199	33,909
Portugal*	2014	53,498	4,178	5,117	5,279	1,382	2,200	3,084	22	9,246	6,308	3,151	13,531
Republic of Moldova	2014	20,606	6,533	2,701	1,033	284	452	750	6	1,946	1,185	2,392	3,324
Romania*	2014	133,056	25,174	19,867	23,864	2,285	3,345	8,000	62	16,420	8,323	7,861	17,855
Russian Federation	2011	997,494	268,484	128,650	88,884	19,031	17,082	41,767	232	78,032	52,144	153,544	149,644
San Marino	2000	105	3	9	30	8	2	10	0	22	5	5	11
Serbia	2014	51,010	5,382	5,477	13,832	618	1,545	3,798	34	6,379	2,877	2,247	8,821
Slovakia*	2014	26,498	6,138	2,358	2,044	371	1,133	1,607	12	4,527	1,578	2,222	4,508
Slovenia*	2010	9,292	1,108	829	1,134	241	443	805	7	1,749	561	989	1,426
Spain*	2014	203,028	19,510	11,647	23,098	3,340	9,276	17,251	95	37,467	25,014	9,648	46,682
Sweden*	2014	43,440	6,947	2,857	5,848	355	1,417	1,805	6	8,611	2,775	3,028	9,791
Switzerland	2013	31,257	4,097	1,465	4,157	344	894	1,960	5	6,243	2,167	2,177	7,748
TFYR Macedonia	2010	10,168	1,086	1,801	2,613	252	219	667	3	1,077	401	422	1,627
Turkey	2013	196,709	32,257	16,167	22,053	4,317	3,720	19,017	59	22,587	21,077	14,292	41,163
Turkmenistan	2012	16,092	3,545	1,978	1,801	172	81	148	5	836	821	933	5,772
Ukraine	2014	310,671	126,762	35,465	20,992	4,860	5,771	10,959	67	24,888	10,619	31,811	38,477
United Kingdom*	2013	279,171	43,056	16,260	20,619	2,950	8,781	19,511	94	56,175	39,372	14,078	58,275
Uzbekistan	2014	81,465	22,300	7,588	17,527	978	374	916	25	3,712	4,166	6,948	16,931
EU		**2,471,355**	**335,517**	**176,504**	**331,854**	**35,631**	**83,962**	**184,659**	**943**	**442,917**	**208,509**	**147,383**	**523,476**
Europe		**4,475,990**	**862,219**	**405,415**	**535,495**	**71,251**	**118,704**	**276,598**	**1,464**	**615,505**	**325,008**	**391,957**	**872,374**

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Other CVD is defined as all circulatory diseases other than IHD and stroke.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

Table 1.1 Total numbers of deaths by cause and sex, latest available year, Europe

Females

	Year	All causes	Ischaemic heart disease	Stroke	Other CVD	Stomach cancer	Colo-rectal cancer	Lung cancer	Breast cancer	Other cancer	Respiratory disease	Injuries and poisoning	All other causes
Albania	2009	7,137	1,306	1,907	1,319	108	48	128	143	509	208	203	1,258
Armenia	2014	13,495	4,128	1,547	1,170	181	268	192	468	1,412	881	364	2,884
Austria*	2014	40,828	7,244	3,040	8,888	360	989	1,458	1,535	5,661	1,680	1,620	8,353
Azerbaijan	2007	23,922	2,695	5,130	6,285	229	118	119	251	1,499	1,488	520	5,588
Belarus	2014	60,268	24,881	7,904	2,017	719	1,107	339	1,106	3,900	357	2,096	15,842
Belgium*	2013	55,426	3,444	4,144	9,302	284	1,391	1,886	2,290	6,870	5,330	2,857	17,628
Bosnia and Herzegovina	2014	17,620	1,800	2,293	5,493	196	382	390	520	1,764	549	244	3,989
Bulgaria*	2013	49,518	5,734	11,147	17,935	478	1,041	665	1,274	3,882	1,354	612	5,396
Croatia*	2014	25,874	5,919	4,284	3,597	307	857	753	1,071	3,155	883	1,134	3,914
Cyprus*	2013	2,384	205	201	449	32	48	32	107	316	189	85	720
Czech Republic*	2014	51,925	13,436	5,525	7,177	468	1,499	1,671	1,581	7,132	2,690	1,854	8,892
Denmark*	2012	26,316	1,944	1,847	2,863	155	917	1,785	1,123	3,633	3,069	806	8,174
Estonia*	2014	8,005	1,909	581	2,418	139	240	182	251	1,015	178	221	871
Finland*	2014	26,545	4,805	2,642	2,700	169	583	771	813	3,458	688	1,159	8,757
France*	2013	276,183	13,993	18,535	42,180	1,681	7,884	8,024	11,681	38,426	17,837	14,596	101,346
Georgia	2014	24,236	3,043	3,153	4,743	190	165	136	515	1,487	574	534	9,696
Germany*	2014	446,133	56,699	33,220	99,599	4,065	11,932	15,524	17,670	56,460	26,860	13,822	110,282
Greece*	2012	56,533	4,491	9,194	12,601	483	1,095	1,271	1,990	6,062	5,651	807	12,888
Hungary*	2014	64,316	17,550	7,121	10,473	698	2,202	3,277	2,107	7,011	3,114	1,952	8,811
Iceland	2009	969	146	84	118	3	22	69	36	130	104	39	218
Ireland*	2013	14,546	1,935	1,156	1,591	119	440	757	704	2,199	1,819	427	3,399
Israel	2013	21,000	1,786	1,265	2,166	187	698	604	1,052	2,966	1,565	589	8,122
Italy*	2012	317,689	37,140	37,304	56,055	4,189	8,796	8,653	12,004	43,917	19,841	9,992	79,798
Kazakhstan	2015	59,640	5,355	6,787	3,702	674	812	515	1,290	4,417	8,294	3,160	24,634
Kyrgyzstan	2013	15,166	5,574	2,361	675	198	109	116	217	1,038	889	719	3,270
Latvia*	2014	14,644	4,536	3,157	1,679	202	353	186	439	1,627	220	451	1,794
Lithuania*	2014	20,142	8,481	3,537	1,054	285	436	262	512	2,089	359	767	2,360
Luxembourg*	2014	1,786	119	139	362	19	40	82	85	254	125	94	467
Malta*	2014	1,615	337	160	157	14	46	28	75	238	140	32	388
Montenegro	2009	2,854	161	317	1,222	17	47	65	73	185	110	65	592
Netherlands*	2013	72,885	3,912	5,653	10,872	529	2,351	4,062	3,161	10,287	5,957	2,888	23,213
Norway	2014	20,659	1,872	1,591	2,776	122	780	960	663	2,674	1,885	1,028	6,308
Poland*	2014	180,676	17,494	17,644	55,779	1,874	4,988	7,363	5,975	24,874	8,760	5,201	30,724
Portugal*	2014	51,721	3,278	6,691	7,743	911	1,608	853	1,664	5,772	5,856	1,667	15,678
Republic of Moldova	2014	18,888	8,090	3,293	1,200	196	381	200	482	1,275	522	643	2,606
Romania*	2014	121,735	25,496	24,815	29,844	1,163	2,518	2,188	3,343	11,260	5,065	2,222	13,821
Russian Federation	2011	928,226	299,698	204,154	86,588	14,182	20,871	8,673	23,320	69,255	22,075	45,814	133,596
San Marino	2000	83	4	7	27	2	3	3	5	10	6	0	16
Serbia	2014	50,237	4,589	6,842	17,871	339	1,050	1,427	1,648	4,968	2,192	828	8,483
Slovakia*	2014	24,847	7,200	2,829	2,320	285	856	567	898	3,372	1,150	944	4,426
Slovenia*	2010	9,317	943	1,144	2,173	153	343	316	416	1,412	558	526	1,333
Spain*	2014	194,898	13,573	16,071	34,434	2,206	6,227	4,069	6,249	24,341	18,979	5,593	63,156
Sweden*	2014	45,622	5,626	3,731	7,539	257	1,354	1,845	1,398	6,289	2,777	1,813	12,993
Switzerland	2013	33,704	3,628	2,238	5,927	225	766	1,209	1,329	4,274	1,949	1,642	10,517
TFYR Macedonia	2010	8,945	666	2,017	2,884	126	163	135	308	755	310	166	1,415
Turkey	2013	160,824	22,987	19,704	29,059	2,294	2,702	3,169	3,541	14,817	14,073	5,316	43,162
Turkmenistan	2012	13,116	3,121	1,927	1,814	87	64	52	236	857	627	335	3,996
Ukraine	2014	321,625	164,683	52,425	25,280	3,051	5,733	2,284	7,275	19,006	4,191	8,324	29,373
United Kingdom*	2013	297,287	29,968	24,027	25,865	1,754	7,501	16,011	11,476	41,589	44,014	8,186	86,896
Uzbekistan	2014	68,296	19,592	6,673	17,177	671	304	353	1,226	3,755	3,287	2,260	12,998
EU		**2,499,396**	**297,411**	**249,539**	**457,649**	**23,279**	**68,535**	**84,541**	**91,892**	**322,601**	**185,143**	**82,328**	**636,478**
Europe		**4,370,306**	**877,216**	**583,158**	**677,162**	**47,276**	**105,128**	**105,679**	**137,596**	**463,554**	**251,279**	**157,217**	**965,041**

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.
Notes: Other CVD is defined as all circulatory diseases other than IHD and stroke.
Data were not available for Andorra, Monaco or Tajikistan.
*Asterisk denotes EU member states.

Figure 1.1a Deaths by cause, males, latest available year, Europe

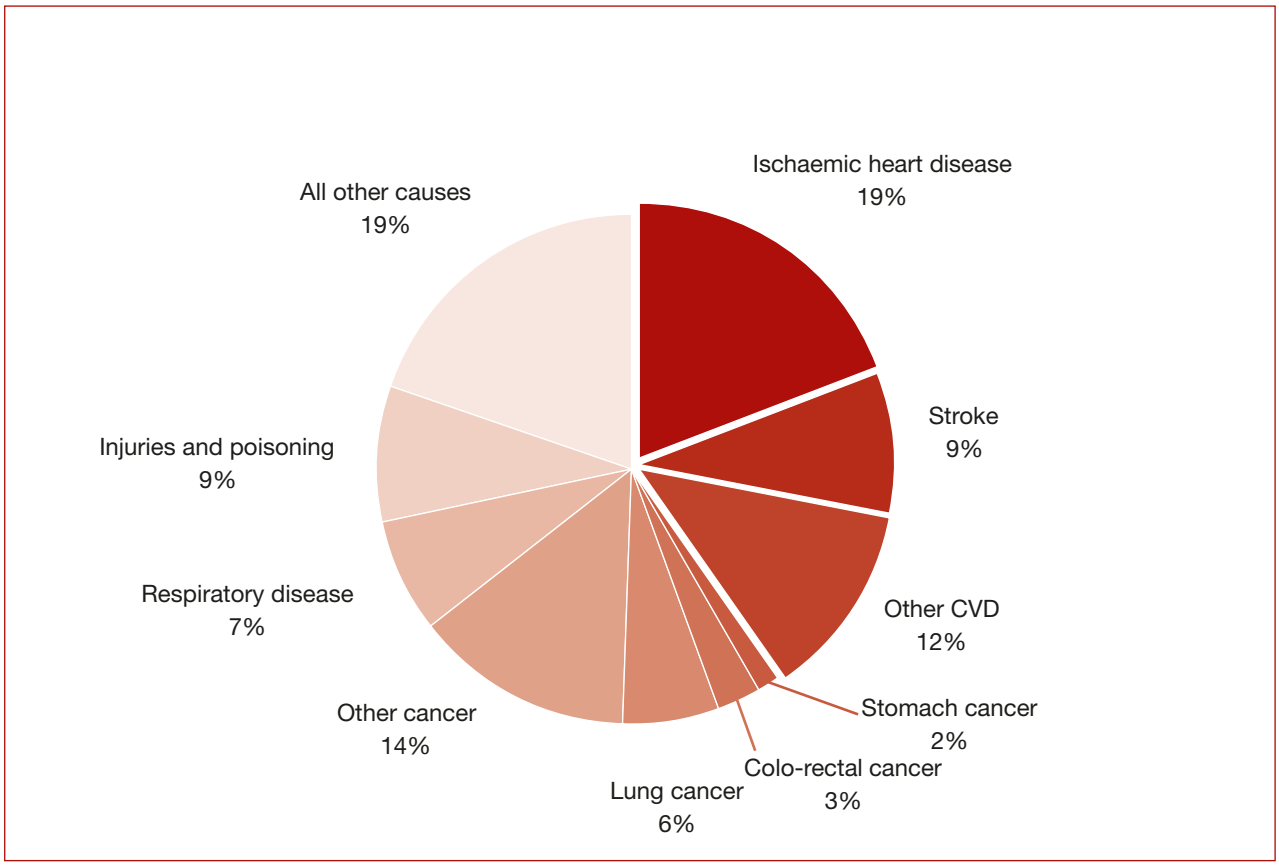


Figure 1.1b Deaths by cause, females, latest available year, Europe

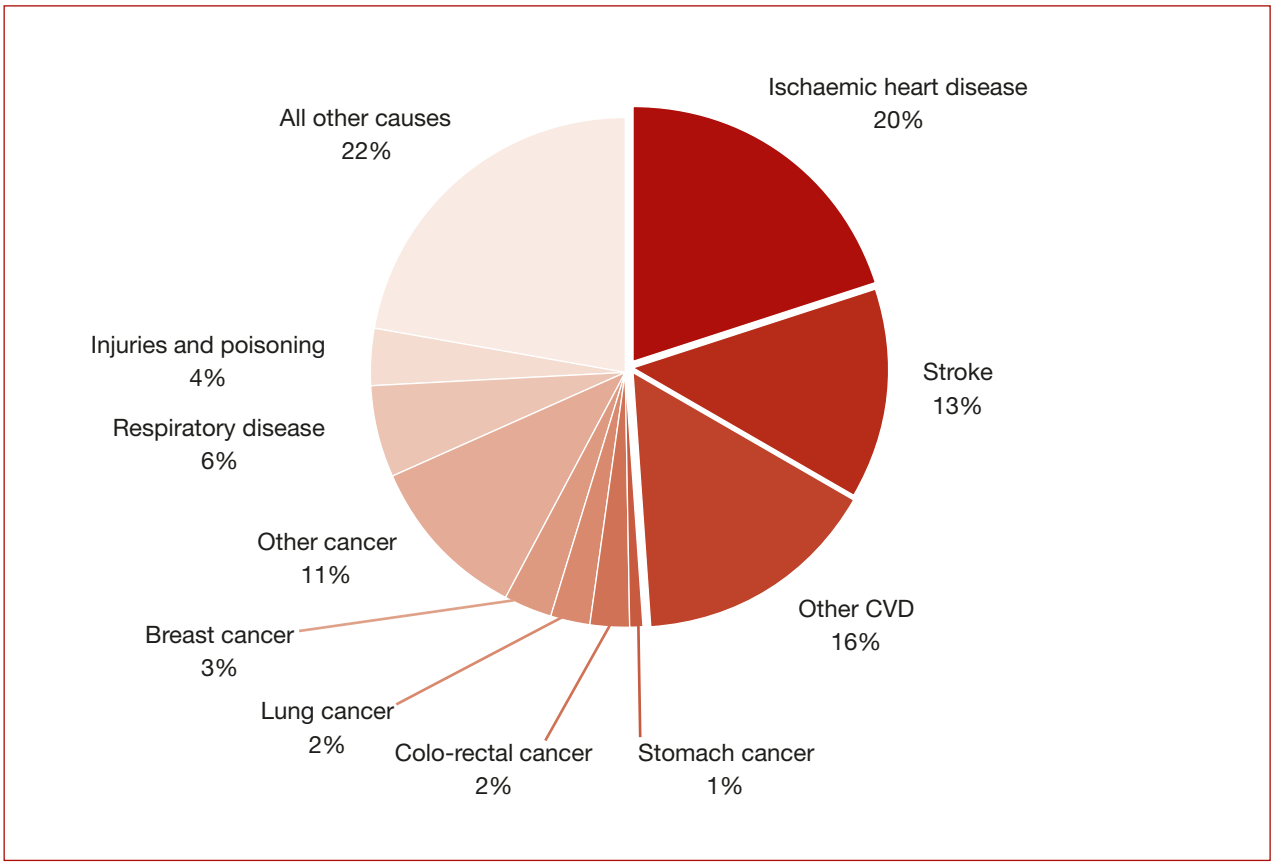


Figure 1.1c Deaths by cause, males, latest available year, EU

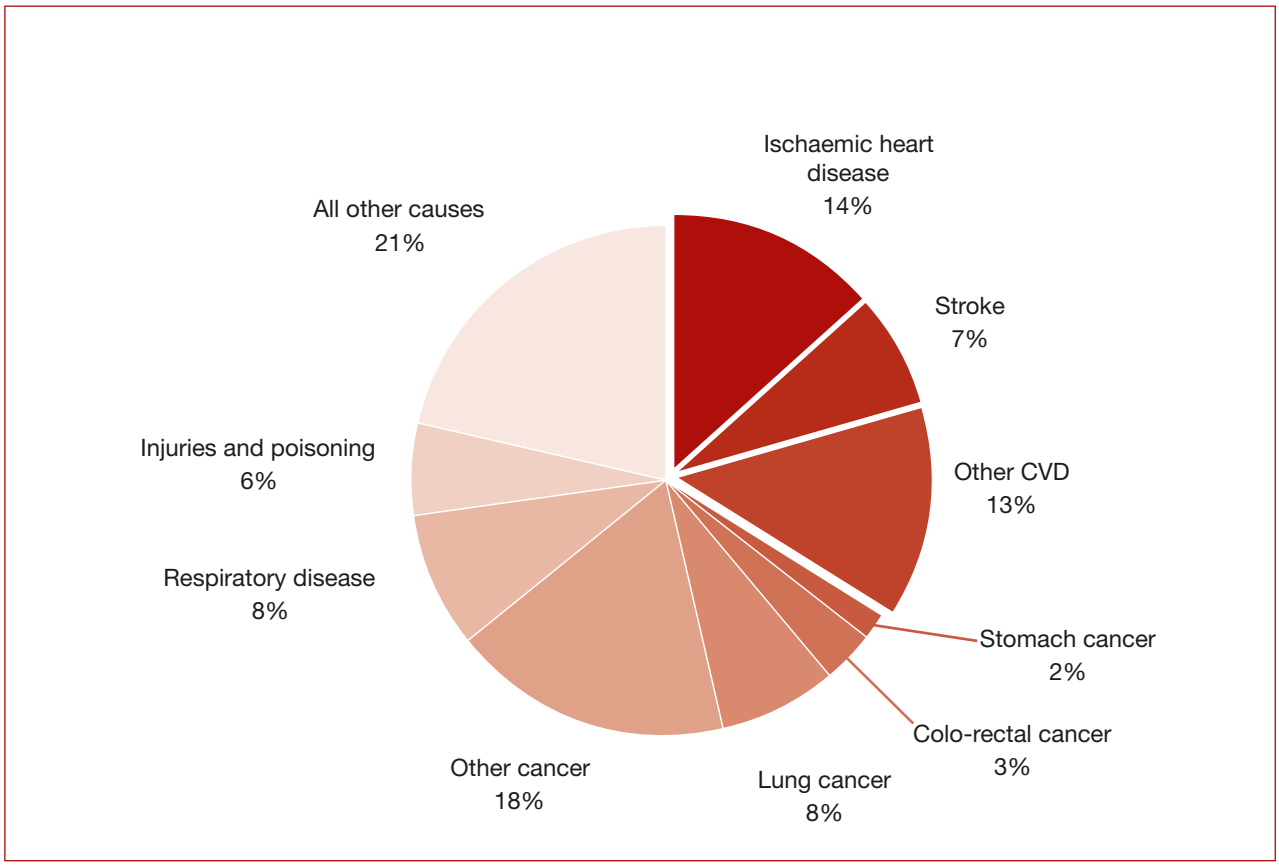


Figure 1.1d Deaths by cause, females, latest available year, EU

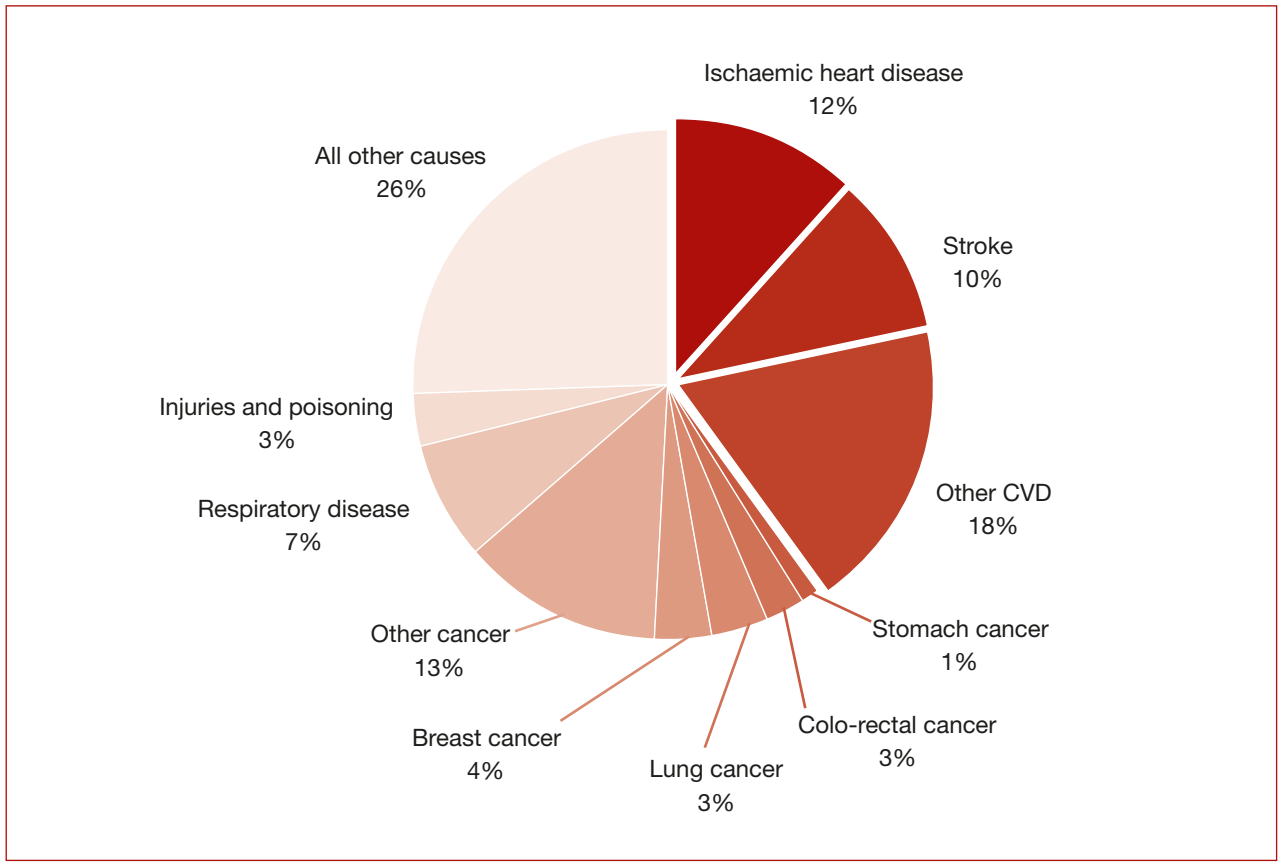


Table 1.2 Number of deaths under 75 years by cause and sex, latest available year, Europe

Males

	Year	All causes	Ischaemic heart disease	Stroke	Other CVD	Stomach cancer	Colo-rectal cancer	Lung cancer	Breast cancer	Other cancer	Respiratory disease	Injuries and poisoning	All other causes
Albania	2009	4,603	911	555	595	137	38	351	2	633	119	644	618
Armenia	2014	7,866	2,207	483	345	180	123	684	6	1,053	366	736	1,683
Austria*	2014	16,796	2,389	564	1,181	229	595	1,653	5	3,675	752	1,784	3,969
Azerbaijan	2007	19,570	2,384	2,364	4,176	293	85	382	6	1,598	1,114	1,685	5,483
Belarus	2014	40,694	13,951	3,475	2,050	848	732	2,113	5	4,228	1,119	7,169	5,004
Belgium*	2013	21,991	1,834	740	1,807	227	688	2,659	7	4,486	1,647	2,703	5,193
Bosnia and Herzegovina	2014	10,132	1,213	758	1,782	206	328	1,102	8	1,458	361	684	2,232
Bulgaria*	2013	29,867	3,627	3,745	7,717	497	903	2,416	15	3,816	1,165	1,786	4,180
Croatia*	2014	12,442	2,115	1,051	870	256	675	1,480	8	2,408	414	1,129	2,036
Cyprus*	2013	1,255	233	45	100	27	29	135	0	241	60	138	247
Czech Republic*	2014	29,417	5,441	1,459	2,911	396	1,261	2,612	6	5,624	1,660	3,024	5,023
Denmark*	2012	11,656	937	492	822	164	511	1,139	2	2,674	759	923	3,233
Estonia*	2014	4,363	691	158	734	99	107	356	0	659	192	677	690
Finland*	2014	11,902	2,097	594	938	132	336	827	4	2,108	434	1,753	2,679
France*	2013	117,569	7,091	3,480	7,790	1,529	3,922	14,929	56	28,093	4,415	13,400	32,864
Georgia	2014	14,256	1,433	1,044	1,903	188	116	598	11	1,336	437	1,215	5,975
Germany*	2014	177,671	22,163	6,202	17,687	2,839	6,429	18,032	74	37,210	10,210	13,273	43,552
Greece*	2012	22,887	3,897	1,501	1,999	407	613	3,270	21	4,341	1,191	2,171	3,476
Hungary*	2014	36,953	6,958	2,465	3,828	549	1,811	4,294	21	6,153	2,046	3,049	5,779
Iceland	2009	405	60	18	33	5	20	36	0	92	15	68	58
Ireland*	2013	6,814	1,134	246	458	107	316	649	5	1,526	382	955	1,036
Israel	2013	8,768	693	338	504	155	296	778	5	1,656	462	860	3,021
Italy*	2012	103,753	11,184	4,540	9,066	2,642	4,628	12,816	66	26,305	4,123	8,239	20,144
Kazakhstan	2015	53,887	5,299	3,873	4,175	1,032	590	1,876	10	3,674	6,005	10,951	16,402
Kyrgyzstan	2013	14,989	2,902	1,648	835	311	91	301	1	746	876	2,387	4,891
Latvia*	2014	8,418	1,827	743	923	160	191	523	1	1,231	305	1,303	1,211
Lithuania*	2014	12,117	2,706	835	916	267	268	767	6	1,576	432	2,346	1,998
Luxembourg*	2014	823	98	24	79	16	27	102	0	186	33	104	154
Malta*	2014	746	149	33	36	16	37	82	0	175	43	49	126
Montenegro	2009	1,852	171	90	551	14	23	162	0	162	101	143	435
Netherlands*	2013	28,986	2,286	1,161	2,803	427	1,419	3,530	11	7,428	1,602	2,204	6,115
Norway	2014	7,706	842	257	539	99	374	709	6	1,636	464	1,020	1,760
Poland*	2014	116,019	11,768	6,677	19,543	2,173	3,775	11,336	28	18,909	4,950	14,281	22,579
Portugal*	2014	21,374	1,919	1,348	1,347	727	1,012	2,011	10	4,640	1,299	2,082	4,979
Republic of Moldova	2014	14,749	3,431	1,580	673	230	355	665	4	1,627	898	2,275	3,011
Romania*	2014	73,706	11,461	7,523	8,944	1,476	1,995	6,386	34	11,297	4,556	6,945	13,089
Russian Federation	2011	749,653	175,887	75,287	67,616	14,627	11,870	34,450	175	61,421	39,935	145,408	122,977
San Marino	2000	48	2	2	10	5	1	6	0	13	3	5	1
Serbia	2014	26,242	2,917	2,140	4,908	372	957	3,028	19	4,078	1,306	1,752	4,765
Slovakia*	2014	16,245	2,910	1,163	1,186	244	723	1,180	7	3,059	773	1,857	3,143
Slovenia*	2010	5,025	558	296	381	124	245	551	3	1,031	149	754	933
Spain*	2014	76,872	7,736	2,912	5,957	1,679	4,067	10,556	48	17,553	5,123	6,380	14,861
Sweden*	2014	15,589	2,283	730	1,304	182	664	969	5	3,674	686	1,950	3,142
Switzerland	2013	11,892	1,209	317	1,001	200	415	1,197	2	2,891	565	1,340	2,755
TFYR Macedonia	2010	5,723	723	812	974	179	161	560	1	749	189	353	1,022
Turkey	2013	119,075	18,897	7,199	9,588	3,136	2,509	15,075	40	15,091	9,763	12,434	25,343
Turkmenistan	2012	13,177	2,351	1,513	1,316	147	74	141	3	747	778	914	5,193
Ukraine	2014	203,853	65,251	18,797	12,889	3,745	3,983	8,967	48	19,637	7,352	29,954	33,230
United Kingdom*	2013	111,120	17,506	4,226	6,811	1,318	4,115	10,336	49	26,017	9,991	10,442	20,309
Uzbekistan	2014	58,886	12,536	5,091	10,501	830	320	824	24	3,232	3,495	6,774	15,259
EU		**1,092,376**	**134,998**	**54,953**	**108,138**	**18,909**	**41,362**	**115,596**	**492**	**226,095**	**59,392**	**105,701**	**226,740**
Europe		**2,480,402**	**450,268**	**182,594**	**235,102**	**45,848**	**64,823**	**189,601**	**868**	**353,853**	**135,115**	**334,472**	**487,858**

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Other CVD is defined as all circulatory diseases other than IHD and stroke.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

Table 1.2 Number of deaths under 75 years by cause and sex, latest available year, Europe

Females

	Year	All causes	Ischaemic heart disease	Stroke	Other CVD	Stomach cancer	Colo-rectal cancer	Lung cancer	Breast cancer	Other cancer	Respiratory disease	Injuries and poisoning	All other causes
Albania	2009	2,549	419	462	390	69	37	75	126	374	65	186	346
Armenia	2014	4,546	869	385	254	101	135	101	338	872	173	187	1,131
Austria*	2014	9,828	803	390	655	139	362	982	786	2,528	420	604	2,159
Azerbaijan	2007	13,252	1,250	2,358	2,821	149	102	89	227	1,249	828	484	3,695
Belarus	2014	19,318	6,497	2,510	907	438	605	217	855	2,704	211	1,680	2,694
Belgium*	2013	13,083	586	549	976	87	446	1,240	1,221	2,767	920	1,150	3,141
Bosnia and Herzegovina	2014	6,294	536	650	1,221	110	206	271	360	1,078	168	168	1,526
Bulgaria*	2013	15,500	1,359	2,336	4,193	245	551	458	818	2,507	501	395	2,137
Croatia*	2014	6,483	819	716	495	121	353	489	527	1,442	165	337	1,019
Cyprus*	2013	627	49	24	60	12	21	25	71	177	21	32	135
Czech Republic*	2014	15,710	1,916	892	1,584	223	711	1,142	896	3,876	772	826	2,872
Denmark*	2012	7,836	333	302	397	86	392	1,031	640	1,755	715	343	1,842
Estonia*	2014	2,114	198	110	392	62	89	95	138	459	68	161	342
Finland*	2014	6,157	504	360	392	81	227	437	450	1,451	191	569	1,495
France*	2013	59,661	1,688	2,106	3,486	605	2,495	5,058	6,089	14,638	1,963	4,683	16,850
Georgia	2014	7,654	633	721	1,054	93	96	86	382	958	198	300	3,133
Germany*	2014	101,575	6,937	4,139	9,571	1,518	4,013	9,558	8,888	22,849	6,011	4,562	23,529
Greece*	2012	11,359	1,040	990	1,135	198	403	715	984	2,614	678	496	2,106
Hungary*	2014	21,689	3,307	1,558	2,131	315	1,080	2,420	1,331	4,001	1,237	914	3,395
Iceland	2009	245	11	9	12	2	8	34	20	63	26	21	39
Ireland*	2013	4,236	312	162	242	54	192	411	428	1,068	317	277	773
Israel	2013	5,742	217	212	348	87	265	311	615	1,327	265	277	1,818
Italy*	2012	61,271	3,576	3,229	4,954	1,470	3,080	4,467	6,210	17,206	2,012	2,411	12,656
Kazakhstan	2015	29,304	2,054	2,851	2,035	514	568	378	1,078	3,513	2,856	2,829	10,628
Kyrgyzstan	2013	8,434	1,527	1,071	427	140	68	94	185	845	483	684	2,910
Latvia*	2014	4,327	796	559	473	103	151	104	253	822	97	295	674
Lithuania*	2014	5,790	1,165	607	415	155	171	150	326	1,078	93	534	1,096
Luxembourg*	2014	435	15	10	37	6	15	45	43	101	26	39	98
Malta*	2014	448	63	24	27	5	17	18	40	117	22	13	102
Montenegro	2009	1,215	77	109	382	10	33	55	63	131	43	56	256
Netherlands*	2013	19,865	783	824	1,412	219	1,026	2,751	1,841	4,745	1,350	902	4,012
Norway	2014	4,813	244	198	230	48	296	591	348	1,132	360	349	1,017
Poland*	2014	57,676	3,977	3,923	8,557	985	2,357	5,382	3,953	13,713	2,349	2,736	9,744
Portugal*	2014	10,866	583	832	805	375	617	488	864	2,471	526	693	2,612
Republic of Moldova	2014	8,716	2,236	1,232	478	136	258	150	366	974	283	529	2,074
Romania*	2014	39,177	5,393	5,189	5,223	598	1,259	1,504	2,158	6,995	1,892	1,590	7,376
Russian Federation	2011	395,500	92,250	59,884	35,772	8,472	12,049	5,612	17,591	47,778	12,299	38,122	65,671
San Marino	2000	23	2	3	5	0	1	1	2	7	1	0	1
Serbia	2014	16,110	1,340	1,635	3,070	187	584	1,084	1,078	3,066	766	472	2,828
Slovakia*	2014	8,366	1,274	650	593	154	409	395	552	1,956	346	435	1,602
Slovenia*	2010	2,385	151	166	189	44	133	181	212	597	49	195	468
Spain*	2014	37,162	1,856	1,749	2,979	795	2,090	2,630	3,201	9,719	1,899	2,071	8,173
Sweden*	2014	10,312	818	427	649	117	537	1,041	736	2,623	600	750	2,014
Switzerland	2013	7,191	339	249	482	100	300	728	691	1,721	355	522	1,704
TFYR Macedonia	2010	3,739	333	724	721	82	100	110	247	534	131	110	647
Turkey	2013	67,954	7,732	6,019	7,827	1,429	1,609	2,101	2,812	9,733	4,659	3,493	20,540
Turkmenistan	2012	8,963	1,483	1,202	1,098	71	59	48	227	768	581	318	3,108
Ukraine	2014	112,237	40,451	14,756	5,513	1,961	3,492	1,542	5,486	13,993	1,995	6,603	16,445
United Kingdom*	2013	75,977	5,718	3,311	4,350	675	2,795	8,077	6,090	18,189	7,805	3,577	15,390
Uzbekistan	2014	39,883	7,153	3,481	7,828	564	243	306	1,113	3,289	2,595	2,182	11,129
EU		**609,915**	**46,019**	**36,134**	**56,372**	**9,447**	**25,992**	**51,294**	**49,746**	**142,464**	**33,045**	**31,590**	**127,812**
Europe		**1,373,597**	**213,672**	**136,855**	**129,247**	**24,210**	**47,106**	**65,278**	**83,956**	**238,573**	**62,386**	**91,162**	**281,152**

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Other CVD is defined as all circulatory diseases other than IHD and stroke.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

Figure 1.2a Deaths under 75 years by cause, males, latest available year, Europe

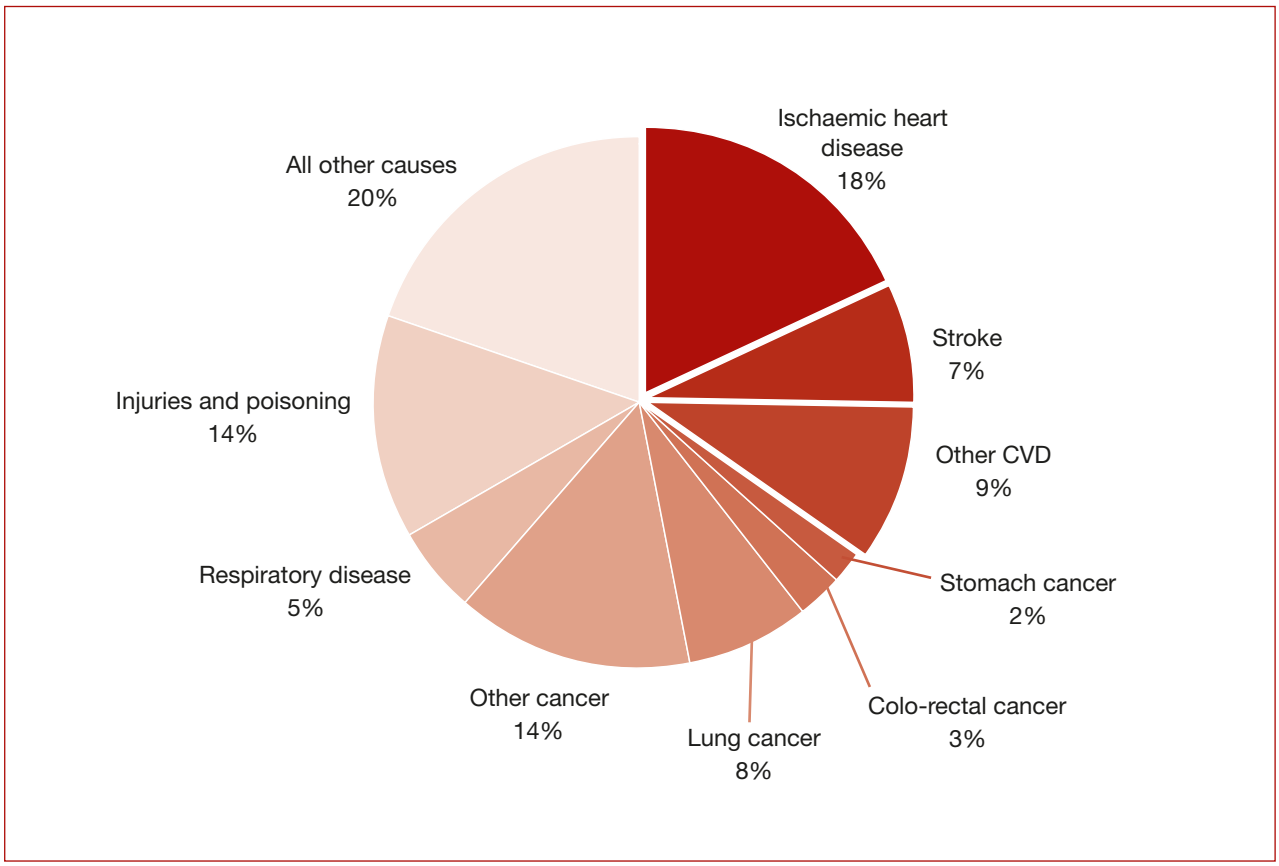


Figure 1.2b Deaths under 75 years by cause, females, latest available year, Europe

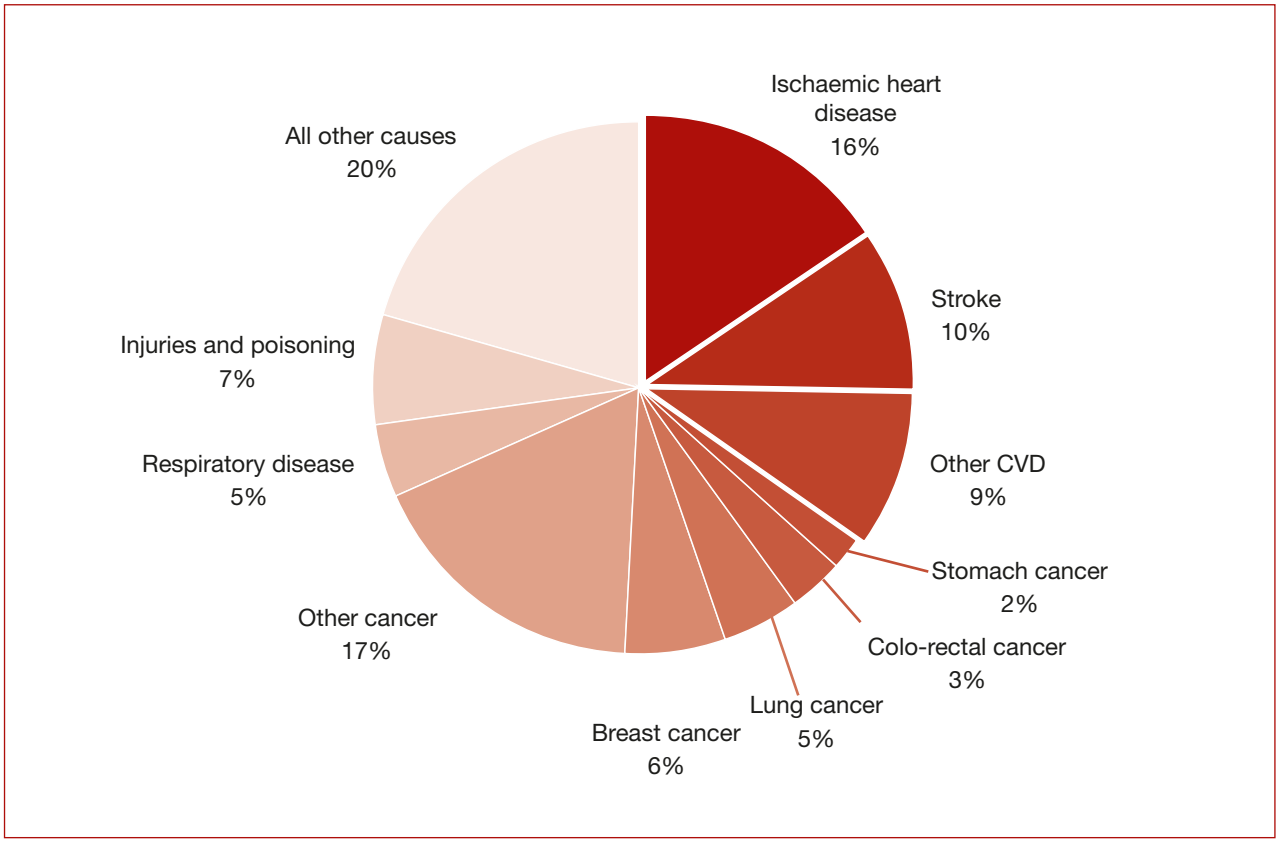


Figure 1.2c Deaths under 75 by cause, males, latest available year, EU

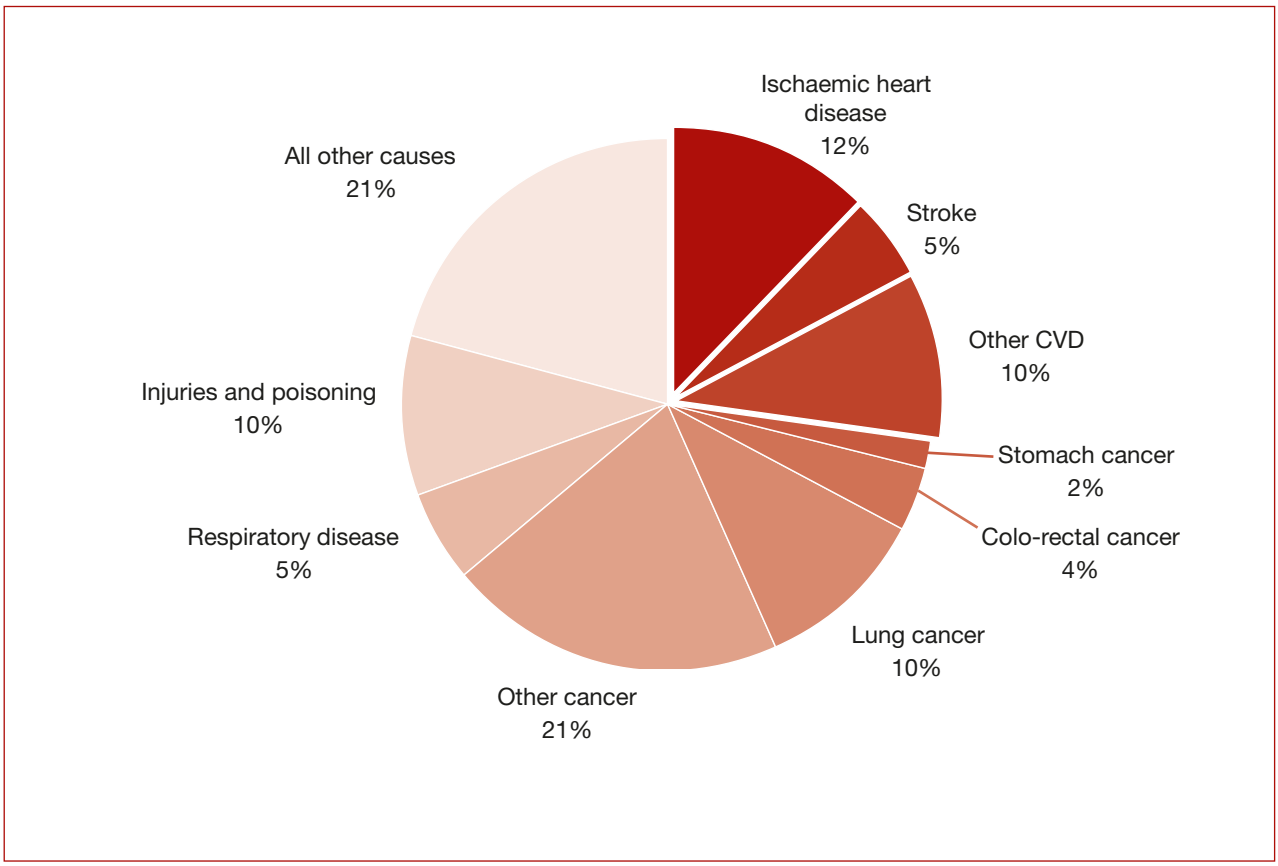


Figure 1.2d Deaths under 75 by cause, females, latest available year, EU

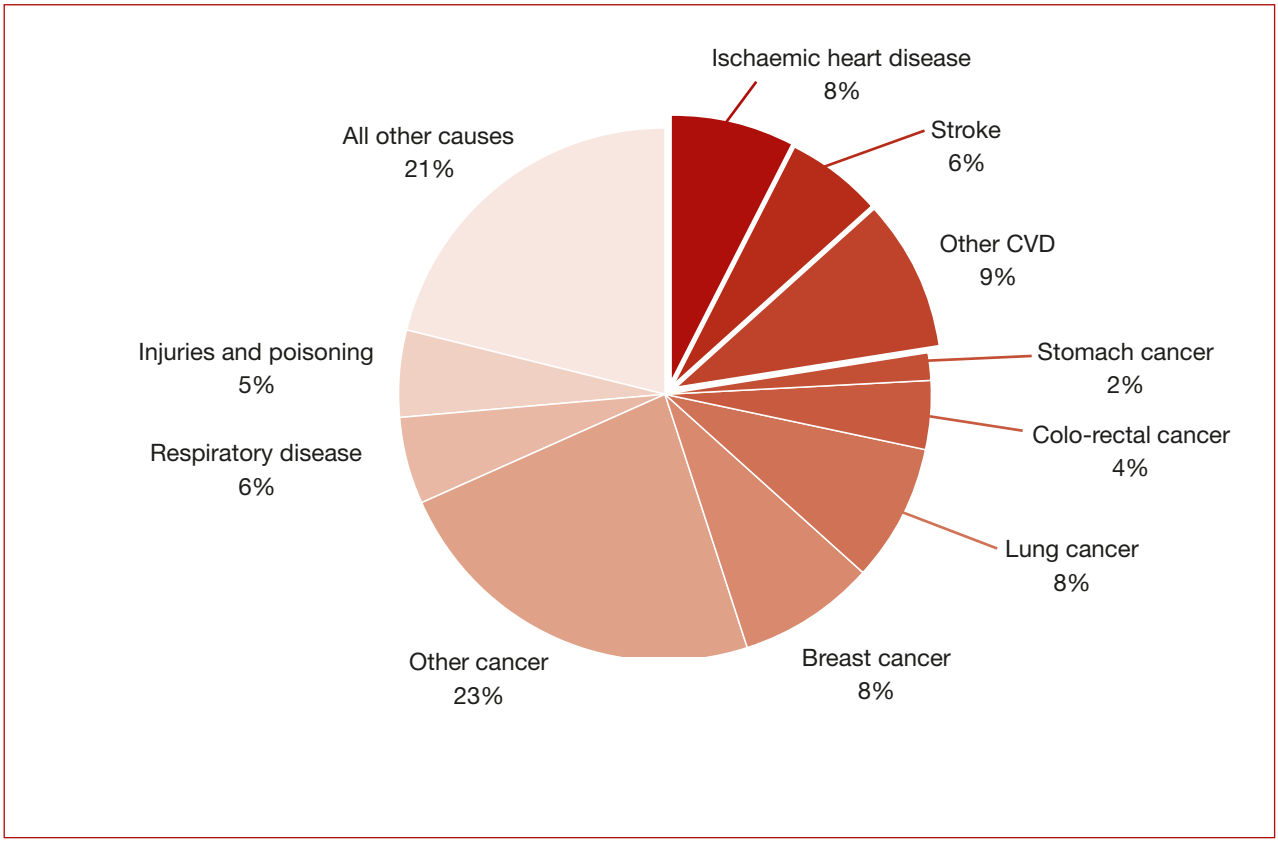


Table 1.3 Number of deaths under 65 years by cause and sex, latest available year, Europe

Males

	Year	All causes	Ischaemic heart disease	Stroke	Other CVD	Stomach cancer	Colo-rectal cancer	Lung cancer	Breast cancer	Other cancer	Respiratory disease	Injuries and poisoning	All other causes
Albania	2009	2,519	443	185	266	67	17	155	2	342	57	587	398
Armenia	2014	5,231	1,381	286	199	106	57	427	4	667	203	669	1,232
Austria*	2014	8,209	939	207	458	102	240	737	3	1,661	204	1,368	2,290
Azerbaijan	2007	11,751	1,267	930	2,134	147	47	229	4	977	731	1,561	3,724
Belarus	2014	27,878	7,725	1,934	1,506	551	398	1,396	4	2,867	810	6,613	4,074
Belgium*	2013	11,701	888	324	807	114	284	1,267	3	2,175	602	2,253	2,984
Bosnia and Herzegovina	2014	5,593	719	285	873	99	159	626	5	810	146	571	1,300
Bulgaria*	2013	16,346	1,921	1,496	3,899	233	438	1,333	6	2,085	640	1,488	2,807
Croatia*	2014	6,693	1,050	398	445	144	303	799	3	1,255	161	901	1,234
Cyprus*	2013	639	124	18	40	15	13	57	0	119	22	114	117
Czech Republic*	2014	14,473	2,273	539	1,336	182	509	1,082	3	2,610	662	2,455	2,822
Denmark*	2012	5,576	410	177	343	77	195	435	0	1,112	265	770	1,792
Estonia*	2014	2,574	337	77	377	53	40	146	0	320	96	611	517
Finland*	2014	6,065	850	241	494	59	154	307	1	846	137	1,380	1,596
France*	2013	69,238	3,744	1,610	3,938	832	1,829	8,341	33	14,768	1,950	11,065	21,128
Georgia	2014	9,202	799	502	1,086	97	65	361	8	806	262	1,075	4,141
Germany*	2014	88,837	9,704	2,312	7,782	1,410	2,755	8,296	31	16,911	3,583	10,230	25,823
Greece*	2012	11,890	2,371	604	733	190	275	1,560	14	2,110	415	1,851	1,767
Hungary*	2014	21,062	3,483	1,148	2,066	304	895	2,404	11	3,542	1,027	2,455	3,727
Iceland	2009	239	29	10	17	3	9	22	0	51	6	60	32
Ireland*	2013	3,677	518	113	224	56	142	267	4	728	125	846	654
Israel	2013	5,117	343	138	276	88	139	396	4	858	206	769	1,900
Italy*	2012	48,355	4,771	1,546	4,001	1,159	1,859	4,905	37	11,434	1,305	6,638	10,700
Kazakhstan	2015	40,881	3,670	2,522	3,325	665	366	1,225	8	2,565	3,537	10,436	12,562
Kyrgyzstan	2013	12,289	1,787	1,151	700	215	70	203	1	539	697	2,303	4,623
Latvia*	2014	5,011	881	314	628	75	76	248	0	640	174	1,119	856
Lithuania*	2014	7,684	1,396	381	611	144	109	408	4	843	253	2,036	1,499
Luxembourg*	2014	452	56	7	35	12	8	49	0	92	17	86	90
Malta*	2014	351	57	13	19	8	15	38	0	80	13	41	67
Montenegro	2009	999	82	36	260	7	8	87	0	93	45	120	261
Netherlands*	2013	13,761	1,000	450	1,155	183	581	1,508	6	3,306	495	1,829	3,248
Norway	2014	3,792	388	77	217	37	162	272	5	719	129	848	938
Poland*	2014	72,877	6,784	3,487	10,945	1,224	1,869	6,058	15	10,631	2,561	12,565	16,738
Portugal*	2014	11,688	1,070	520	611	389	466	1,043	3	2,506	519	1,644	2,917
Republic of Moldova	2014	10,384	1,924	826	426	157	202	448	3	1,151	697	2,062	2,488
Romania*	2014	44,594	6,177	3,212	4,490	779	1,009	3,820	15	6,895	2,799	5,900	9,498
Russian Federation	2011	546,532	106,739	39,230	51,670	8,956	6,289	21,744	120	40,241	29,031	135,590	106,922
San Marino	2000	27	1	1	6	3	0	3	0	6	2	5	0
Serbia	2014	14,309	1,538	884	2,280	185	451	1,790	10	2,283	634	1,400	2,854
Slovakia*	2014	9,899	1,516	539	695	127	387	609	4	1,767	397	1,582	2,276
Slovenia*	2010	2,855	284	117	170	61	108	316	2	526	50	603	618
Spain*	2014	40,247	3,996	1,301	2,859	852	1,815	5,083	24	8,709	1,951	5,234	8,423
Sweden*	2014	6,800	841	243	504	75	246	332	2	1,349	190	1,571	1,447
Switzerland	2013	6,077	542	118	442	99	176	520	1	1,277	190	1,106	1,606
TFYR Macedonia	2010	3,132	416	324	420	86	90	338	1	430	76	303	648
Turkey	2013	74,625	10,759	3,486	4,865	1,876	1,464	9,208	25	9,158	4,359	11,278	18,147
Turkmenistan	2012	10,607	1,446	982	897	98	60	104	3	566	741	883	4,827
Ukraine	2014	137,155	32,525	9,746	9,961	2,302	2,124	5,545	25	12,828	5,227	27,624	29,248
United Kingdom*	2013	56,070	8,079	1,786	3,246	567	1,764	3,950	23	11,410	3,413	9,259	12,573
Uzbekistan	2014	44,555	7,872	3,239	6,528	588	236	608	18	2,545	3,009	6,542	13,370
EU		**587,624**	**65,520**	**23,180**	**52,911**	**9,426**	**18,384**	**55,398**	**247**	**110,430**	**24,026**	**87,894**	**140,208**
Europe		**1,560,518**	**247,915**	**90,072**	**141,265**	**25,858**	**30,973**	**101,105**	**498**	**192,209**	**74,821**	**300,299**	**355,503**

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.
Notes: Other CVD is defined as all circulatory diseases other than IHD and stroke.
Data were not available for Andorra, Monaco or Tajikistan.
*Asterisk denotes EU member states.

Table 1.3 Number of deaths under 65 years by cause and sex, latest available year, Europe

Females

	Year	All causes	Ischaemic heart disease	Stroke	Other CVD	Stomach cancer	Colo-rectal cancer	Lung cancer	Breast cancer	Other cancer	Respiratory disease	Injuries and poisoning	All other causes
Albania	2009	1,294	144	123	178	46	18	38	99	229	43	166	210
Armenia	2014	2,491	325	166	107	51	77	55	248	560	80	147	675
Austria*	2014	4,528	212	148	198	76	155	495	449	1,153	112	403	1,127
Azerbaijan	2007	6,529	430	700	1,086	73	66	56	187	862	536	413	2,120
Belarus	2014	10,427	2,186	1,043	582	262	326	127	621	1,733	139	1,450	1,958
Belgium*	2013	6,887	225	222	398	50	192	689	715	1,400	386	890	1,720
Bosnia and Herzegovina	2014	2,814	206	176	418	57	109	168	231	632	72	124	621
Bulgaria*	2013	7,049	460	677	1,604	117	239	275	480	1,402	285	291	1,219
Croatia*	2014	2,945	238	214	151	63	169	292	314	697	50	239	518
Cyprus*	2013	278	18	7	20	7	9	10	43	82	3	23	56
Czech Republic*	2014	6,694	495	247	569	108	308	486	458	1,745	281	600	1,397
Denmark*	2012	3,539	106	112	145	36	136	434	343	799	216	257	955
Estonia*	2014	979	54	42	122	27	41	40	75	222	29	133	194
Finland*	2014	2,808	147	141	156	35	101	156	254	589	65	423	741
France*	2013	34,005	769	976	1,542	337	1,266	3,317	3,794	7,743	904	3,437	9,920
Georgia	2014	3,782	176	238	382	52	54	43	255	581	96	235	1,670
Germany*	2014	47,723	2,338	1,544	3,425	747	1,775	4,938	4,955	10,652	2,122	3,098	12,129
Greece*	2012	5,308	514	312	292	97	200	391	591	1,374	220	346	971
Hungary*	2014	10,547	1,163	567	791	159	505	1,429	739	2,153	604	634	1,803
Iceland	2009	119	1	2	4	0	4	13	11	36	9	19	20
Ireland*	2013	2,236	117	63	118	33	100	180	263	548	108	232	474
Israel	2013	3,132	65	81	142	58	139	162	404	726	115	218	1,022
Italy*	2012	27,796	1,128	1,088	1,718	700	1,417	2,193	3,690	7,969	675	1,619	5,599
Kazakhstan	2015	19,184	899	1,530	1,383	307	339	254	822	2,502	1,428	2,618	7,102
Kyrgyzstan	2013	6,319	659	632	326	96	42	69	160	645	383	647	2,660
Latvia*	2014	2,049	243	166	233	53	59	54	150	415	53	229	394
Lithuania*	2014	2,910	310	190	222	81	87	75	202	579	40	423	701
Luxembourg*	2014	212	5	4	10	3	7	21	24	51	10	25	52
Malta*	2014	199	21	6	9	2	12	7	19	59	6	9	49
Montenegro	2009	576	34	30	145	6	10	45	43	75	16	45	127
Netherlands*	2013	9,986	294	308	552	123	476	1,481	1,128	2,335	520	680	2,089
Norway	2014	2,281	74	75	87	24	142	242	214	527	107	273	516
Poland*	2014	31,124	1,672	1,656	3,485	526	1,175	3,013	2,549	7,625	1,094	2,194	6,135
Portugal*	2014	5,162	204	287	300	204	296	283	550	1,210	198	463	1,167
Republic of Moldova	2014	4,880	812	516	220	87	135	87	238	642	208	437	1,498
Romania*	2014	19,579	1,907	1,633	1,821	279	616	889	1,395	4,195	1,077	1,203	4,564
Russian Federation	2011	223,832	33,528	21,515	21,326	4,433	6,030	3,238	11,988	29,831	8,531	32,987	50,425
San Marino	2000	10	1	2	0	0	0	0	2	4	0	0	1
Serbia	2014	7,526	490	518	1,011	105	317	697	664	1,703	351	330	1,340
Slovakia*	2014	4,258	367	251	251	83	208	228	334	1,040	172	325	999
Slovenia*	2010	1,165	37	65	56	18	54	109	136	279	21	125	265
Spain*	2014	19,357	733	668	1,128	408	1,044	1,683	2,165	5,146	784	1,536	4,062
Sweden*	2014	4,296	247	139	174	56	241	385	396	1,050	143	584	881
Switzerland	2013	3,500	119	103	180	61	138	359	385	766	117	387	885
TFYR Macedonia	2010	1,722	143	222	232	44	48	76	174	301	56	92	334
Turkey	2013	38,625	3,142	2,424	3,235	855	965	1,277	2,150	6,023	2,118	2,912	13,524
Turkmenistan	2012	6,701	733	677	676	53	47	37	202	611	554	299	2,812
Ukraine	2014	57,406	12,153	5,310	3,341	1,102	1,807	867	3,639	8,978	1,398	5,541	13,270
United Kingdom*	2013	36,482	2,140	1,329	1,850	325	1,273	3,172	3,791	8,392	2,625	2,888	8,697
Uzbekistan	2014	28,124	3,637	1,988	4,300	427	184	254	964	2,700	2,217	2,084	9,369
EU		**300,101**	**16,164**	**13,062**	**21,340**	**4,753**	**12,161**	**26,725**	**30,002**	**70,904**	**12,803**	**23,309**	**68,878**
Europe		**731,375**	**76,121**	**51,133**	**60,701**	**12,952**	**23,158**	**34,889**	**53,703**	**131,571**	**31,377**	**74,733**	**181,037**

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Other CVD is defined as all circulatory diseases other than IHD and stroke.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

Figure 1.3a Deaths under 65 years by cause, males, latest available year, Europe

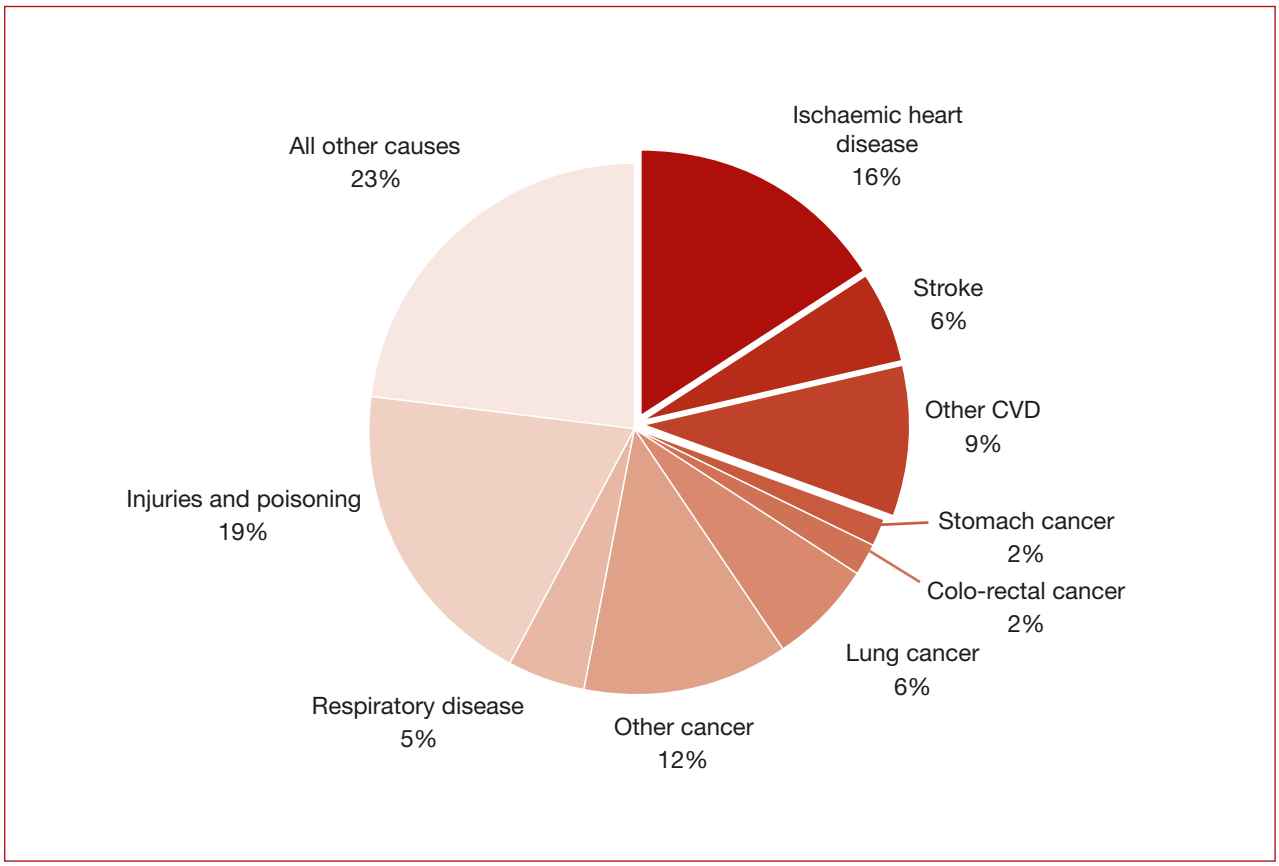


Figure 1.3b Deaths under 65 years by cause, females, latest available year, Europe

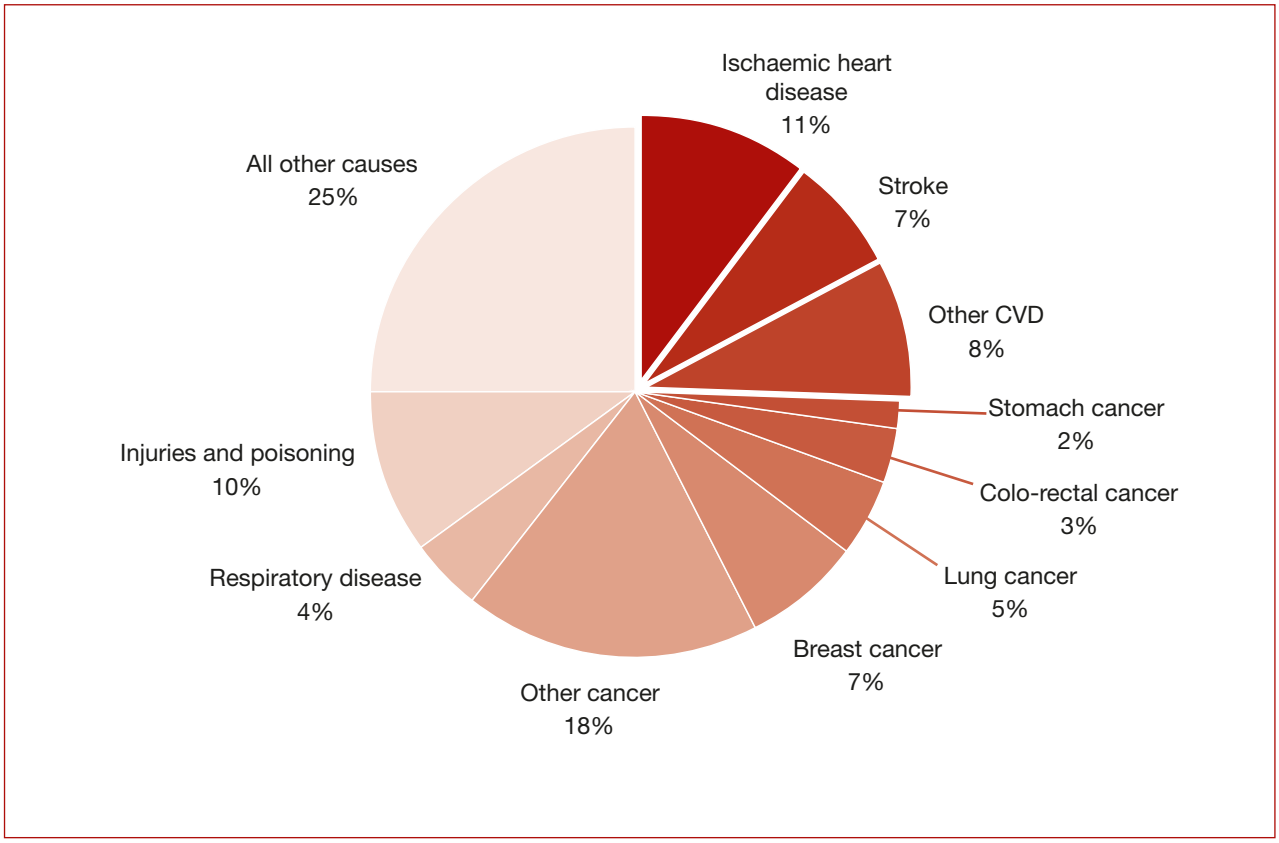


Figure 1.3c Deaths under 65 years by cause, males, latest available year, EU

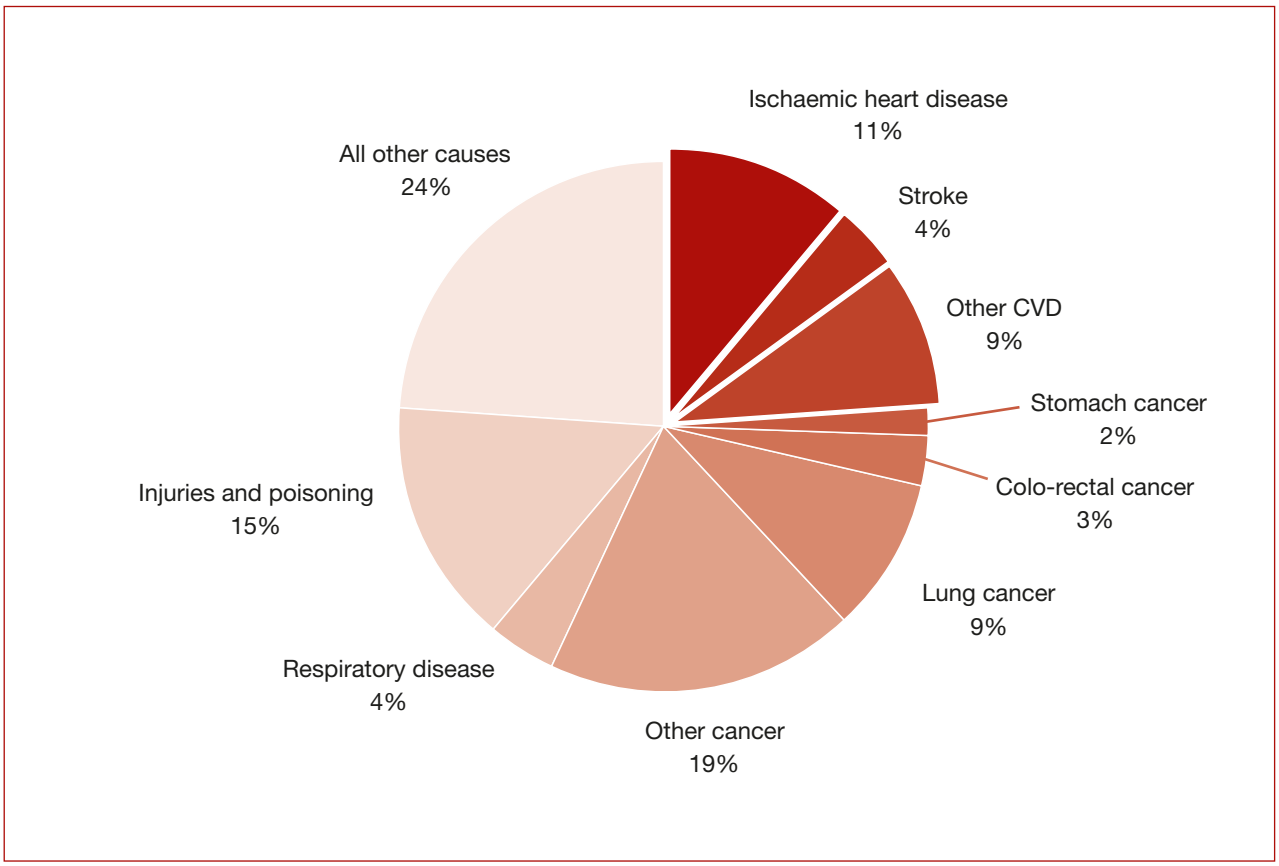


Figure 1.3d Deaths under 65 years by cause, females, latest available year, EU

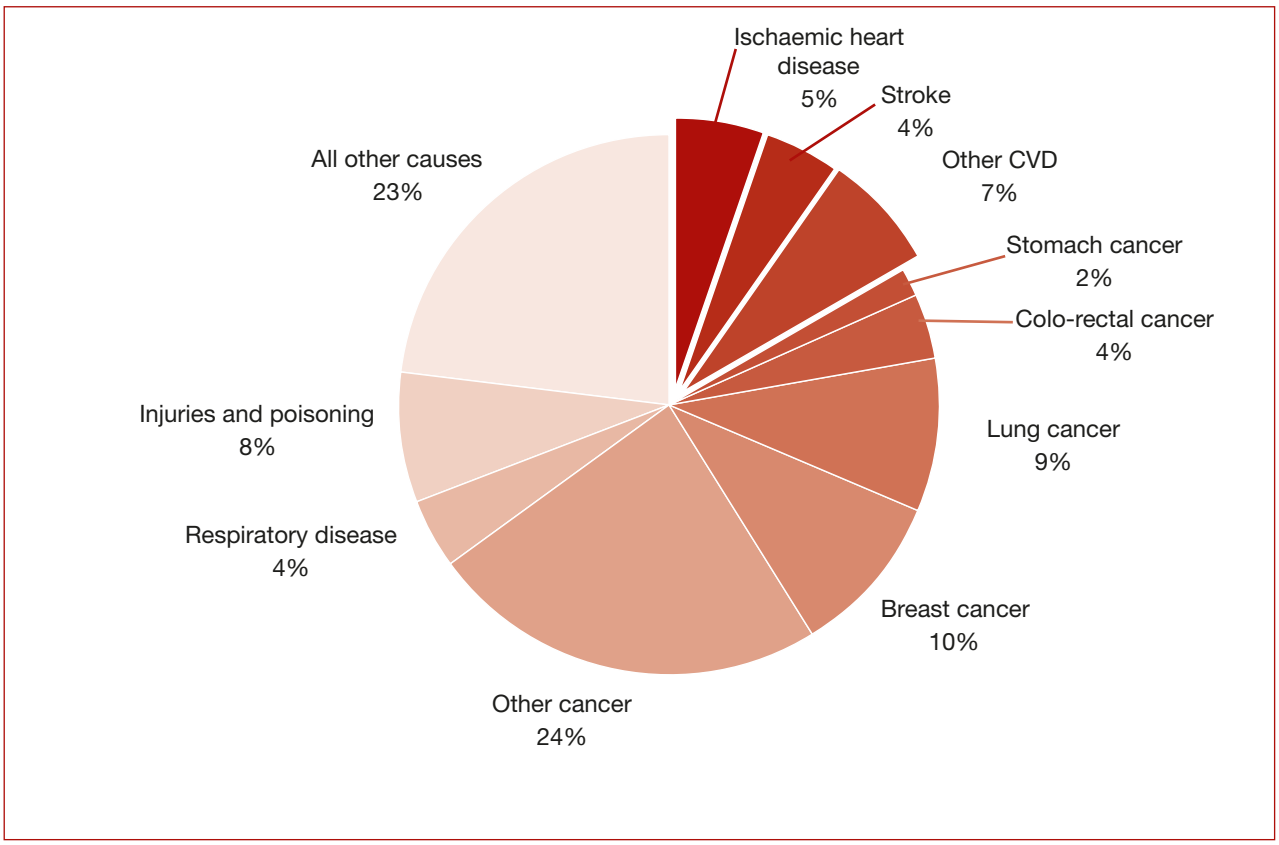


Table 1.4 Potential years of life lost (PYLL) by cause, by sex, latest available year, Europe

Males

PYLL per 100,000 males aged 0-74 years and cause-specific percentage of total years of life lost

		All causes	CVD		IHD		Stroke	
	Year	n	n	%	n	%	n	%
Albania	2009	4,669	1,384	30	582	12	274	6
Armenia	2014	8,015	2,135	27	1,557	19	315	4
Austria*	2014	4,195	678	16	375	9	93	2
Azerbaijan	2007	8,230	2,248	27	604	7	441	5
Belarus	2014	12,888	4,184	32	2,743	21	709	6
Belgium*	2013	4,579	631	14	268	6	103	2
Bosnia and Herzegovina	2014	5,757	1,730	30	640	11	265	5
Bulgaria*	2013	9,355	3,652	39	911	10	698	7
Croatia*	2014	6,275	1,489	24	821	13	293	5
Cyprus*	2013	3,485	807	23	537	15	80	2
Czech Republic*	2014	5,491	1,321	24	683	12	183	3
Denmark*	2012	4,112	580	14	250	6	105	3
Estonia*	2014	8,755	2,063	24	833	10	223	3
Finland*	2014	4,747	969	20	478	10	146	3
France*	2013	4,765	533	11	205	4	94	2
Georgia	2014	11,714	2,316	20	762	7	452	4
Germany*	2014	4,553	872	19	407	9	104	2
Greece*	2012	4,926	1,308	27	848	17	206	4
Hungary*	2014	8,130	2,259	28	1,134	14	379	5
Iceland	2009	3,461	755	22	307	9	125	4
Ireland*	2013	3,884	671	17	384	10	96	2
Israel	2013	3,197	324	10	136	4	56	2
Italy*	2012	3,735	675	18	288	8	103	3
Kazakhstan	2015	12,435	2,091	17	718	6	524	4
Kyrgyzstan	2013	13,656	2,309	17	1,078	8	679	5
Latvia*	2014	11,678	3,550	30	1,546	13	579	5
Lithuania*	2014	12,517	3,094	25	1,676	13	479	4
Luxembourg*	2014	3,287	603	18	344	10	39	1
Malta*	2014	3,721	834	22	480	13	111	3
Montenegro	2009	7,163	2,329	33	453	6	182	3
Netherlands*	2013	3,477	550	16	203	6	94	3
Norway	2014	3,357	467	14	241	7	59	2
Poland*	2014	7,769	1,863	24	550	7	310	4
Portugal*	2014	4,977	827	17	396	8	187	4
Republic of Moldova	2014	12,396	2,891	23	1,718	14	733	6
Romania*	2014	8,272	2,093	25	928	11	475	6
Russian Federation	2011	19,040	5,267	28	2,613	14	963	5
San Marino	2000	5,621	1,416	25	63	1	275	5
Serbia	2014	7,710	2,184	28	727	9	400	5
Slovakia*	2014	7,297	1,648	23	857	12	336	5
Slovenia*	2010	5,544	934	17	456	8	188	3
Spain*	2014	3,722	661	18	312	8	106	3
Sweden*	2014	3,287	582	18	280	9	89	3
Switzerland	2013	3,403	508	15	234	7	59	2
TFYR Macedonia	2010	6,364	1,965	31	686	11	534	8
Turkey	2013	5,324	886	17	468	9	161	3
Turkmenistan	2012	13,790	2,274	16	934	7	651	5
Ukraine	2014	15,505	4,516	29	2,612	17	812	5
United Kingdom*	2013	4,137	771	19	443	11	110	3
Uzbekistan	2014	8,340	2,000	24	884	11	342	4

Source: European WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Potential years of life lost (PYLL) is defined here as the number of years lost due to deaths occurring before the age of 75 years.

Data are crude rates.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

Table 1.4 Potential years of life lost (PYLL) by cause, by sex, latest available year, Europe

Females

PYLL per 100,000 females aged 0-74 years and cause-specific percentage of total years of life lost

		All causes	CVD		IHD		Stroke	
	Year	n	n	%	n	%	n	%
Albania	2009	2,571	725	28	194	8	184	7
Armenia	2014	3,757	630	17	336	9	174	5
Austria*	2014	2,373	255	11	90	4	68	3
Azerbaijan	2007	4,721	1,217	26	218	5	354	8
Belarus	2014	4,475	1,309	29	680	15	364	8
Belgium*	2013	2,745	286	10	67	2	78	3
Bosnia and Herzegovina	2014	3,051	784	26	188	6	163	5
Bulgaria*	2013	4,302	1,415	33	210	5	343	8
Croatia*	2014	2,889	497	17	184	6	171	6
Cyprus*	2013	1,354	197	15	75	6	29	2
Czech Republic*	2014	2,600	452	17	156	6	88	3
Denmark*	2012	2,649	237	9	63	2	73	3
Estonia*	2014	3,237	574	18	129	4	123	4
Finland*	2014	2,241	287	13	81	4	92	4
France*	2013	2,405	200	8	43	2	60	2
Georgia	2014	4,921	741	15	160	3	218	4
Germany*	2014	2,533	347	14	101	4	76	3
Greece*	2012	2,234	409	18	187	8	118	5
Hungary*	2014	4,001	831	21	359	9	202	5
Iceland	2009	1,747	121	7	11	1	58	3
Ireland*	2013	2,288	249	11	84	4	48	2
Israel	2013	1,965	133	7	27	1	34	2
Italy*	2012	2,129	266	12	65	3	74	3
Kazakhstan	2015	5,799	803	14	159	3	304	5
Kyrgyzstan	2013	7,699	952	12	338	4	356	5
Latvia*	2014	4,387	1,123	26	388	9	274	6
Lithuania*	2014	4,304	889	21	345	8	233	5
Luxembourg*	2014	1,716	115	7	39	2	18	1
Malta*	2014	2,065	313	15	151	7	51	2
Montenegro	2009	4,028	1,260	31	173	4	191	5
Netherlands*	2013	2,524	262	10	61	2	68	3
Norway	2014	1,990	176	9	54	3	57	3
Poland*	2014	3,213	589	18	130	4	149	5
Portugal*	2014	2,202	304	14	76	3	104	5
Republic of Moldova	2014	5,460	1,268	23	651	12	416	8
Romania*	2014	3,752	793	21	273	7	246	7
Russian Federation	2011	6,973	1,790	26	705	10	475	7
San Marino	2000	1,503	250	17	63	4	146	10
Serbia	2014	4,126	945	23	221	5	255	6
Slovakia*	2014	3,258	527	16	213	7	148	5
Slovenia*	2010	2,588	319	12	70	3	137	5
Spain*	2014	1,937	219	11	58	3	58	3
Sweden*	2014	2,050	222	11	89	4	56	3
Switzerland	2013	1,995	182	9	48	2	46	2
TFYR Macedonia	2010	3,707	1,016	27	224	6	378	10
Turkey	2013	3,229	442	14	139	4	118	4
Turkmenistan	2012	9,183	1,477	16	443	5	464	5
Ukraine	2014	5,858	1,578	27	847	14	398	7
United Kingdom*	2013	2,640	331	13	119	5	84	3
Uzbekistan	2014	5,536	1,171	21	413	7	217	4

Source: European WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.
Notes: Potential years of life lost (PYLL) is defined here as the number of years lost due to deaths occurring before the age of 75 years.
Data are crude rates.
Data were not available for Andorra, Monaco or Tajikistan.
*Asterisk denotes EU member states.

Table 1.5 Age-standardised death rates from IHD, all ages, by sex, 1980 to 2015, Europe

Males

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								157	154	175			183	176	150	205
Armenia		654	727			719	743	793	790	807	839	842	903	902	761	787
Austria*	382	422	420	438	413	418	409	399	389	401	402	408	403	400	391	394
Azerbaijan		796	799			851	849	946	961	839	901	1,004	1,002	1,079	912	986
Belarus		972	964			1,117	996	996	970	891	812	790	782	910	937	979
Belgium*	320	315	302	308	297	287	273	255	241	229	223	214	212	235	217	225
Bosnia and Herzegovina						184	197	201	210	228	217	211				
Bulgaria*	390	388	430	445	468	546	558	525	499	497	516	518	494	535	520	538
Croatia*						209	206	210	193	192	184	302	409	412	449	436
Cyprus*																
Czech Republic*							769	728	698	735	767	726	706	678	644	634
Denmark*	691	698	645	638	637	630	609	604	571	557	542	514	504	487	436	423
Estonia*		1,262	1,169			1,285	1,165	1,164	1,120	1,083	1,114	1,044	1,064	1,083	1,141	1,049
Finland*	713	704	687	690	678	723	657	661	644	624	633	597	618	588	538	554
France*	190	192	189	191	190	195	201	181	176	168	162	162	156	155	146	145
Georgia		942	900			916	928	969	978	937	890	919	999		663	924
Germany*	429	432	428	428	430	440	420	420	413	403	406	420	411	420	402	400
Greece*	193	191	192	200	205	210	198	211	221	226	225	219	222	216	207	217
Hungary*	531	554	563	565	550	550	552	542	544	544	554	563	580	603	577	584
Iceland	584	633	559	590	522	536	514	527	533	492	418	498	467	430	448	432
Ireland*	651	668	666	683	657	689	673	636	631	612	595	576	546	561	544	551
Israel	471	483	509	421	416	410	446	426	389	377	342	349	360	369	368	366
Italy*	311	288	294	314	276	256	255	250	243	244	239	242	233	232	229	231
Kazakhstan		711	731			768	713	740	742	716	748	765	814	871	1,042	999
Kyrgyzstan		632	664			725	684	686	708	698	639	587	614	682	772	742
Latvia*	1,165	1,100	1,018	1,063	1,126	1,176	1,023	1,023	1,003	917	968	913	968	1,079	1,149	1,002
Lithuania*		978	951			1,122	1,002	1,054	1,035	976	1,025		985	995	969	952
Luxembourg*	322	364	362	327	386	375	351	345	355	319	276	268	279	281	260	252
Malta*	974	1,110	583	569	533	448	584	604	532	479	511	490	535	494	462	400
Montenegro																
Netherlands*	435	436	430	419	421	426	408	387	366	357	339	325	310	325	296	295
Norway	524	530	520	517	516	549	529	530	506	483	489	463	445	427	398	404
Poland*	258	241	239	233	241	249	256	267	263	274	280	296	286	276	255	250
Portugal*	220	196	188	201	215	200	190	192	196	190	197	191	185	201	173	169
Republic of Moldova		1,361	1,242			1,328	1,117	1,158	1,060	939	782	823	770	810	916	1,117
Romania*	325	333	334	371	387	410	395	427	424	413	421	446	480	543	536	541
Russian Federation	968	939	903	939	972	956	880	880	849	809	798	782	791	932	979	896
San Marino																116
Serbia																
Slovakia*															712	686
Slovenia*						313	249	240	206	257	281	305	354	360	341	274
Spain*	192	193	194	194	194	194	186	185	186	183	184	188	184	183	178	182
Sweden*	750	732	695	666	644	655	629	574	559	497	500	484	466	465	430	435
Switzerland	317	327	309	316	316	308	298	298	300	295	297	295	287	284	272	296
TFYR Macedonia												205	231	217	242	222
Turkey																
Turkmenistan		861	864			896	897	831	960	1,044	1,015	1,145	1,208	1,232	1,155	1,157
Ukraine	1,200	1,167	1,198	1,006	970	897	810	749	786	817	948	1,022	1,079	1,086	1,096	1,054
United Kingdom*	645	626	619	621	613	626	604	578	559	546	528	531	511	509	469	459
Uzbekistan		791	840			886	829	779	846	874	871	870	907	1,022	1,048	1,043

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Data were age-standardised to the 2013 European standard population.

Blank cells indicate that data were not available.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
230	212	234	232	250	198	255	306	278	263	241	214	264	256						
744	705	655	665	601	592	889	931			718		772	761	859	908	622		637	
387	396	393	377	352	332	338	319	303	291	288	279	259	259	261	246	242	241	226	
928	908	918	926	953	858	909	833	578			250								
946	1,006	1,038	1,123	1,063	1,119	1,157	1,157				1,043	1,055	1,106	1,115	1,061		987	1,011	
217	217	232	218	224	214	209	202	195	186	162	157	148	142	137	120	120	113		
															159			185	
511	550	536	470	434	430	452	425	394	380	350	323	300	270	271	255	271	251		
474	480	514	460	461	386	381	450	360	410	387	373	384	377	388	369	387	358	341	
								194	202	193	207	174	183	156	169	162	157		
560	532	487	482	461	458	447	444	409	439	425	461	438	422	412	426	419	425	388	
375	363	341	321	296	301	262	247	231	211	191	180	167	164	147	129	124			
960	897	955	921	847	885	830	811	749	715	701	644	618	563	552	471	481	399	388	
517	497	493	496	474	447	445	419	399	388	385	372	350	346	344	320	304	281	269	
145	137	143	139	139	133	130	126	119	115	106	101	98	92	88	84	82	77		
803	823	884	866	906	848			770	408	327	279		273	134	226	242	187	266	
388	376	370	356	334	323	317	310	285	271	254	240	224	222	212	198	195	204	189	
223	218	201	207	205	207	203	212	205	184	176	169	155	154	142	141	145			
578	576	578	598	558	527	520	554	556	631	577	545	523	525	513	500	501	491	479	
416	398	322	377	317	312	333	332	333	250	260	269	264	238						
521	486	480	458	432	393	375	338	324	296	284	300	295	273	252	234	236	226		
275	272	294	248	243	221	209	215	183	180	172	188	161	147	139	133	120	115		
223	217	220	208	198	192	194	204			172	167	163	156	150	151	148			
1,059	981	1,013	970	1,014	1,005	1,027	1,046	853	883	854	870	822	554	426	341	290	300	265	249
752	774	773	695	793	754	819	866	759	853	895	885	889	881	986	997	1,037	984		
894	870	886	830	830	796	774	753	797	781	719	791	722	685	696	668	632	604	584	
960	916	839	821	772	851	865	874	823	874	841	825	794	768	783	757	740	726	700	
286	252	241	206	216	190	194	247	202	164	185	166	164	129	128	125	121	110	115	
442	472	394	448	429	375	355	356	330	380	368	305	302	301	251	337	370	272	240	
				148	167	165	137	179	179	148	145	137	138						
284	266	258	245	227	216	202	195	173	161	149	137	127	118	112	103	99	90		
371	370	354	340	314	305	297	268	244	221	199	200	192	178	170	159	149	137	126	
248			354	345	329	312	313	292	285	279	261	258	247	231	228	214	191	176	
173	161	166	159	151	147	153	147				116	110	103	102	92	89	89	98	
1,245	1,243	1,249	1,383	1,353	1,319	1,391	1,372	1,269	1,370	1,216	1,093	1,034	1,082	1,113	999	988	936	898	
569	556	539	542	500	497	526	519	496	493	484	458	444	429	431	408	400	365	364	
837	810	795	857	881	885	913	991	953	963	919	891	883	850	856	790				
98	60	62	107	35															
		254	262	277	269	268	275	263	301	282	258	261	253	237	220	211	199	194	
657	657	646	640	676	693	687	707	673	648	600	639	684	648	644		496	504	465	
272	320	307	316	270	268	242	258	210	215	178	174	182	168	175					
185	183	185	182	169	164	161	162	150	148	137	134	125	122	119	114	112	104	102	
410	382	375	363	338	328	324	313	286	282	269	253	244	229	221	202	201	186	174	
281	280	280	260	251	235	220	222	201	204	194	185	177	168	159	151	149	141		
248	247	279	257	237	248	251	250	231	230	231	216	205	193	188					
													202	196	191	172	244		
1,236	1,036	1,001																	
1,108	1,154	1,137	1,231	1,256	1,234	1,289	1,256	1,235	1,289	1,254	1,244	1,227	1,181	1,181	1,096	1,077		1,102	
439	413	402	384		347	332	318	294	276	252	241	227	212	203	184	181	177		
978	926	1,032	930	964	862	827	794	761	803									688	

Table 1.5 Age-standardised death rates from IHD, all ages, by sex, 1980 to 2015, Europe

Females

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								69	74	77			82	69	72	100
Armenia		534	565			606	590	590	598	641	632	627	692	714	615	627
Austria*	197	209	207	218	209	217	212	211	208	211	224	234	227	226	221	223
Azerbaijan		500	517			553	545	587	616	554	563	602	660	688	562	636
Belarus		665	661			785	700	697	668	595	522	483	474	544	558	548
Belgium*	149	150	150	150	145	143	134	128	121	114	107	109	101	119	112	109
Bosnia and Herzegovina						102	100	113	115	124	115	118				
Bulgaria*	263	275	323	314	341	416	415	361	351	358	367	372	342	363	357	353
Croatia*						91	90	98	89	82	74	181	286	279	306	306
Cyprus*																
Czech Republic*							464	417	408	438	436	430	398	402	391	384
Denmark*	382	370	348	346	343	340	333	322	315	303	304	278	267	275	236	238
Estonia*		771	761			837	768	772	756	710	687	659	622	675	673	631
Finland*	332	336	320	321	328	339	334	331	331	323	320	311	308	321	295	295
France*	94	95	95	95	95	97	99	89	87	84	81	80	76	76	70	69
Georgia		632	617			634	647	672	678	647	622	649	691		419	606
Germany*	212	214	211	214	215	223	216	215	216	213	217	227	225	229	223	223
Greece*	82	86	86	98	93	100	93	108	107	111	117	110	115	111	109	114
Hungary*	308	326	320	324	307	314	320	309	316	316	326	330	335	351	344	348
Iceland	285	299	304	282	249	298	256	264	256	270	240	255	239	249	232	205
Ireland*	339	339	341	344	329	350	344	322	329	340	306	295	286	291	292	287
Israel	327	343	373	280	294	298	298	286	269	243	234	231	228	241	256	257
Italy*	182	163	168	181	152	138	133	131	131	129	128	129	126	127	125	126
Kazakhstan		475	490			525	481	488	503	474	474	485	504	549	639	611
Kyrgyzstan		459	454			524	466	462	479	465	414	408	396	421	506	499
Latvia*	778	688	659	676	726	765	657	662	653	580	592	567	546	586	624	565
Lithuania*		744	707			807	759	767	755	702	713	650		646	629	660
Luxembourg*	180	161	151	150	181	182	168	190	141	159	135	124	127	135	135	109
Malta*	686	884	339	388	266	306	341	401	302	328	380	358	341	291	293	299
Montenegro																
Netherlands*	207	209	206	196	196	196	192	179	174	162	161	155	149	153	143	139
Norway	251	256	244	242	237	243	240	242	239	230	231	223	212	210	193	189
Poland*	104	99	97	93	90	91	91	96	95	103	106	112	113	114	108	104
Portugal*	125	113	110	112	111	108	105	102	105	106	114	110	108	110	101	99
Republic of Moldova		1,075	1,004			1,073	915	915	869	749	608	610	542	584	670	812
Romania*	245	256	274	300	302	325	321	350	344	342	336	337	343	399	388	389
Russian Federation	634	607	578	602	642	638	577	576	560	517	501	476	472	538	554	517
San Marino																65
Serbia																
Slovakia*															464	438
Slovenia*						174	113	109	107	144	193	203	211	228	220	163
Spain*	100	101	100	103	100	99	96	96	96	95	97	98	94	95	92	95
Sweden*	407	385	360	344	328	330	323	278	278	249	247	239	237	238	213	214
Switzerland	145	152	150	145	143	142	143	143	146	144	147	143	146	144	144	152
TFYR Macedonia												110	109	110	115	119
Turkey																
Turkmenistan		582	598			628	644	589	656	776	729	857	922	1,032	1,049	816
Ukraine		865	826			868	736	701	651	562	495	509	521	630	688	716
United Kingdom*	313	310	307	307	309	318	305	295	292	287	277	277	267	266	244	237
Uzbekistan		596	606			659	632	594	647	661	625	649	698	796	794	825

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Data were age-standardised to the 2013 European standard population.

Blank cells indicate that data were not available.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
101	105	117	116	159	114	150	183	175	161	158	126	192	183						
616	588	563	580	514	470	673	670			485		557	536	557	599	445		446	
221	217	225	221	204	197	212	211	198	189	178	171	161	159	151	143	149	141	132	
596	581	581	591	684	648	681	637	389			178								
869	561	580	658	619	652	637	618				530	523	546	554	498	492		505	
110	105	118	107	111	104	105	105	97	92	79	76	71	65	63	58	54	51		
															107			132	
346	373	371	321	301	293	302	279	256	236	207	188	176	163	162	150	166	145		
322	324	322	303	326	256	251	309	251	273	263	253	256	265	279	266	268	246	244	
								91	100	98	103	86	73	68	88	71	64		
348	321	288	298	278	276	276	276	256	294	277	315	298	290	268	280	276	280	253	
202	197	180	183	165	167	150	141	125	117	109	101	93	89	84	70	67			
588	542	577	534	532	501	504	491	430	407	392	363	353	327	312	271	260	233	211	
270	260	262	261	258	247	252	237	212	213	200	200	194	177	176	159	157	145	137	
68	64	68	65	63	63	61	61	54	52	48	45	43	40	37	27	34	32		
537	553	539	547	614	576			453	219	170	141		151	75	133	139	109	169	
218	214	214	207	195	190	191	190	173	163	152	142	133	129	123	114	111	111	101	
116	115	105	109	110	111	111	118	114	99	97	93	81	81	74	71	68			
368	360	366	380	362	347	344	364	367	414	383	356	343	337	347	331	335	320	315	
200	186	204	208	187	146	163	151	141	138	151	107	135	125						
278	269	256	254	229	213	212	189	181	163	161	166	159	147		131	124	117		
181	192	199	163	150	142	134	134	117	120	114	112	100	84	78	77	71	67		
121	120	122	117	111	106	107	119			98	96	93	88	82	85	83			
642	585	571	566	558	631	659	680	537	558	540	550	524	337	228	175	139	179	156	140
502	495	498	498	545	539	637	648	595	649	689	701	684		769	807	816	747		
481	491	539	490	481	449	430	442	429	410	398	438	377	370	363	349	363	348	331	
624	643	585	536	516	572	552	535	534	548	535	517	488	466	485	449	450	451	429	
117	122	107	98	99	107	101	116	93	93	104	86	74	52	57	67	48	65	45	
270	278	280	307	262	257	239	246	211	235	217	183	185	181	184	193	231	159	163	
				97	90	90	95	89	91	87	91	92	72						
139	127	125	117	110	104	100	94	85	78	71	67	63	56	54	50	47	45		
176	178	170	173	164	153	151	142	130	110	112	107	100	96	90	86	86	73	68	
105			193	188	179	169	170	160	159	153	140	141	136	122	122	112	99	90	
99	97	94	91	87	85	86	90				69	64	62	58	51	50	48	49	
927	924	906	997	1,011	997	1,048	1,058	964	1,029	910	863	828	817	863	775	752	706	717	
412	400	396	407	373	365	376	365	353	352	345	321	308	302	301	281	284	251	250	
498	491	481	510	513	512	530	561	536	547	545	530	524	505	503	466				
20	87	36	47	32															
		159	163	174	174	189	187	180	204	197	181	177	178	160	138	138	123	125	
423	422	447	454	487	491	484	502	468	468	418	458	476	466	450		358	361	321	
162	186	188	169	158	144	131	135	123	115	96	94	87	88	86					
96	94	94	93	85	82	82	81	77	75	67	66	62	59	57	54	52	47	45	
206	194	190	183	175	173	170	162	153	145	146	136	133	123	116	112	107	99	94	
153	151	150	148	142	134	129	126	114	111	105	101	97	90	85	76	79	74		
131	128	143	137	131	128	139	142	141	131	137	125	117	117	103					
													120	120	115	97	145		
915	748	677																	
726	743	730	763	797	785	800	826	797	827	815	795	791	775	783	735	721		727	
226	214	210	199		181	174	169	154	144	132	124	118	107	101	90	90	87		
764	742	823	734	772	695	668	623	590	605									508	

Figure 1.5a Age-standardised death rates from IHD, males, latest available year, Europe

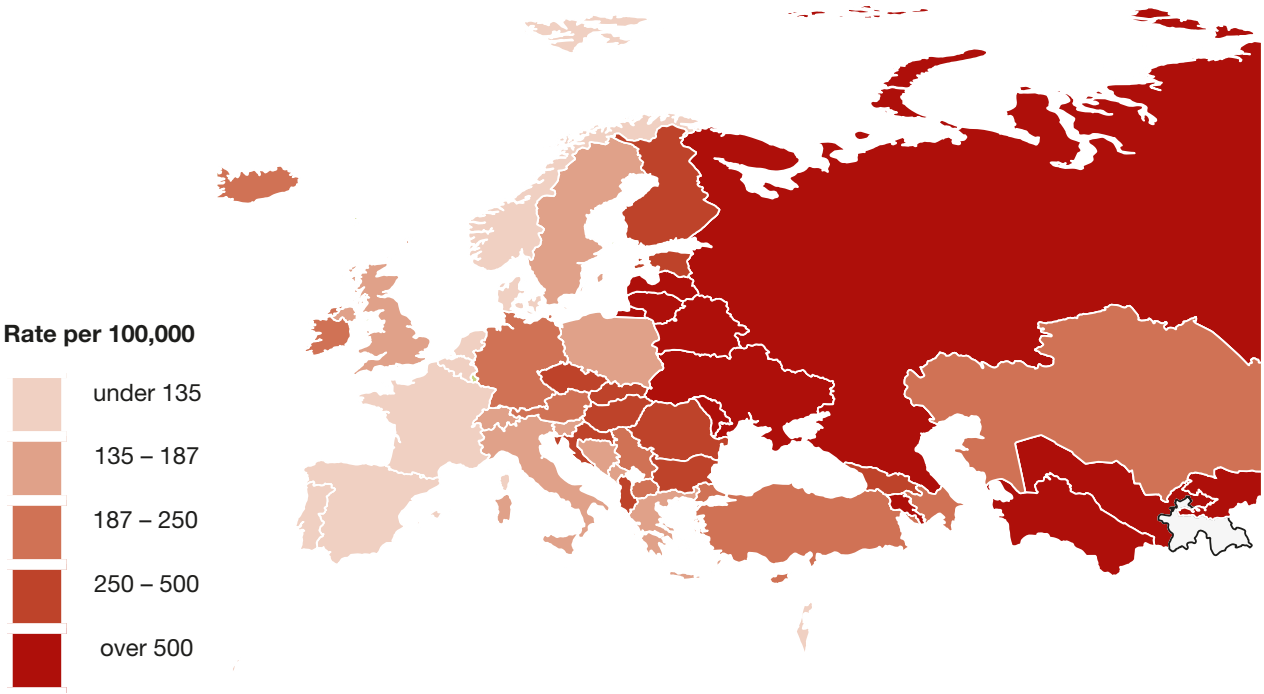


Figure 1.5b Age-standardised death rates from IHD, females, latest available year, Europe

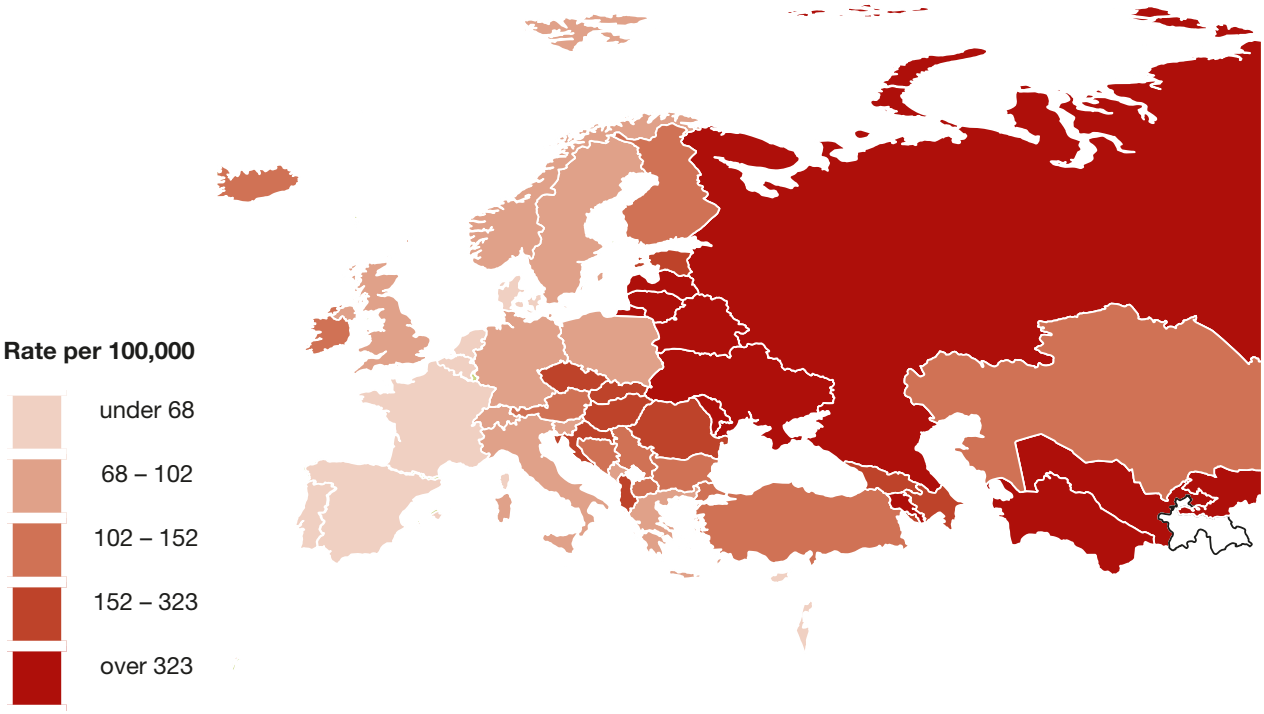


Figure 1.5c Age-standardised death rates/100,000 from IHD, males, 1980 to 2015, selected European countries

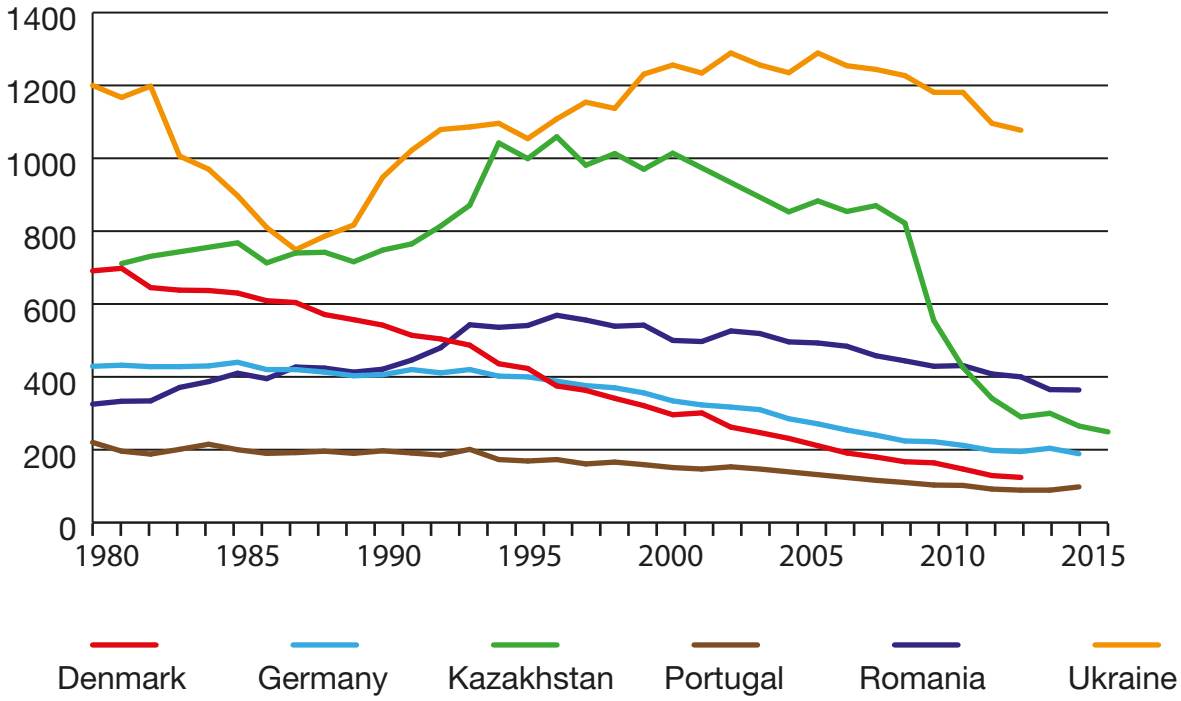


Figure 1.5d Age-standardised death rates/100,000 from IHD, females, 1980 to 2015, selected European countries

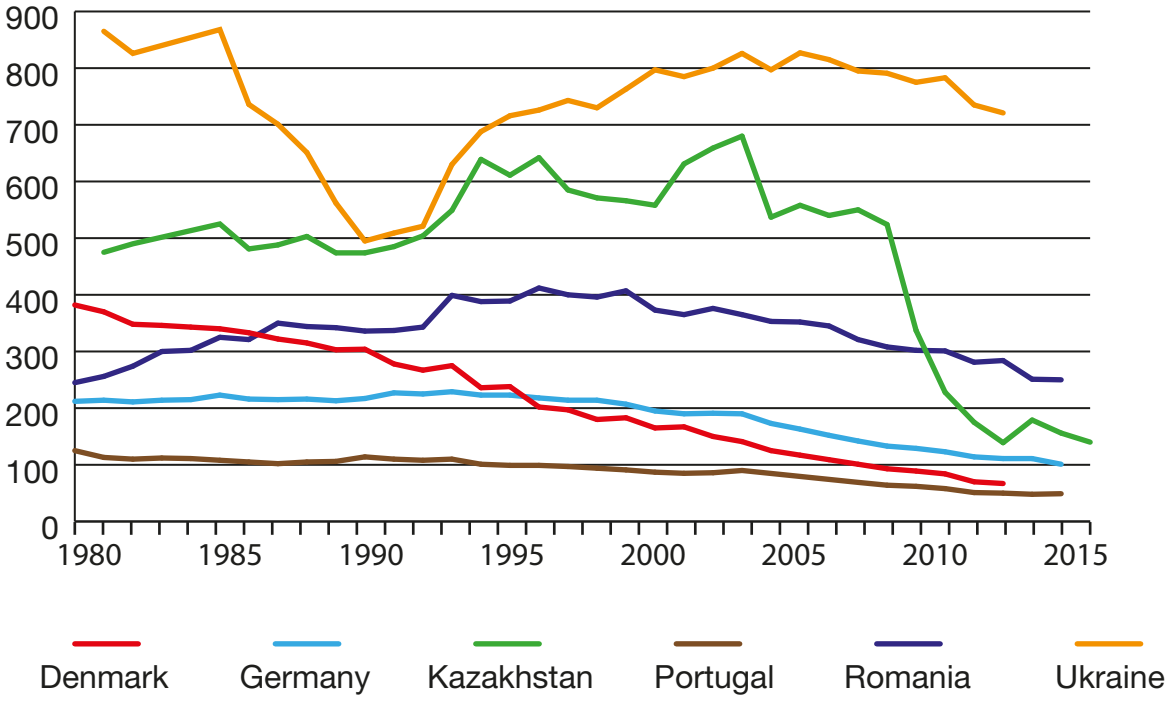


Table 1.6 Age-standardised death rates from stroke, all ages, by sex, 1980 to 2015, Europe

Males

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								285	315	310			268	249	234	310
Armenia		246	241			278	271	261	294	308	314	288	311	350	290	267
Austria*	341	343	315	335	311	327	312	282	262	245	231	221	221	201	193	191
Azerbaijan		341	371			389	370	372	347	271	240	249	254	281	246	272
Belarus		275	275			310	294	312	313	299	292	300	290	329	318	331
Belgium*	224	224	219	231	217	189	183	161	165	159	160	153	156	157	146	139
Bosnia and Herzegovina						165	175	194	221	222	243	243				
Bulgaria*	574	469	468	472	483	517	477	470	453	462	466	481	470	503	476	442
Croatia*						366	378	365	357	386	364	356	328	345	334	334
Cyprus*																
Czech Republic*							501	482	469	466	460	434	400	378	370	347
Denmark*	179	178	172	165	160	161	157	149	154	152	161	158	160	166	148	156
Estonia*		487	428			491	480	457	468	411	460	431	462	477	455	421
Finland*	240	245	230	228	227	239	226	227	218	201	215	217	199	209	193	201
France*	227	220	207	201	189	191	194	161	149	140	130	129	121	118	109	108
Georgia		546	512			583	532	479	500	495	479	466	487		462	431
Germany*	279	276	258	256	241	238	228	219	213	208	203	213	201	197	190	184
Greece*	296	282	286	291	289	299	276	276	268	264	267	266	260	242	260	262
Hungary*	464	444	433	417	415	426	389	381	362	366	381	370	365	363	345	344
Iceland	148	189	133	187	116	136	156	140	126	126	161	155	123	137	146	180
Ireland*	268	244	257	247	224	214	238	201	195	189	181	167	173	180	160	160
Israel	221	182	204	190	159	158	162	151	142	145	137	144	154	155	133	139
Italy*	264	254	268	276	257	265	256	241	239	223	214	217	205	205	196	181
Kazakhstan		376	361			398	401	399	406	441	427	439	407	456	516	500
Kyrgyzstan		418	412			428	394	457	475	442	433	457	467	494	525	518
Latvia*	468	526	492	510	508	545	511	522	514	489	498	487	472	527	567	545
Lithuania*		210	216			244	229	231	229	238	243		244	256	267	246
Luxembourg*	424	377	373	386	368	371	391	340	337	298	275	249	228	242	199	210
Malta*	345	381	267	225	184	175	272	292	206	205	201	229	170	218	163	142
Montenegro																
Netherlands*	180	179	172	168	168	159	159	152	154	154	151	154	150	148	143	137
Norway	219	222	211	210	211	194	197	203	191	188	195	177	184	186	165	165
Poland*	145	128	125	115	131	144	143	144	141	141	143	150	157	164	159	155
Portugal*	598	567	541	568	553	552	531	509	526	467	481	480	454	467	414	403
Republic of Moldova		429	390			510	441	406	399	360	353	355	327	354	378	389
Romania*	349	350	342	356	359	370	377	397	390	370	358	367	382	490	481	486
Russian Federation	543	553	541	548	583	581	554	560	568	539	539	526	533	605	642	609
San Marino																36
Serbia																
Slovakia*													206	212	229	219
Slovenia*						317	302	317	305	254	297	311	311	271	269	254
Spain*	290	285	261	266	254	249	229	216	214	205	198	198	181	175	167	162
Sweden*	168	172	162	159	153	156	157	151	150	145	152	154	147	147	139	141
Switzerland	208	193	199	181	165	163	151	147	146	139	141	126	120	121	119	112
TFYR Macedonia												321	344	361	347	371
Turkey																
Turkmenistan											227	299	262	329	311	275
Ukraine		368	375			442	406	423	422	403	398	417	416	449	460	472
United Kingdom*	245	229	222	213	222	223	217	200	193	191	183	191	182	165	156	156
Uzbekistan		301	323			333	313	350	328	301	317	339	344	367	463	407

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Data were age-standardised to the 2013 European standard population.

Blank cells indicate that data were not available.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
384	362	385	371	250	198	255	306	332	312	289	249	308	295						
255	233	220	212	201	212	385	363			243		284	249	238	266	182		159	
196	192	180	171	158	144	147	127	98	96	92	84	82	77	69	69	70	67	62	
256	234	243	238	249	210	231	268	289			345								
326	356	367	372	347	355	365	364				323	310	313	311	280		250	239	
145	134	122	118	121	113	112	112	100	95	89	85	86	81	77	72	71	69		
															216			184	
438	455	460	405	416	405	423	412	396	426	430	425	409	385	405	358	382	353		
398	375	407	405	366	329	333	312	279	290	282	275	263	257	243	231	223	218	210	
								103	92	114	84	80	73	77	85	79	70		
323	287	298	303	317	301	294	304	260	252	233	186	175	181	162	150	147	139	124	
150	142	135	131	129	135	145	143	133	125	117	107	96	94	93	79	79			
409	362	377	372	358	326	318	341	277	267	261	210	175	153	140	135	109	112	93	
161	161	162	155	146	143	131	136	126	121	116	114	104	103	97	98	98	95	89	
106	102	100	98	93	90	87	86	76	75	69	66	63	60	58	57	55	53		
376	436	468	485	501	478			513	459	441	431		331	167	196	184	172	244	
178	166	159	149	135	130	125	119	105	100	93	86	84	81	77	72	70	72	65	
245	247	250	242	245	235	234	220	211	195	188	166	160	152	134	130	139			
344	320	330	340	340	309	309	307	281	247	226	227	211	212	203	193	187	181	173	
131	118	145	122	116	137	95	97	104	88	103	91	80	88						
161	151	133	147	126	118	102	99	82	88	71	90	92	88	79	80	72	71		
151	118	102	82	95	104	93	85	86	82	75	73	58	55	58	61	63	57		
169	169	170	159	154	144	142	145			117	112	113	108	100	98	96			
491	483	505	486	504	449	430	490	446	443	407	395	373	368	372	283	240	282	245	225
501	461	448	455	465	479	495	481	455	503	499	487	443	440	418	409	351	383	351	
495	484	468	472	465	481	481	484	415	421	392	339	333	308	309	283	310	284	296	
252	251	250	260	242	253	259	259	250	251	263	256	254	250	243	239	230	249	219	
202	159	173	184	157	148	162	145	122	116	117	102	98	113	99	88	67	72	53	
184	170	216	132	153	138	163	163	138	130	137	116	135	151	88	126	100	86	84	
				221	205	210	210	210	236	192	190	175	126						
133	131	128	130	122	118	121	111	105	95	89	82	77	71	69	64	62	68		
169	157	156	150	138	130	126	113	109	106	95	91	94	90	82	84	77	68	66	
159			220	222	220	210	207	195	186	180	174	166	159	149	144	138	127	117	
398	357	347	331	311	293	274	264				188	178	169	166	146	149	134	128	
428	427	398	412	438	469	459	477	461	472	455	430	413	394	374	368	361	344	354	
512	501	487	473	434	439	464	462	444	447	429	390	368	366	364	345	340		297	
582	581	577	599	621	624	631	682	652	637	582	542	523	482	476	415				
79	110	80	95	109															
		353	354	350	330	337	339	316	330	315	306	289	288	270	259	257	229	210	
212	208	221	195	192	204	207	204	193	172	160	201	229	216	203	186	186	166	173	
246	226	227	212	205	191	194	189	173	152	127	132	152	158	144					
152	144	144	141	125	122	118	117	104	104	95	93	86	82	77	72	71	64	62	
137	143	142	134	133	127	124	120	111	105	97	94	98	93	85	86	82	75	73	
104	101	101	95	87	85	80	82	73	72	67	66	62	59	60	53	53	51		
376	415	400	392	410	387	407	425	405	397	389	404	397	384	383					
													135	141	138	124	140		
234	148	155														314			
428	415	399	392	395	384	388	387	380	381	369	359	360	348	345	320	306		305	
153	147	144	138		144	144	139	125	116	109	102	99	91	89	74	72	70		
375	342	336	312	370	399	325	310	289	336									210	

Table 1.6 Age-standardised death rates from stroke, all ages, by sex, 1980 to 2015, Europe

Females

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								222	238	237			201	198	162	234
Armenia		202	245			275	266	275	274	310	294	279	288	328	278	268
Austria*	284	284	272	282	265	264	262	245	216	201	192	196	177	168	164	158
Azerbaijan		291	284			313	303	303	296	226	193	188	220	231	200	220
Belarus		228	233			264	255	270	284	265	247	249	245	268	260	252
Belgium*	188	190	191	196	177	162	156	146	138	138	137	131	125	129	121	115
Bosnia and Herzegovina						161	171	200	211	215	230	235				
Bulgaria*	518	422	435	417	411	450	440	401	387	388	382	401	388	398	380	365
Croatia*						323	311	307	301	304	300	285	268	283	280	279
Cyprus*																
Czech Republic*							413	396	381	376	367	338	317	314	304	281
Denmark*	144	141	144	140	139	135	134	133	129	127	133	131	133	138	125	126
Estonia*		413	415			434	393	404	418	375	382	377	395	401	377	358
Finland*	208	223	193	200	187	197	191	200	189	190	184	180	171	186	162	174
France*	170	166	159	156	144	145	144	122	113	108	102	100	93	90	83	81
Georgia		414	397			446	405	365	413	420	398	387	404		377	341
Germany*	235	236	221	213	200	199	192	181	176	172	170	177	168	164	159	150
Greece*	320	304	306	325	300	323	309	302	294	293	292	294	279	269	275	278
Hungary*	378	360	351	341	330	328	316	307	290	284	296	290	284	276	259	262
Iceland	131	142	127	103	106	133	147	138	152	115	117	111	100	122	124	135
Ireland*	265	255	236	235	202	214	221	190	195	175	164	167	158	159	153	149
Israel	226	213	218	204	182	164	174	164	148	140	134	140	146	147	117	119
Italy*	215	206	216	221	210	214	208	198	192	177	174	173	171	169	165	150
Kazakhstan		296	301			329	334	342	356	362	347	359	338	379	418	398
Kyrgyzstan		323	347			378	342	361	385	379	368	380	390	433	454	437
Latvia*	408	463	456	485	467	500	473	472	444	432	424	417	406	431	451	429
Lithuania*		218	205			226	216	221	225	222	220		213	224	225	231
Luxembourg*	341	330	294	326	297	292	290	275	227	270	249	224	208	187	166	164
Malta*	276	508	188	191	128	128	237	227	222	232	197	226	205	202	161	175
Montenegro																
Netherlands*	155	151	149	141	143	135	132	128	130	129	129	129	131	128	122	120
Norway	188	197	179	176	177	173	165	162	165	165	163	153	151	153	141	134
Poland*	129	117	114	103	117	126	123	123	118	118	115	121	128	131	128	129
Portugal*	512	463	436	453	456	445	412	418	402	377	396	391	363	369	337	337
Republic of Moldova		370	341			441	387	379	352	328	302	306	273	287	324	328
Romania*	345	342	343	349	359	360	360	394	381	364	346	349	339	435	425	428
Russian Federation	431	439	432	438	469	475	462	470	479	446	443	435	440	484	508	496
San Marino																59
Serbia																
Slovakia*													160	164	178	188
Slovenia*						259	255	244	230	204	213	237	207	214	200	192
Spain*	257	260	238	240	228	223	211	198	192	184	179	177	162	157	150	140
Sweden*	147	151	147	139	141	142	139	133	134	130	135	132	130	125	121	116
Switzerland	177	169	156	150	141	131	129	118	118	114	110	104	101	97	96	89
TFYR Macedonia												282	308	296	314	332
Turkey																
Turkmenistan											193	232	211	309	384	269
Ukraine		300	306			374	355	363	369	344	335	341	342	376	386	383
United Kingdom*	224	211	206	199	204	205	197	188	184	179	172	171	163	153	145	145
Uzbekistan		239	264			274	264	306	281	259	270	291	312	331	408	358

Source: WHO Mortality Database http://apps.who.int/healthinfo/statistics/mortality/whodpms/.

Notes: Data were age-standardised to the 2013 European standard population.

Blank cells indicate that data were not available.

Data were not available for Andorra, Monaco or Tajikistan.

*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
272	241	286	274	159	114	150	183	283	250	241	234	244	280						
278	249	221	241	229	248	355	336			212		250	241	224	229	168		162	
166	158	151	146	137	123	122	116	85	79	78	72	68	64	65	58	62	60	56	
216	207	203	212	241	211	214	269	294			342								
256	267	280	285	272	278	271	259				224	208	217	210	184		161	160	
113	114	102	98	99	97	96	94	91	85	78	74	72	69	66	63	62	60		
															199			157	
362	368	379	344	353	329	342	332	311	340	342	347	331	307	310	287	302	281		
322	316	330	323	312	266	257	258	231	242	229	233	217	209	196	193	176	175	173	
								81	101	104	83	84	76	69	82	78	66		
260	233	260	264	261	261	257	262	218	216	197	158	154	156	145	130	124	117	104	
124	115	112	112	112	111	116	111	107	101	98	85	81	77	76	69	64			
317	316	317	293	278	279	278	257	229	215	198	156	128	111	108	91	75	88	66	
145	141	125	123	127	118	119	114	105	98	97	88	85	85	80	78	81	76	76	
80	78	77	75	71	69	67	67	60	58	53	50	49	48	46	44	44	42		
294	356	352	374	396	363			377	307	300	279		235	130	150	140	123	175	
146	136	130	122	113	108	107	105	94	90	83	77	77	74	71	66	64	64	59	
261	263	270	260	260	260	255	256	241	227	213	201	187	168	155	149	136			
266	245	245	256	246	232	225	225	208	184	165	160	152	150	148	139	139	135	128	
136	120	110	121	115	100	99	102	84	80	76	92	73	72						
147	133	127	136	106	96	85	79	71	63	63	89	86	82	82	73	72	70		
136	98	89	75	83	82	83	72	77	75	69	67	52	51	52	53	52	48		
141	140	140	132	127	119	116	121			98	96	94	91	85	84	83			
391	387	405	381	381	382	371	396	361	355	327	309	287	280	292	195	161	219	183	225
401	390	378	412	422	407	444	425	416	437	414	380	361	340	333	305	293	277		
400	417	404	399	383	404	389	380	346	339	308	285	253	234	229	213	233	241	231	
225	230	241	236	223	218	230	216	213	218	228	208	216	208	202	195	191	190	179	
145	135	140	134	131	134	133	120	113	99	98	95	83	85	86	72	65	54	52	
171	135	133	168	147	141	135	136	139	133	135	129	110	108	89	99	81	81	78	
				207	214	230	217	221	209	220	186	157	147						
115	113	111	112	109	105	105	98	93	86	80	74	71	69	65	61	60	65		
136	132	128	118	111	104	106	101	93	87	85	79	81	73	71	70	69	60	59	
135			187	179	180	172	166	159	152	143	135	128	122	117	114	106	99	91	
329	295	287	278	256	241	227	219				154	146	139	135	119	116	102	99	
330	351	336	353	356	357	376	390	369	391	366	355	339	317	293	289	293	287	279	
444	426	417	408	383	374	395	397	379	387	371	336	310	302	298	289	283	255	241	
484	489	492	506	513	521	524	542	513	506	473	437	418	378	369	318				
82	96	77	92	55															
		329	326	330	313	315	318	294	306	299	286	278	273	259	233	230	204	187	
164	162	168	146	147	151	152	153	146	129	118	146	168	162	159	139	126	123	123	
192	173	165	167	145	141	144	142	128	112	92	103	113	123	104					
133	127	123	121	109	106	101	102	90	88	80	77	73	69	65	60	58	54	52	
118	117	117	116	112	110	110	104	98	87	86	81	84	79	76	73	71	68	62	
86	84	79	79	75	69	66	71	61	61	59	59	58	53	49	48	46	47		
335	359	372	367	363	360	382	367	368	406	365	385	369	349	345					
												126	112	132	124	113	124		
195	132	136														259			
350	344	334	337	334	321	310	307	292	291	282	275	271	266	268	247	236		231	
142	136	135	132		134	134	131	120	113	104	99	97	89	87	72	72	68		
345	310	312	297	350	379	319	292	260	312									158	

Figure 1.6a Age-standardised death rates from stroke, males , latest available year, Europe

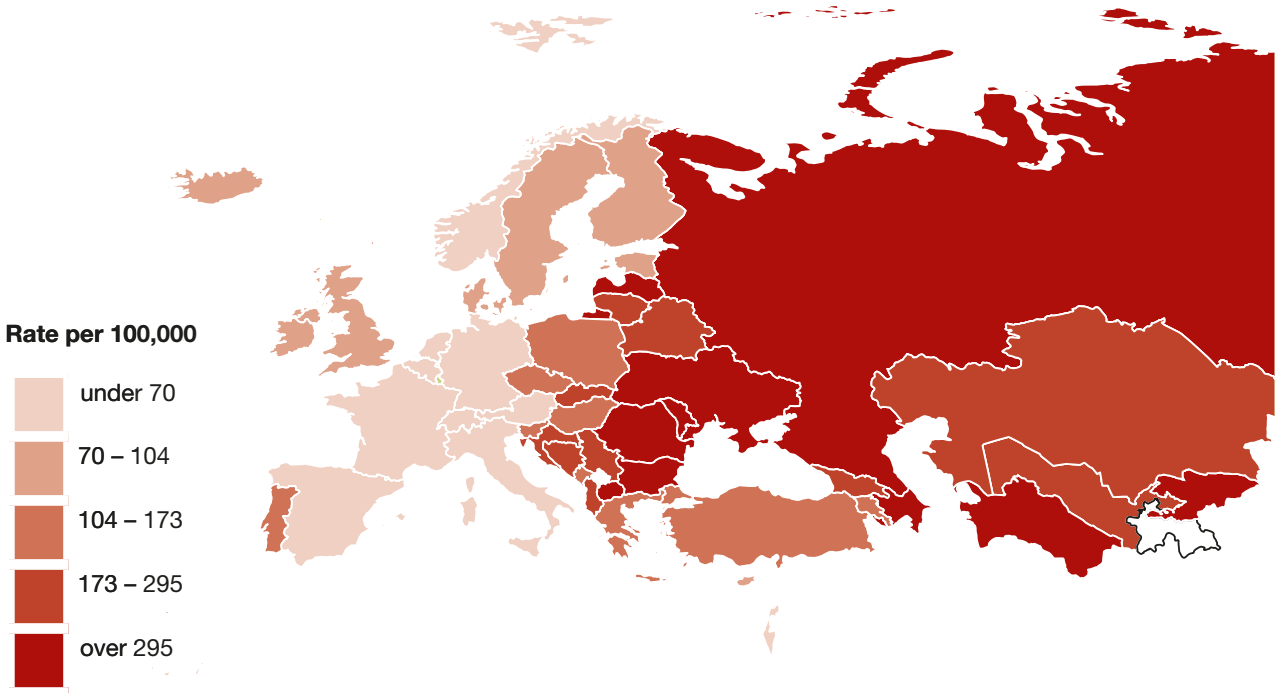


Figure 1.6b Age-standardised death rates from stroke, females, latest available year, Europe

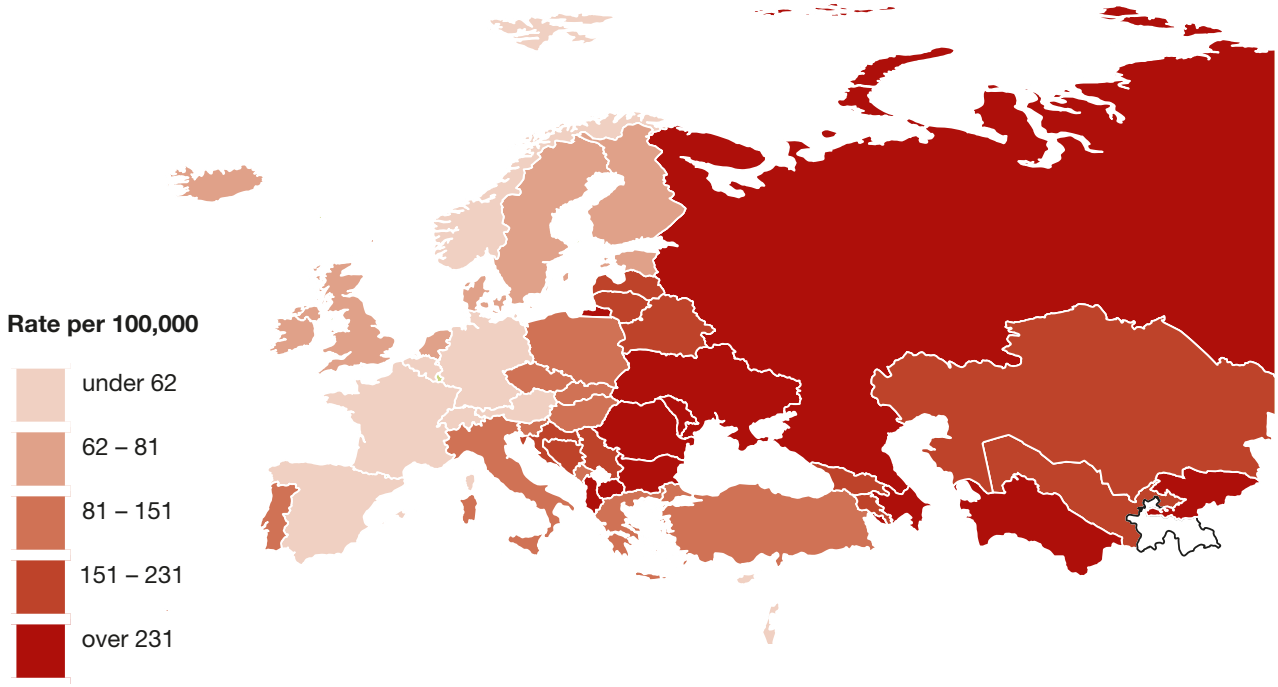


Figure 1.6c Age-standardised death rates/100,000 from stroke, males, 1980 to 2015, selected European countries

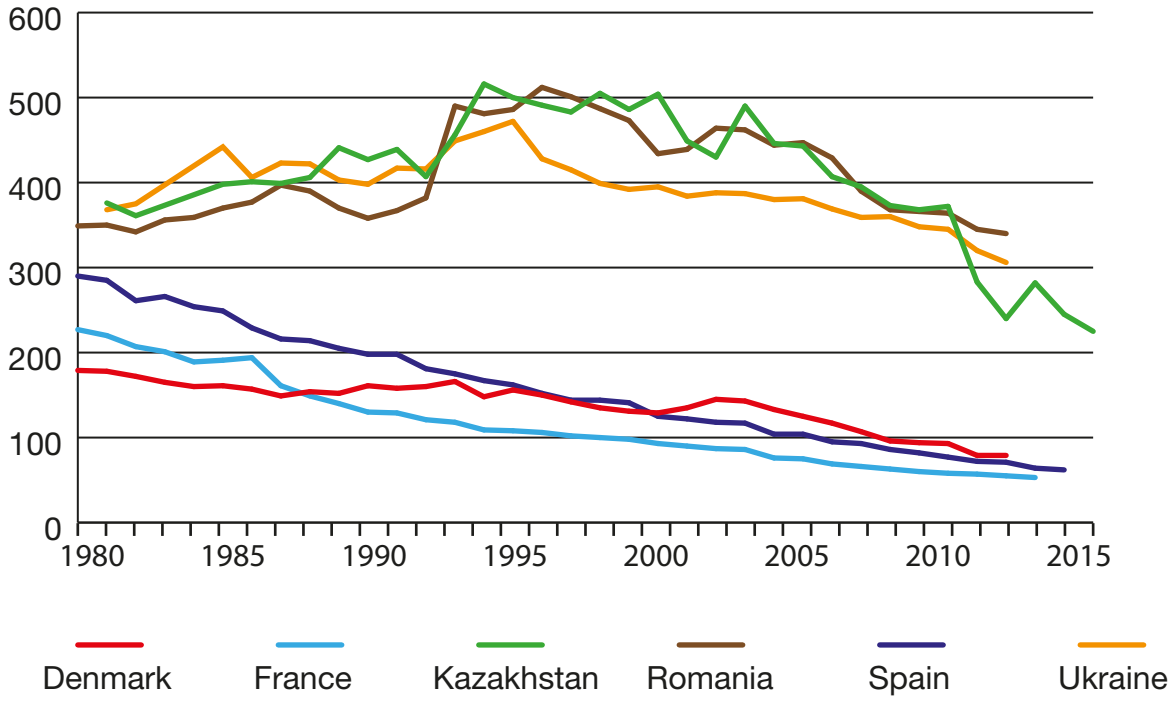


Figure 1.6d Age-standardised death rates/100,000 from stroke, females, 1980 to 2015, selected European countries

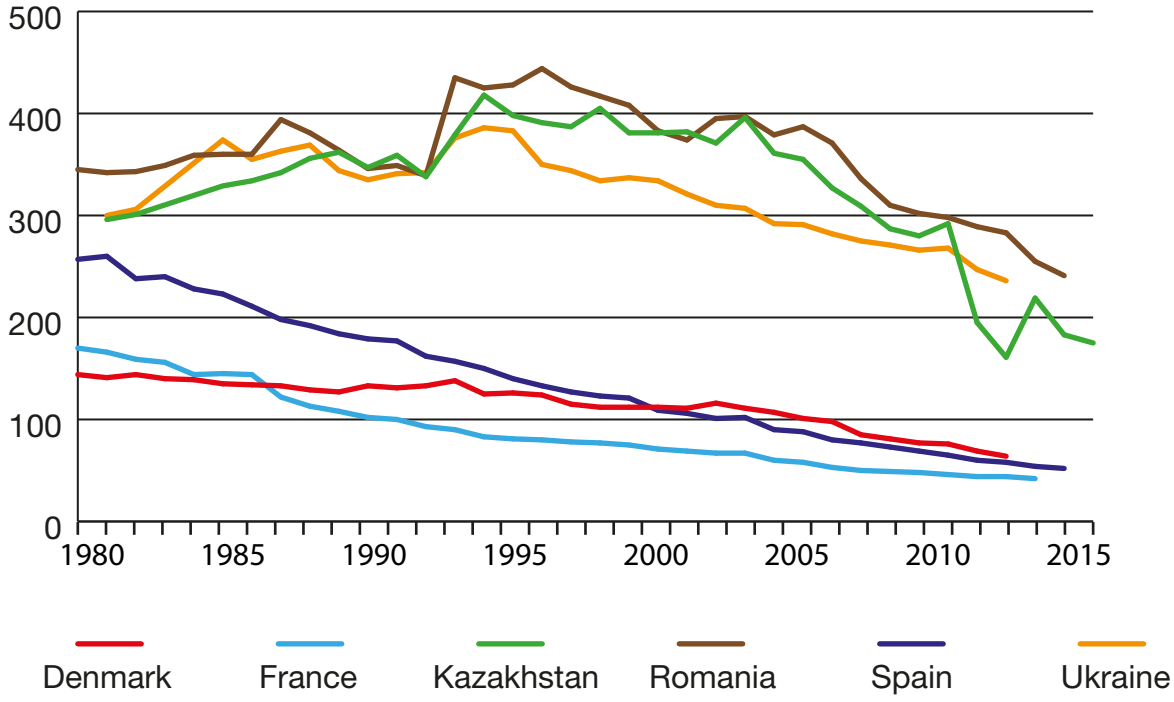


Table 1.7 Age-standardised death rates from IHD, under 65 years, by sex, 1980 to 2015, Europe

Males

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								33	31	28			37	33	29	33
Armenia		101	105			104	109	97	115	122	132	138	141	141	126	139
Austria*	81	83	83	82	77	75	72	72	66	64	61	62	61	57	58	57
Azerbaijan		147	149			147	146	156	167	156	181	203	191	212	185	196
Belarus		132	134			148	132	136	132	141	145	152	158	190	194	208
Belgium*	75	71	71	68	63	60	56	51	46	42	39	37	37	39	36	37
Bosnia and Herzegovina						64	68	68	70	67	68	71				
Bulgaria*	75	68	75	77	80	80	81	80	81	82	86	88	87	101	96	102
Croatia*						67	67	63	63	62	62	67	66	66	63	63
Cyprus*																
Czech Republic*							140	135	132	132	140	128	125	114	107	101
Denmark*	105	108	97	96	94	92	86	89	80	76	71	66	63	59	54	51
Estonia*		164	153			170	166	158	151	159	168	168	173	198	208	190
Finland*	166	167	160	149	148	148	137	123	119	117	108	100	95	86	81	77
France*	38	37	36	35	36	36	35	32	31	28	27	26	25	24	23	22
Georgia		136	128			123	116	130	148	144	144	155	167		160	168
Germany*	82	81	78	77	75	74	70	67	64	61	60	61	59	57	54	52
Greece*	52	51	53	52	52	54	51	54	53	51	52	50	50	48	48	49
Hungary*	125	135	137	135	136	133	135	130	130	128	131	134	135	137	127	127
Iceland	120	116	95	133	104	98	77	81	86	56	59	61	50	63	61	50
Ireland*	138	136	133	140	132	130	125	124	111	109	102	99	86	93	85	82
Israel	87	87	88	78	75	67	74	70	60	52	49	51	50	46	43	42
Italy*	60	59	56	56	53	51	49	48	44	43	40	40	38	37	35	33
Kazakhstan		140	138			141	124	130	127	129	137	138	144	171	181	207
Kyrgyzstan		107	108			99	95	104	101	101	99	100	105	129	152	146
Latvia*	180	177	162	173	179	184	153	163	160	166	184	184	216	253	275	237
Lithuania*		122	128			145	133	140	136	143	161		174	191	188	173
Luxembourg*	82	91	109	84	89	76	72	71	56	55	52	56	50	49	47	45
Malta*	127	104	106	114	87	78	89	79	90	75	72		70	65	57	48
Montenegro																
Netherlands*	90	87	84	81	78	79	76	69	65	63	57	54	49	48	45	43
Norway	105	103	102	96	99	101	101	96	92	83	80	72	70	61	56	58
Poland*	89	84	86	85	92	97	103	105	101	107	107	111	105	95	87	85
Portugal*	46	43	39	40	44	40	38	39	40	36	37	39	37	38	32	32
Republic of Moldova		121	125			127	109	106	95	93	105	111	103	116	138	145
Romania*	60	64	63	69	69	73	73	77	74	73	82	87	97	106	105	108
Russian Federation	163	157	157	161	167	156	141	144	142	147	155	155	171	222	256	230
San Marino																
Serbia																
Slovakia*													125	119	119	117
Slovenia*						69	66	62	53	48	52	56	57	60	53	45
Spain*	42	41	41	40	40	40	39	38	37	34	34	34	35	33	32	32
Sweden*	98	98	92	88	84	85	81	77	75	64	62	60	54	53	51	50
Switzerland	59	57	56	52	54	50	50	47	44	42	39	40	38	35	32	34
TFYR Macedonia												65	73	69	78	68
Turkey																
Turkmenistan		143	137			139	142	146	151	174	166				194	190
Ukraine		145	146			141	122	125	120	124	132	142	155	170	184	201
United Kingdom*	139	133	129	129	125	123	119	114	108	100	95	91	87	84	75	72
Uzbekistan		120	119			116	110	104	115	118	121	121	121	136	138	138

Source: WHO Mortality Database
http://www.who.int/healthinfo/mortality_data/en/
Notes: Data were age-standardised to the 2013 European standard population.
Blank cells indicate that data were not available.
Data were not available for Andorra, Monaco or Tajikistan.
*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
41	35	35	38	39	37	39	43	46	39	48	33	38	37						
130	121	116	119	112	110	120	116			147		115	141	147	146	145		135	
55	54	50	47	46	41	37	32	29	29	29	30	26	27	28	27	24	25	22	
192	184	174	168	170	154	151	152	134			53								
183	201	208	212	201	216	227	229				194	202	208	215	215		177	174	
36	35	33	33	33	29	29	29	26	26	24	23	23	21	19	17	16	16		
															38			37	
91	98	92	84	82	80	80	79	78	78	72	67	62	60	56	53	53	50		
66	71	72	67	63	63	61	64	55	57	54	51	53	52	52	50	49	45	47	
								40	39	39	41	40	39	35	31	31	32		
95	85	79	77	71	66	63	59	57	54	52	53	50	48	47	48	45	45	42	
43	40	37	34	31	29	25	26	24	20	20	18	18	18	16	15	15			
156	137	162	134	134	133	132	123	121	102	101	89	83	74	73	63	62	54	55	
72	67	64	62	63	53	51	52	50	47	45	43	41	38	37	37	32	30	29	
23	21	21	21	20	19	19	18	16	16	16	16	15	14	14	13	12	12		
147	140	136	127	127	125			93	70	59	57		46	29	44	45	39	49	
49	46	44	41	38	37	35	34	33	31	30	29	27	27	26	24	24	24	22	
50	52	51	51	49	51	49	50	52	48	47	49	45	46	43	42	45			
119	113	114	115	104	95	91	94	93	101	94	91	85	85	82	81	74	71	70	
42	45	33	48	37	31	33	32	38	30	21	29	26	20						
77	69	70	61	59	52	51	45	43	38	34	39	33	33		28	28	26		
32	30	34	29	27	26	25	21	20	18	19	19	17	15	13	14	11	12		
31	30	30	27	26	24	24	24			20	19	19	18	17	17	16			
212	200	202	188	200	192	197	195	181	187	175	169	152	122	111	101	93	73	62	61
147	131	128	115	119	123	121	126	126	123	135	133	117		131	127	125	118		
187	168	173	152	153	161	160	147	144	157	161	158	139	132	119	113	108	104	96	
150	127	118	122	113	126	122	125	129	144	144	141	134	116	119	119	116	105	104	
53	37	31	27	34	30	31	25	27	25	32	18	24	17	20	15	14	20	20	
46	52	53	49	43	45	43	40	37	44	35	31	39	26	30	38	39	32	25	
				43	45	40	33	43	47	41	30	32	30						
42	39	37	34	33	27	26	27	22	22	20	18	16	15	15	14	13	11		
48	46	46	39	34	35	32	26	26	26	25	23	22	21	21	19	19	17	16	
82			83	75	70	64	62	59	55	54	52	49	45	43	39	40	37	34	
32	29	30	28	25	25	28	28				18	17	16	16	14	13	14	21	
133	134	119	136	132	122	125	128	130	143	131	126	121	124	135	119	123	116	119	
112	110	102	96	93	94	93	93	87	83	83	79	78	76	72	67	64	57	57	
205	185	181	201	216	224	236	243	234	234	207	191	191	180	176	164				
18		9	16	8					7										
		66	62	66	61	60	62	59	64	64	58	57	53	49	44	42	39	39	
113	105	95	94	90	85	83	78	75	72	71	77	76	77	72		58	55	55	
41	48	45	42	40	41	34	38	33	33	29	30	32	28	26					
33	31	31	30	29	27	26	26	24	23	23	22	21	20	19	18	17	17	18	
44	43	39	38	36	35	32	31	29	28	26	26	25	23	22	21	20	20	18	
28	30	29	28	25	22	22	21	19	20	19	20	17	17	17	14	15	13		
72	68	70	68	69	69	67	60	58	55	61	49	48	45	44					
													39	37	35	32	40		
197	184	169														112			
200	195	181	193	203	200	211	214	220	229	214	217	212	182	172	163	162		166	
68	64	61	57		51	48	46	43	40	38	36	34	32	31	29	27	27		
137	118	123	118	119	113	126	124	116	118									89	

Table 1.7 Age-standardised death rates from IHD, under 65 years, by sex, 1980 to 2015, Europe

Females

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								19	21	18			20	18	13	18
Armenia		32	35			32	37	43	33	35	38	37	42	40	34	38
Austria*	19	18	17	18	17	17	16	16	14	14	14	15	14	15	13	14
Azerbaijan		51	50			52	57	59	61	58	70	77	82	88	70	72
Belarus		41	41			42	37	39	36	36	38	39	42	51	50	54
Belgium*	17	16	16	16	16	14	13	13	11	10	9	9	8	9	10	10
Bosnia and Herzegovina						22	24	23	25	22	23	23				
Bulgaria*	22	19	22	22	23	24	22	20	22	22	23	25	25	26	24	26
Croatia*						15	15	17	17	16	15	18	19	17	16	16
Cyprus*																
Czech Republic*							35	34	31	33	34	33	30	29	28	28
Denmark*	26	25	26	24	24		24	22	21	20	21	18	17	19	14	16
Estonia*		39	34			40	39	35	35	37	39	36	39	42	48	43
Finland*	27	28	25	24	24	24	23	25	22	19	18	16	15	14	13	12
France*	7	6	6	6	6	6	6	6	5	5	5	5	4	4	4	4
Georgia		47	45			46	44	47	51	50	49	52	58		55	53
Germany*	17	17	16	16	16	17	15	15	15	14	14	15	14	14	13	13
Greece*	10	11	11	12	11	11	10	12	11	11	10	10	10	10	10	10
Hungary*	34	38	36	37	37	39	38	36	36	36	37	37	38	39	37	36
Iceland	22	13	22	19	22	19	13	13	23	13	18	9	13	8	15	7
Ireland*	41	38	40	37	39	34	34	34	30	30	27	21	24	24	21	21
Israel	30	32	30	26	24	22	23	22	21	18	17	17	15	15	17	14
Italy*	13	12	11	12	11	10	10	9	9	8	8	8	8	7	7	7
Kazakhstan		45	43			45	37	39	37	37	38	42	42	53	55	65
Kyrgyzstan		44	42			42	39	38	40	37	39	38	38	45	54	58
Latvia*	46	47	44	44	46	46	40	39	41	39	42	46	50	59	70	56
Lithuania*		32	35			34	29	34	34	37	36		37	43	44	43
Luxembourg*	24	17	17	15	20	15	13	18	12	14	10	12	9	13	10	8
Malta*	50	36	22	31	24	14	33	35	20	26	31	23	26	16	18	14
Montenegro																
Netherlands*	19	20	18	17	18	18	17	16	15	14	13	14	13	13	13	12
Norway	19	18	19	18	17	18	20	18	17	17	18	16	16	14	14	13
Poland*	17	17	17	17	19	20	21	22	21	23	23	24	23	21	19	19
Portugal*	12	12	12	12	11	11	11	11	11	9	10	11	9	11	9	9
Republic of Moldova		73	73			71	61	56	51	50	51	58	53	60	67	73
Romania*	23	23	24	26	25	26	26	28	27	27	27	28	31	35	34	34
Russian Federation	46	44	43	44	46	43	37	37	36	36	38	38	43	57	66	58
San Marino																
Serbia																
Slovakia*													33	31	34	33
Slovenia*						16	12	12	12	11	12	14	12	15	13	9
Spain*	8	8	8	8	8	7	7	7	7	7	7	6	6	6	6	6
Sweden*	19	19	18	18	17	16	16	16	16	14	15	15	14	12	12	11
Switzerland	12	11	10	10	9	9	8	7	7	8	8	7	7	7	6	6
TFYR Macedonia												22	22	23	24	22
Turkey																
Turkmenistan		60	53			61	60	60	71	78	73				84	86
Ukraine		52	52			50	41	41	39	38	41	44	46	55	60	66
United Kingdom*	36	34	33	34	33	33	32	31	30	28	28	26	24	23	21	20
Uzbekistan		56	51			56	51	49	52	56	53	60	60	67	71	69

Source: WHO Mortality Database
http://www.who.int/healthinfo/mortality_data/en/
Notes: Data were age-standardised to the 2013 European standard population.
Blank cells indicate that data were not available.
Data were not available for Andorra, Monaco or Tajikistan.
*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
14	16	12	12	14	12	15	16	15	14	14	11	14	12						
35	33	32	30	28	28	29	26			38		32	33	30	33	29		27	
15	13	12	13	10	10	10	8	7	7	7	6	6	7	6	6	6	5	5	
73	69	66	65	66	58	59	56	43			17								
62	55	54	59	54	59	61	58				46	49	47	48	50		40	39	
8	9	9	8	9	8	8	8	7	6	6	6	6	6	5	5	4	4		
															11			10	
25	25	24	24	22	22	24	21	20	18	18	15	14	14	13	11	13	11		
17	17	16	16	17	16	14	15	14	14	12	11	11	11	12	11	11	10	10	
								7	7	8	8	9	5	6	7	7	4		
25	22	20	19	18	17	16	15	14	13	12	13	12	11	11	11	11	11	9	
13	10	10	9	9	9	7	7	6	6	6	5	4	4	4	4	4			
36	37	35	32	30	28	28	28	22	19	19	15	16	13	13	10	9	11	7	
11	10	12	10	11	9	9	8	8	7	7	7	7	6	6	5	5	5	5	
4	4	4	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2		
46	48	42	42	41	40			27	22	14	13		12	7	8	8	7	9	
12	12	11	10	9	9	8	8	8	7	7	7	6	6	6	6	6	6	5	
10	10	10	11	9	9	10	11	11	9	10	10	10	10	9	10	9			
34	32	33	32	29	29	27	27	27	28	24	24	24	23	23	21	21	20	20	
8	8	7	14	15	9	13	10	6	3	4	4	3	1						
17	19	17	14	12	10	11	10	9	9	8	9	7	9		7	7	6		
10	8	9	7	7	6	5	5	4	4	4	3	4	3	2	2	2	2		
6	6	6	6	5	5	5	5			4	4	4	4	3	4	4			
66	62	60	58	61	57	55	57	52	54	53	49	42	32	30	27	24	18	15	13
54	51	46	41	47	44	48	47	48	47	51	46	45		44	42	47	41		
43	39	39	34	34	37	33	34	34	34	37	33	30	26	27	28	22	22	21	
37	27	28	24	22	24	24	25	27	28	31	29	27	25	27	23	22	20	19	
7	7	7	5	4	7	10	7	9	3	13	8	5	3	4	5	4	6	2	
16	17	15	17	17	15	17	13	6	11	7	6	11	10	6	9	12	6	9	
				14	13	11	13	17	10	10	12	6	12						
12	10	10	10	9	8	8	7	7	6	6	5	5	5	4	4	4	3		
10	9	10	10	10	9	7	7	6	6	6	6	4	5	5	4	5	4	3	
18			18	17	16	13	13	13	12	11	11	10	10	9	9	9	8	8	
8	8	7	8	7	7	7	7				4	4	4	3	3	3	3	4	
73	66	59	62	65	58	64	63	56	60	58	53	50	49	50	44	41	43	42	
37	36	36	34	31	32	31	30	28	27	26	25	23	22	21	18	18	17	16	
52	47	45	49	53	55	59	62	58	58	52	46	46	43	43	40				
	17	9	7	8															
		22	20	21	20	21	20	20	21	20	18	17	15	14	11	12	11	11	
32	32	29	26	27	21	21	21	21	18	18	21	19	20	19		15	14	12	
11	8	11	8	8	7	6	5	6	5	5	4	5	5	4					
6	6	5	6	5	5	5	5	4	4	4	4	3	3	3	3	3	3	3	
10	10	9	10	10	9	9	8	7	7	7	7	7	7	6	6	5	5	5	
6	6	6	6	5	4	5	5	4	4	4	3	4	3	3	3	3	3		
26	24	25	22	22	22	19	24	22	18	18	18	15	15	15					
													11	11	11	9	12		
97	81	67														54			
65	64	58	63	64	65	68	69	70	74	68	66	64	56	52	49	47		48	
19	18	17	15		13	13	12	10	10	9	9	8	8	7	7	7	7		
64	59	65	57	59	55	62	57	54	58									39	

Figure 1.7a Age-standardised death rates from IHD, males under 65 years, latest available year, Europe

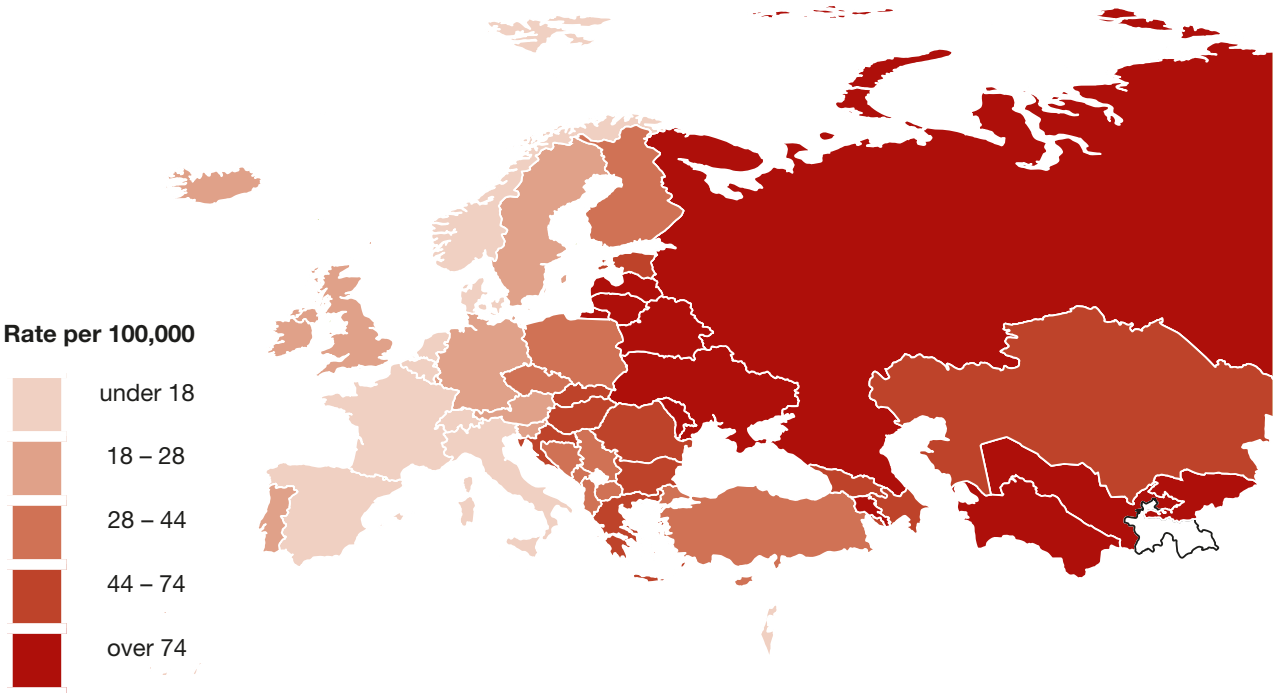


Figure 1.7b Age-standardised death rates from IHD, females under 65 years, latest available year, Europe

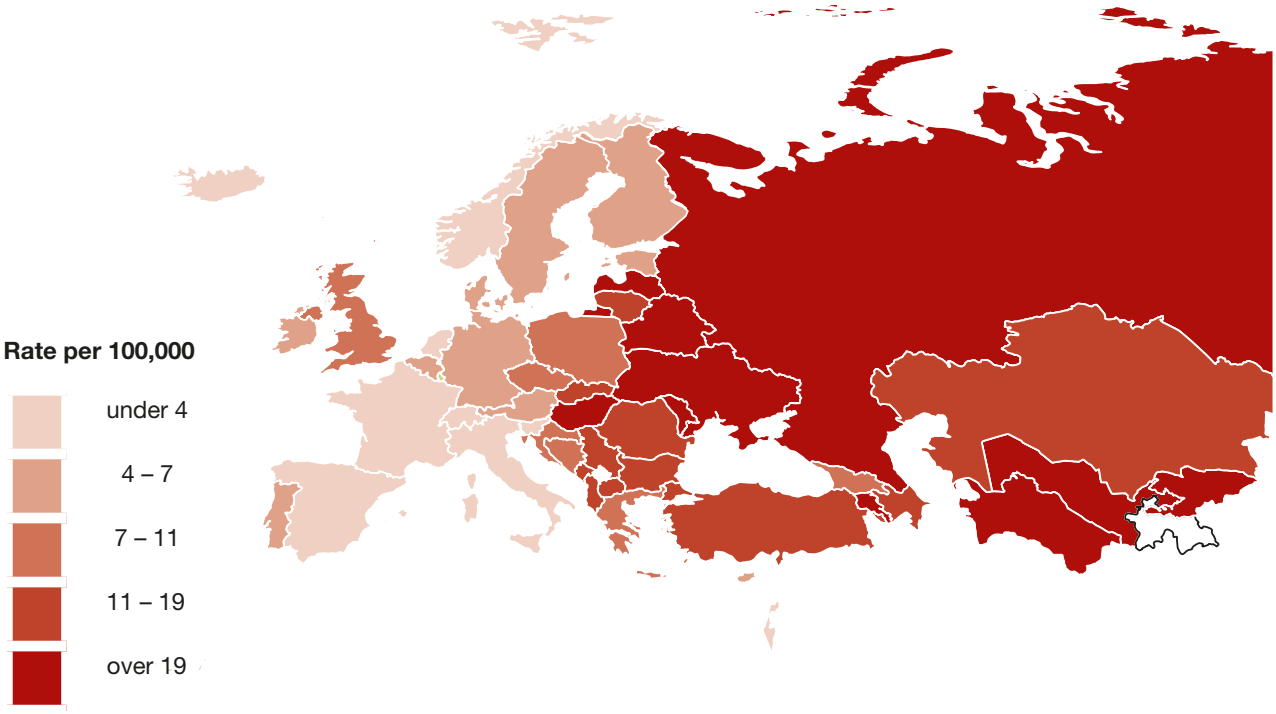


Figure 1.7c Age-standardised death rates/100,000 from IHD, males under 65 years, 1980 to 2015, selected European countries

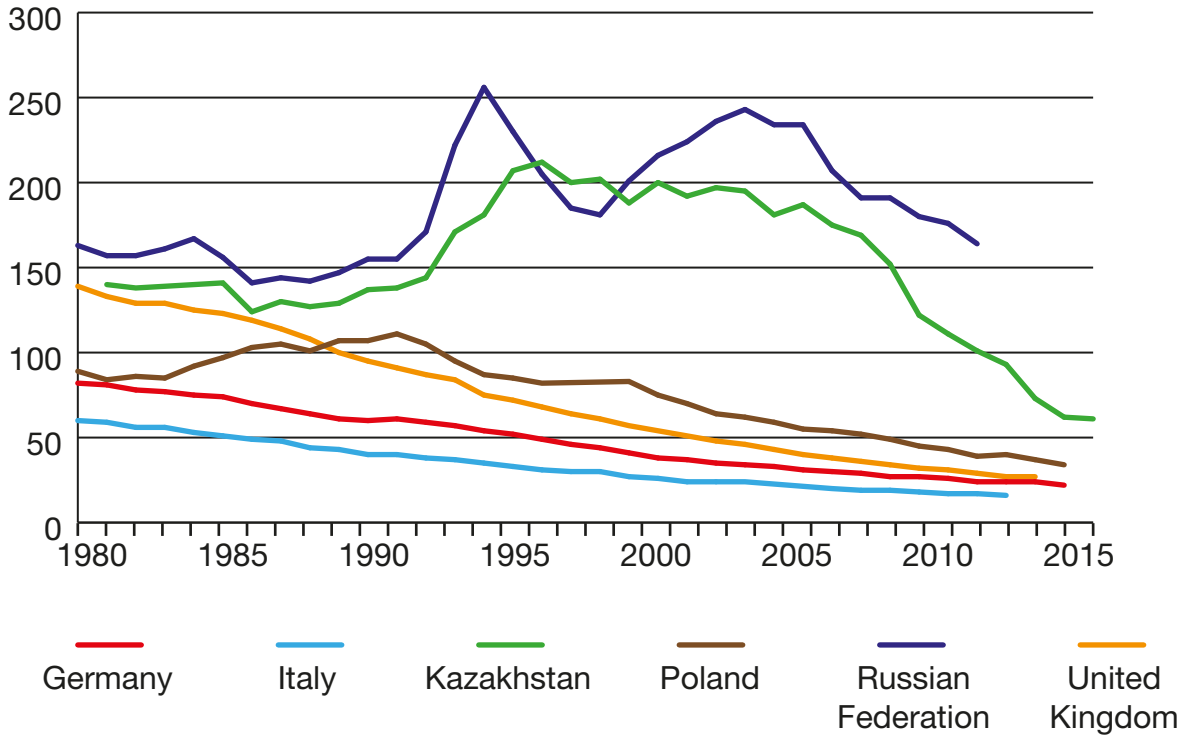


Figure 1.7d Age-standardised death rates/100,000 from IHD, females under 65 years, 1980 to 2015, selected European countries

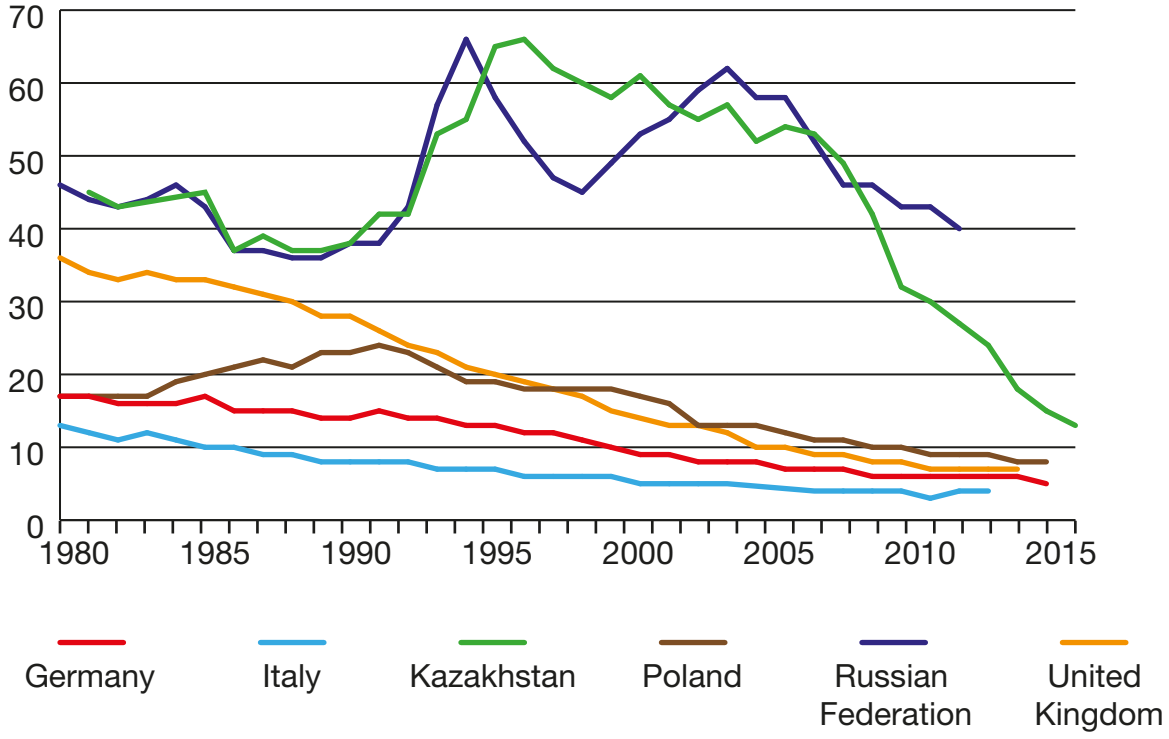


Table 1.8 Age-standardised death rates from stroke, under 65 years, by sex, 1980 to 2015, Europe

Males

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								33	31	28			31	25	20	24
Armenia		27	23			27	27	26	30	31	32	36	37	44	39	38
Austria*	27	26	24	27	25	23	21	20	20	17	17	16	16	15	15	16
Azerbaijan		57	57			55	51	56	52	42	44	43	49	53	48	48
Belarus		57	53			57	49	49	50	53	54	59	60	71	71	75
Belgium*	19	17	17	18	16	15	15	13	12	12	12	12	12	11	10	10
Bosnia and Herzegovina						29	30	30	33	33	34	42				
Bulgaria*	60	60	61	59	64	64	62	60	64	62	66	66	72	80	76	67
Croatia*						46	49	45	46	47	44	44	42	42	41	39
Cyprus*																
Czech Republic*							45	43	41	39	44	38	35	32	31	29
Denmark*	14	15	16	15	14	14	14	14	13	15	15	14	14	12	13	13
Estonia*		52	48			61	53	46	58	52	61	58	67	65	66	65
Finland*	26	27	26	25	25	26	26	23	22	21	25	21	21	21	18	18
France*	20	19	18	18	17	17	16	15	13	13	12	12	11	11	10	10
Georgia		69	75			78	71	64	67	68	68	72	70		64	67
Germany*	20	19	18	18	17	17	15	15	15	14	14	15	14	14	14	13
Greece*	22	20	20	20	21	20	18	18	17	18	17	18	17	17	17	17
Hungary*	60	58	61	64	66	65	61	59	58	59	60	59	59	60	56	56
Iceland	12	17	12	18	10	8	15	18	8	8	6	12	7	8	6	9
Ireland*	23	22	21	21	20	17	16	16	15	15	15	12	11	14	12	12
Israel	23	17	18	17	15	17	16	16	12	11	12	11	13	13	12	13
Italy*	25	23	22	22	21	20	19	18	17	16	15	14	14	13	12	11
Kazakhstan		68	65			64	60	57	56	62	64	63	64	71	79	85
Kyrgyzstan		82	77			75	69	66	66	69	73	77	82	95	111	122
Latvia*	65	63	60	60	61	61	54	50	54	57	67	63	65	79	84	76
Lithuania*		40	38			40	37	38	32	39	40		41	45	44	41
Luxembourg*	25	27	20	29	29	30	25	23	22	20	20	16	15	12	18	12
Malta*	30	25	30	32	18	21	29	38	15	15	10	20	16	16	11	12
Montenegro																
Netherlands*	14	14	14	12	13	12	12	11	10	11	11	10	10	10	10	9
Norway	15	14	13	14	14	13	12	14	11	12	12	10	10	13	10	10
Poland*	27	23	24	24	26	28	29	28	28	29	30	31	31	31	29	30
Portugal*	52	48	45	44	42	40	40	35	36	33	35	36	34	33	29	28
Republic of Moldova		52	52			67	57	54	53	53	63	66	62	70	78	83
Romania*	43	43	43	44	45	47	46	51	48	47	48	50	52	68	72	72
Russian Federation	71	71	70	71	74	71	64	63	63	63	65	66	69	85	100	95
San Marino																9
Serbia																
Slovakia*													34	30	32	29
Slovenia*						33	27	35	36	31	31	35	33	30	33	26
Spain*	23	23	21	20	21	20	18	17	17	16	15	15	13	13	13	13
Sweden*	15	15	14	12	12	13	12	11	12	11	12	12	12	11	10	9
Switzerland	10	11	11	10	9	9	8	8	8	7	8	6	6	6	6	6
TFYR Macedonia												38	42	43	44	45
Turkey																
Turkmenistan		84	91			90	87	83	87	48	54				64	57
Ukraine		56	58			61	52	53	52	54	58	64	67	72	75	84
United Kingdom*	22	20	20	19	19	18	18	17	16	15	15	15	14	13	12	12
Uzbekistan		63	66			64	60	60	60	61	62	63	61	60	74	70

Source: WHO Mortality Database
http://www.who.int/healthinfo/mortality_data/en/
Notes: Data were age-standardised to the 2013 European standard population.
Blank cells indicate that data were not available.
Data were not available for Andorra, Monaco or Tajikistan.
*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
24	26	25	26	22	25	22	23	19	18	16	14	18	15						
35	34	29	30	29	27	36	34			32		27	27	25	27	25		23	
14	14	13	12	10	11	9	7	7	7	5	6	6	6	5	5	5	5	5	
52	46	40	38	41	33	35	38	38			44								
75	77	76	78	72	79	80	77				63	60	61	58	58		45	43	
10	11	9	10	9	9	9	8	8	8	7	7	7	7	6	6	6	6		
															21			15	
64	68	67	58	62	57	58	53	53	54	55	49	48	48	46	41	43	39		
45	39	37	40	37	33	33	29	28	30	29	28	26	22	21	20	20	19	18	
								10	8	6	6	6	5	7	4	3	4		
27	24	24	23	22	20	20	19	17	16	15	14	13	13	13	11	11	10	10	
14	12	12	15	11	12	12	13	12	9	10	10	9	8	8	6	6			
58	50	51	51	54	49	44	47	40	40	36	29	26	22	17	19	16	20	16	
17	17	16	16	13	14	13	14	13	11	11	11	11	10	10	9	8	8	8	
9	9	9	9	8	8	8	7	7	7	7	6	6	6	6	6	6	5		
60	60	61	65	67	62			54	59	55	61		45	25	25	25	25	31	
12	12	11	10	10	9	9	8	8	7	7	7	7	7	6	6	6	6	5	
17	16	16	15	16	15	14	14	14	14	13	11	12	11	10	11	12			
53	51	50	50	48	44	43	42	38	33	33	31	31	28	29	26	24	23	23	
8	9	6	7	3	5	7	4	5	4	6	4	3	7						
11	11	11	11	10	9	8	8	8	7	7	5	7	6		6	5	6		
13	10	10	7	9	9	7	7	8	8	6	6	5	5	5	6	5	5		
10	10	10	9	9	9	8	8			7	6	6	6	6	6	5			
86	85	88	84	92	79	80	90	86	88	82	81	74	72	76	66	61	52	45	42
103	104	101	100	107	107	108	103	105	105	104	109	92	94	82	86	77	76		
70	64	61	55	55	59	62	55	55	56	53	48	42	41	43	37	35	35	34	
36	37	33	30	29	35	32	34	35	35	38	38	32	36	32	34	32	31	28	
16	10	11	8	9	15	12	15	9	7	7	4	8	8	6	8	6	5	3	
14	8	8	8	7	13	12	8	6	8	8	6	7	6	7	6	5	4	6	
				26	30	27	21	24	31	25	17	15	14						
10	9	9	9	9	8	9	8	7	7	6	6	6	5	5	5	5	5		
11	9	9	9	8	8	7	6	7	5	6	6	7	5	5	5	5	5	3	
28			34	31	31	29	28	29	27	26	26	25	24	22	21	20	19	18	
28	27	25	24	24	23	21	19				14	14	13	12	12	12	11	10	
81	82	72	79	81	81	76	77	76	79	70	67	64	64	65	57	57	52	51	
75	77	71	64	61	63	64	61	56	55	52	48	45	44	41	37	35	33	30	
88	83	81	88	95	98	101	102	98	97	85	76	74	69	67	61				
				6															
		46	45	48	43	42	41	41	37	36	34	29	31	28	25	24	23	22	
27	29	30	24	23	21	23	21	18	19	18	23	27	26	23		21	20	20	
26	24	24	19	21	18	17	18	18	12	16	12	13	11	11					
12	11	11	11	10	10	9	9	8	8	8	8	7	7	6	6	6	6	6	
10	10	10	9	8	8	8	7	8	6	7	6	6	6	5	5	5	5	5	
6	7	6	5	5	4	4	4	5	4	4	3	3	3	3	3	3	3		
49	43	42	45	39	45	43	44	38	37	37	35	33	35	34					
													14	14	12	12	13		
48	29	29														74			
80	77	69	70	72	68	66	66	65	67	64	62	62	56	54	54	51		49	
12	12	12	11		10	10	10	9	8	8	7	7	7	7	6	6	6		
71	67	57	51	54	56	56	53	47	54									38	

Table 1.8 Age-standardised death rates from stroke, under 65 years, by sex, 1980 to 2015, Europe

Females

Deaths per 100,000

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Albania								19	21	18			20	18	13	18
Armenia		17	23			28	23	24	21	26	27	25	31	31	27	27
Austria*	14	15	13	13	14	12	12	11	9	8	9	9	8	9	8	8
Azerbaijan																
Belarus		34	33			37	33	33	32	31	33	34	35	41	41	43
Belgium*	12	13	13	12	11	10	11	9	8	9	8	7	8	8	7	6
Bosnia and Herzegovina						20	23	24	26	25	25	27				
Bulgaria*	38	38	41	39	38	37	36	36	35	34	35	37	38	37	35	34
Croatia*						29	26	28	24	25	24	25	24	22	23	21
Cyprus*																
Czech Republic*							24	23	22	20	22	18	18	16	15	15
Denmark*	12	10	10	11	9	11	11	10	10	9	11	11	10	11	9	8
Estonia*		34	32			34	31	28	29	32	27	30	39	36	37	32
Finland*	17	17	16	16	14	15	15	14	13	13	12	11	11	12	10	10
France*	10	9	9	9	9	8	7	7	6	6	6	6	6	5	5	5
Georgia		38	39			43	43	37	39	38	39	37	41		34	31
Germany*	11	11	11	10	10	10	9	8	8	8	8	9	8	8	8	8
Greece*	16	16	15	15	14	13	12	12	11	12	11	12	12	10	9	10
Hungary*	35	35	33	35	35	34	33	31	30	30	29	29	27	27	25	26
Iceland	20	13	13	5	8	9	8	7	8	8	10	6	5	3	4	7
Ireland*	22	18	18	17	16	15	15	11	11	11	10	10	10	9	10	10
Israel	18	19	14	15	15	11	11	11	9	9	8	8	9	9	8	7
Italy*	15	14	14	13	13	12	11	10	10	9	8	9	8	8	7	7
Kazakhstan		41	40			41	42	39	37	41	40	39	39	45	51	54
Kyrgyzstan		54	53			58	53	46	49	48	47	56	58	62	77	81
Latvia*	33	40	34	35	36	38	33	33	27	34	32	32	37	42	41	38
Lithuania*		26	23			24	22	24	22	23	22		22	23	25	24
Luxembourg*	20	13	8	18	16	14	18	13	12	12	13	11	12	12	9	12
Malta*	16	16	19	18	12	8	6	11	12	14	15	10	13	7	5	5
Montenegro																
Netherlands*	10	9	9	9	9	8	9	8	7	8	8	7	8	7	7	8
Norway	9	10	9	8	8	9	8	9	9	8	7	6	7	8	8	6
Poland*	17	17	16	15	17	17	17	17	17	17	16	16	16	15	16	15
Portugal*	30	28	26	26	25	23	22	22	19	19	20	20	18	17	15	15
Republic of Moldova		38	40			59	51	45	46	45	47	53	46	50	55	60
Romania*	32	32	31	32	33	32	33	36	34	32	32	33	32	42	41	43
Russian Federation	41	41	41	42	44	43	40	39	38	37	37	37	40	47	53	50
San Marino																
Serbia																
Slovakia*													17	16	15	15
Slovenia*						16	15	13	15	17	14	17	16	13	15	14
Spain*	15	14	13	12	12	11	10	10	9	8	8	8	7	7	6	6
Sweden*	10	10	10	8	9	8	8	7	8	7	7	7	7	7	7	6
Switzerland	8	7	7	6	7	5	6	4	4	5	4	5	5	4	4	4
TFYR Macedonia												30	33	33	33	35
Turkey																
Turkmenistan		62	61			65	74	62	67	38	42				45	42
Ukraine		34	35			36	34	34	34	33	34	36	38	42	44	46
United Kingdom*	17	16	16	16	14	15	14	13	13	12	11	11	11	10	10	10
Uzbekistan		42	43			45	43	46	41	41	44	43	43	42	50	49

Source: WHO Mortality Database
http://www.who.int/healthinfo/mortality_data/en/
Notes: Data were age-standardised to the 2013 European standard population.
Blank cells indicate that data were not available.
Data were not available for Andorra, Monaco or Tajikistan.
*Asterisk denotes EU member states.

1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
14	16	12	12	14	12	15	16	15	12	13	10	10	11						
29	23	23	24	20	21	22	23					17	11	14	16	10		11	
9	8	9	8	7	6	6	5	4	4	5	4	4	4	4	3	4	3	3	
					28	27	31	26			29								
44	43	41	42	38	40	41	39				30	27	26	25	26		20	19	
7	7	6	7	7	6	7	6	6	6	5	6	5	5	5	4	4	4		
															12			9	
32	33	34	31	29	28	27	25	25	25	24	24	22	21	20	18	18	17		
24	21	19	22	18	16	16	17	13	14	12	12	12	12	10	9	8	9	9	
								5	4	4	4	7	3	3	2	2	2		
13	12	12	10	10	10	10	9	9	8	7	7	6	6	6	6	5	5	4	
8	8	8	9	8	7	7	7	8	7	7	6	6	6	5	5	4			
29	27	24	25	23	20	19	19	15	16	13	15	10	8	8	7	5	10	7	
8	9	8	8	9	7	8	7	7	6	7	6	5	5	5	4	5	5	5	
5	5	5	5	4	4	4	4	4	4	4	3	3	3	3	3	3	3		
27	33	31	30	30	28			27	28	23	24		20	9	12	11	8	12	
7	7	6	6	5	5	5	5	5	5	4	4	4	4	4	4	4	4	3	
8	8	9	9	8	8	8	7	7	7	6	6	6	5	5	5	6			
24	23	23	23	21	20	19	18	18	14	14	13	14	11	11	11	11	10	10	
11	8	4	5	10	3	3	4	3	5	5	4	6	1						
9	8	7	9	9	7	5	6	5	4	6	6	5	5		5	4	3		
7	5	5	5	5	5	4	4	4	4	3	2	3	2	2	3	2	3		
7	6	6	6	5	5	5	4			4	4	4	3	3	4	3			
54	55	57	53	54	48	47	51	47	48	44	41	40	40	39	34	31	27	23	21
75	64	70	70	68	69	71	70	66	71	66	56	53		44	42	39	36		
39	32	33	29	30	29	31	27	27	25	24	21	19	19	17	16	16	14	14	
21	22	21	17	16	16	19	17	15	16	18	17	16	14	15	15	14	13	12	
8	7	12	7	12	9	11	7	7	6	7	6	4	3	3	3	4	5	2	
6	6	3	5	7	4	7	5	5	5	6	5	6	4	4	4	4	3	3	
				24	23	25	17	17	19	15	16	9	10						
7	7	7	7	7	7	7	6	5	5	5	5	4	5	4	4	4	4		
6	5	6	5	5	6	5	4	5	4	4	4	4	3	3	4	3	3	3	
15			17	16	15	15	13	14	13	12	11	11	10	10	9	9	8	8	
15	14	13	13	12	12	11	10				7	7	6	6	5	5	5	5	
57	59	54	52	59	59	55	53	55	54	51	44	39	38	36	32	31	27	26	
43	42	41	37	35	35	36	34	33	31	28	24	23	22	19	17	18	15	14	
48	45	44	46	49	49	49	49	46	45	39	34	33	30	29	26				
9			8	17															
		33	33	33	32	30	29	26	26	24	23	20	18	17	16	14	13	12	
14	14	14	10	8	9	7	8	8	7	8	9	11	11	10		9	7	8	
11	10	11	9	9	11	9	7	7	7	7	5	6	6	6					
6	5	5	5	5	5	5	5	4	4	4	4	4	4	3	3	3	3	3	
7	6	6	6	6	6	6	5	5	4	5	4	4	4	4	3	3	4	3	
4	4	4	4	3	3	3	3	3	3	3	3	3	3	2	2	2	3		
31	32	32	32	33	30	34	29	28	29	28	26	27	22	23					
													11	10	9	8	9		
33	22	20														45			
45	42	39	39	38	37	35	34	33	32	30	28	27	26	25	23	23		21	
9	9	9	9		8	8	7	7	6	6	6	6	5	5	4	5	4		
49	43	40	37	37	39	36	34	30	34									21	

Figure 1.8a Age-standardised death rates from stroke, males under 65 years, latest available year, Europe

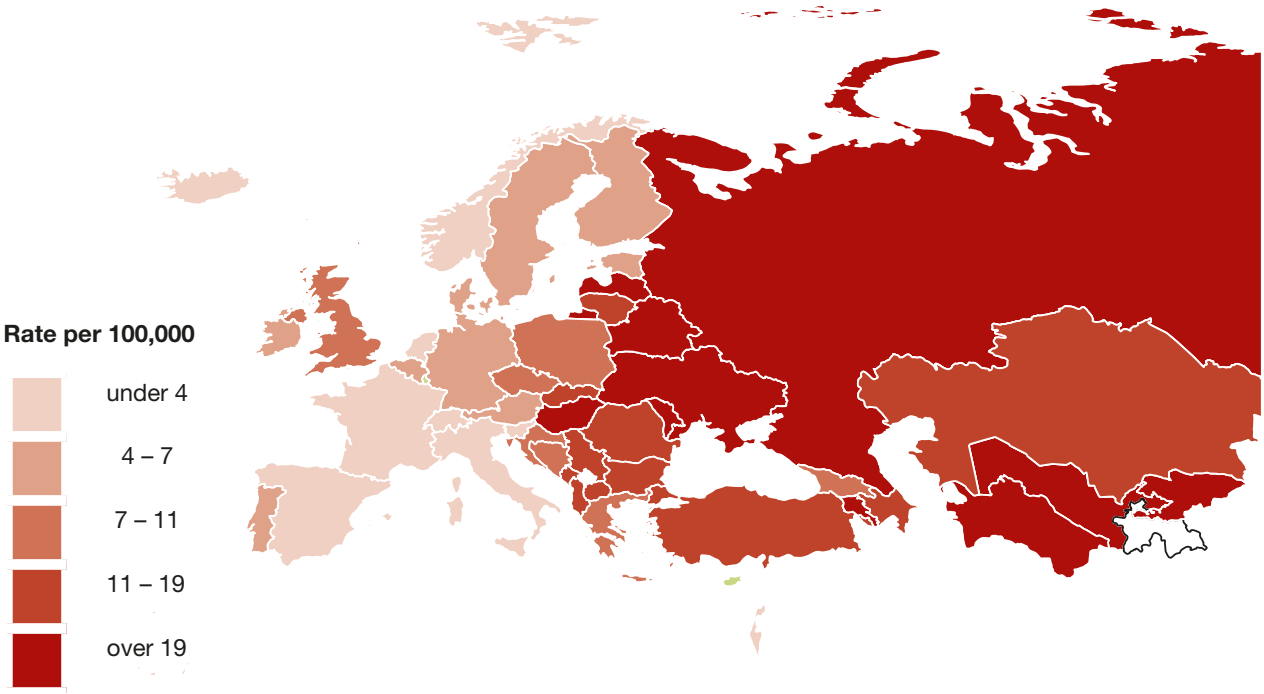


Figure 1.8b Age-standardised death rates from stroke, females under 65 years, latest available year, Europe

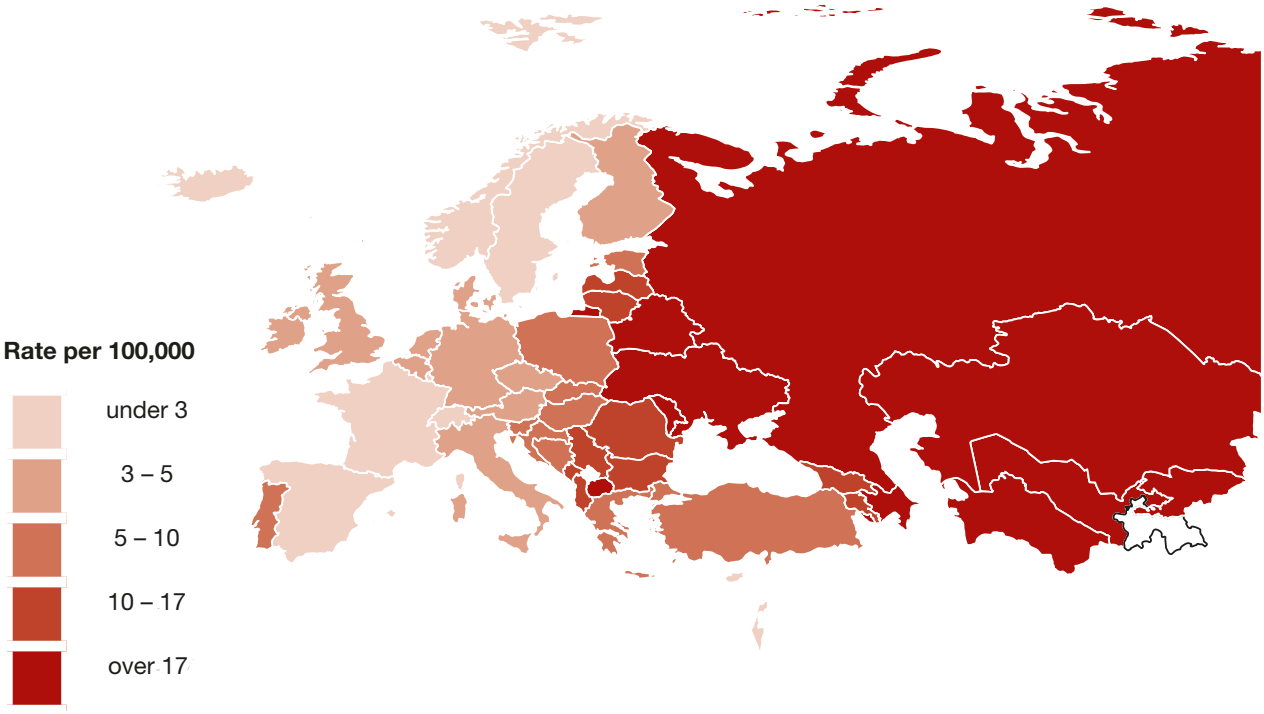


Figure 1.8c Age-standardised death rates/100,000 from stroke, males under 65 years, 1980 to 2015, selected European countries

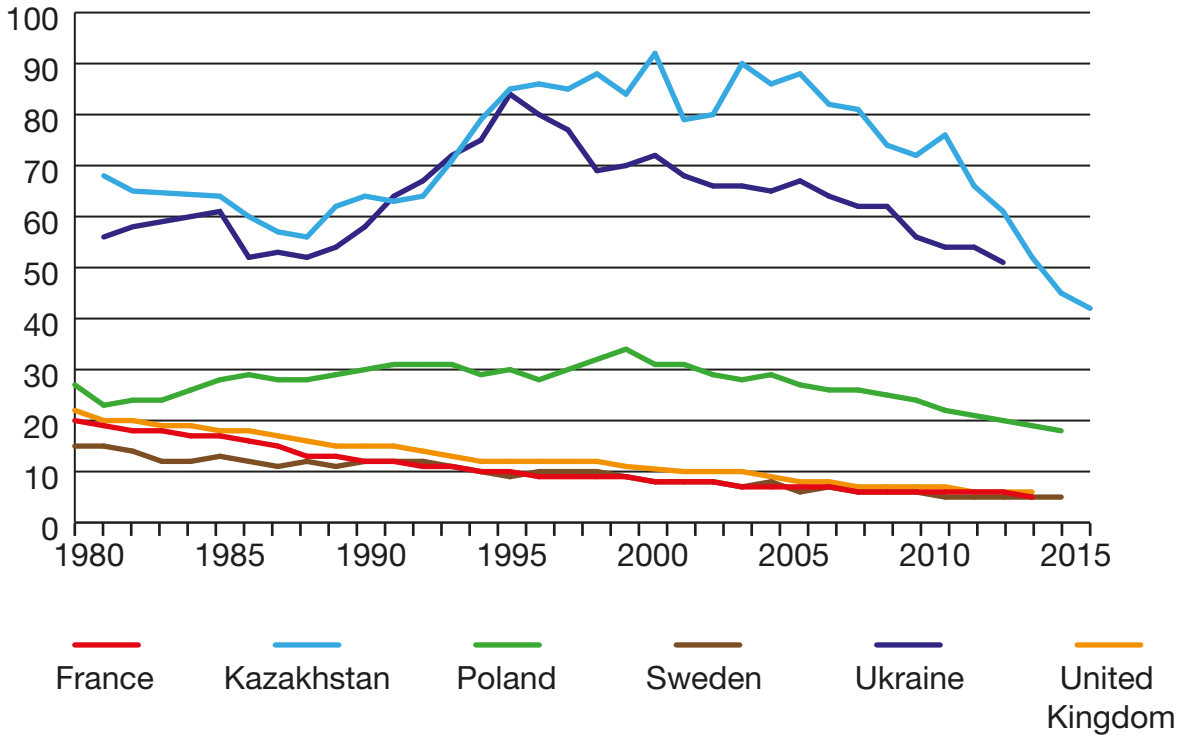
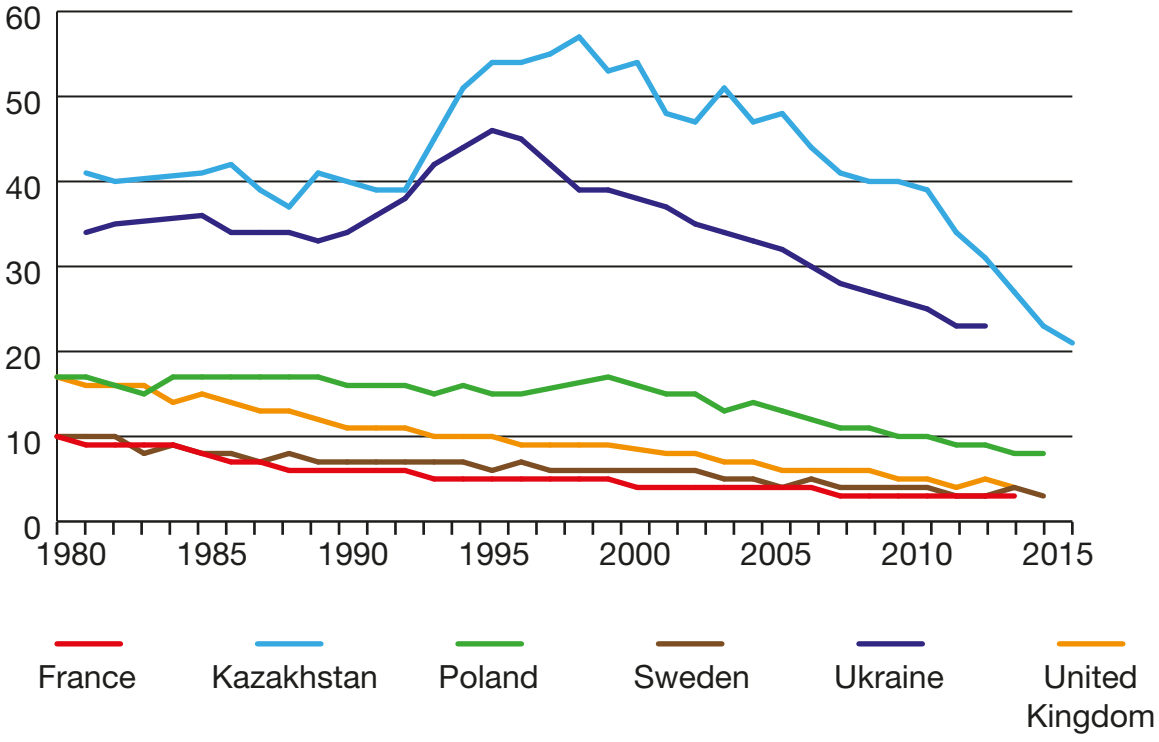


Figure 1.8d Age-standardised death rates/100,000 from stroke, females under 65 years, 1980 to 2015, selected European countries



2. Morbidity

In addition to its large mortality burden, CVD makes a substantial contribution to morbidity in Europe. This chapter presents Europe-wide data on the incidence, prevalence and disability-adjusted life years (DALYs) lost due to cardiovascular conditions.

Incidence

The incidence of a disease describes the number of new cases that develop within a population over a specified period of time. The incidence data reported here come from the Global Burden of Disease (GBD) project and are modelled on surveillance data, survey data, and records of inpatient and outpatient hospital visits.

In 2015, there were just under 11.3 million new cases of CVD in Europe as a whole: 5.4 million among males and 5.8 million among females. Just over half of all new CVD cases in Europe were due to IHD, with slightly more new IHD cases among males (2.97 million) than females (2.78 million). By contrast, the incidence of stroke, which accounted for around 14% of all new CVD cases in Europe, was slightly higher in females (880,000) than males (680,000), with nearly 1.6 million new stroke cases in total (Table 2.1).

In the EU, there were 6.1 million new cases of CVD in 2015. Half of these new CVD cases were due to IHD (1.63 million new cases in males, 1.4 million new cases in females), while around 10% of new CVD cases were due to stroke (286,000 among males and 340,000 in females) (Table 2.1).

Between 1990 and 2015, most European countries reported an increase in the number of new CVD cases, with the largest increases of nearly 100% reported in Andorra and Azerbaijan among males. The only countries to show a decrease in incidence over this period were the UK and Latvia for both sexes, as well as Hungary for males and Denmark, Georgia and Germany for females (Table 2.2). Importantly, however, these crude incidence numbers do not take into account differences between populations in terms of size, age composition, or the efficiency of CVD surveillance. Therefore, comparisons over time, and also between countries, should be treated with caution.

Prevalence

The prevalence of a disease refers to the number of people in a population who are currently living with the disease, or in the case of cardiovascular conditions, the number of people alive today who have ever suffered a cardiovascular event. Here we use GBD estimates of the prevalence of cardiovascular conditions, which are derived from surveillance data, survey data, and records of inpatient and outpatient hospital visits.

In 2015, more than 85 million people across Europe were living with CVD; 48% of cases (41.2 million) had occurred in males and 52% (44.1 million) in females. The most prevalent cardiovascular conditions were peripheral vascular disease and IHD. Peripheral vascular disease accounted for 15.3 million cases (37% of all CVD) amongst males and for just over 21 million cases (48% of all CVD) amongst females, while IHD was responsible for almost 17 million cases (41% of all CVD) in males and just over 13 million cases (30% of all CVD) in females (Tables 2.3, 2.4).

Within the EU, almost 49 million people (24.3 million males and 24.6 million females) were living with CVD in 2015. Again, peripheral vascular disease and IHD were responsible for the greatest share of CVD cases in the EU, with the former accounting for just under 10 million cases (41% of all CVD) in males and 12.5 million cases (51% of all CVD) in females, and the latter for 7.7 million (32% of all CVD) and 5.5 million (23% of all CVD) of CVD in males and females respectively (Tables 2.3, 2.4).

Age-standardised[1] prevalence rates for CVD were higher in males than females in all European countries for which data were available. On average, CVD prevalence rates were lower in the EU (6,308 per 100,000 in males, 4,921 per 100,000 in females) than in Europe as a whole (7,147 per 100,000 in males, 5,612 per 100,000 in females). Among both EU and non-EU member states, CVD prevalence rates tended to be relatively high in Eastern and Central European countries and lower in Western, Northern and Southern European countries. Indeed, the age-standardised CVD prevalence rate in the EU ranged from 5,099/100,000 in Italy to 9,403/100,000 in Slovakia among men and from 3,975/100,000 in Italy to 7,135/100,000 in the Czech Republic among females. Outside of the EU, the CVD prevalence rate per 100,000 ranged from 5,908 in Switzerland to 9,171 in Russia among males, and from 3,941 in Israel to 7,392

in Turkey among females (Table 2.4; Figures 2.4a, 2.4b). Similar sex differences and regional differences in age-standardised prevalence rates were also observed for the specific cardiovascular conditions shown in Table 2.4.

Over the past 25 years, there has been an increase in the absolute number of CVD cases in Europe. Among males, the number of cases increased by 34% between 1990 and 2015 and in females by 29%. Similarly, in the EU, the absolute number of CVD cases rose by 32% among males and 26% among females from 1990 to 2015. In fact, with the exception of Georgia, the absolute number of people living with CVD increased in all countries for which data were available (Table 2.5).

Importantly, the increase in the absolute number of CVD cases has corresponded with an increase in the size of the total population and older ages in particular. Analysing the age-standardised CVD prevalence rate per 100,000 population, which controls for these changes in population size and composition, reveals a slight decrease in Europe as a whole. Between 1990 and 2015, the rate fell by 9% and 5% in males and females respectively. The prevalence rate of CVD also decreased in the EU on average, by 12% among males and 9% among females – slightly greater than the percentage decrease in Europe as a whole. Focusing on individual countries, the sharpest decreases between 1990 and 2015 occurred in Israel (-15.2%), Finland (-15.3%) and Germany (-16.6%) among males, while in females, the sharpest decrease was found in Italy (-14.1%). Meanwhile, the highest percentage increase in the prevalence of CVD was observed amongst men in Belarus (+4.0%), with little change or slight increases also found in a number of other Central and Eastern European countries (Table 2.5; Figures 2.5a, 2.5b). Whilst these age-standardised prevalence rates control for differences in population size and age structure, it should be noted that variation in the efficiency of CVD detection and diagnosis between countries and over time (i.e. differences in the size of the 'hidden' CVD burden) could account for some of the country-level and trend differences observed.

Disability-adjusted life years lost

The disability-adjusted life year (DALY) is an aggregate measure of years of life lost due to premature death from a condition and years lived with a disability due to a condition, with one DALY equating to one healthy year of life lost. The Global Burden of Disease project provides data on DALYs lost.

In 2015, CVD was the main cause of disability-adjusted life years lost in Europe, responsible for 64.7 million DALYs, or 23% of the total (Table 2.6; Figure 2.6a). In males, CVD accounted for 24% of all lost DALYs, while in females it was responsible for 22% of lost DALYs. Ischaemic heart disease (IHD) was the leading single cause of lost DALYs in both sexes, while stroke was the second most common cause of lost DALYs. Overall in Europe, 35.6 million DALYs were lost to IHD (14% of all DALYs among males and 11% among females) and 17.1 million were lost to stroke (5.6% of all DALYs in males and 6.7% of all DALYs in females) (Table 2.6, Figure 2.6a).

In the EU in 2015, CVD was responsible for the loss of 26 million DALYs, or 19% of the total (Table 2.6, Figure 2.6b). Overall, 13.2 million DALYs were lost to IHD (10% of the total), while 6.5 million DALYs were lost to stroke (5% of the total) (Table 2.6, Figure 2.6b). Among females, CVD was the largest contributor to DALYs lost (17.2% of all DALYs, compared to 16.5% from cancer). However, in males the proportion of DALYs lost to cancer (21%) was slightly greater than that for CVD (20%) (Table 2.6). Comparing between the different European regions, the contribution of CVD to lost DALYs was exceeded by that of cancer in Western Europe among both males (18% versus 21%) and females (15% versus 17%), although in Central Europe, Eastern Europe and Central Asia, CVD was the leading cause of DALYs lost in both sexes (Table 2.6).

Age-standardised[2] DALY rates from IHD in males were two to three times higher than those of females in all European countries. Age-standardised DALY rates for stroke were also higher among males than females in all European countries, with the difference ranging from about 10% in Tajikistan to 110% in Andorra (Table 2.7). As with the prevalence of cardiovascular conditions, CVD DALY rates were on average slightly lower in the EU than in Europe as a whole. IHD was responsible for the loss of 2,087 DALYs per 100,000 males in the EU compared to 3,619 DALYs per 100,000 in Europe, and for the loss of 900/100,000 among females in the EU compared to 1,687 in Europe as a whole. The age-standardised DALY rate for stroke among males in the EU was 825/100,000 compared to 1,457/100,000 for Europe as a whole and among females was 588/100,000 in the EU versus 1,033/100,000 in Europe (Table 2.7). Geographically, the highest DALY rates were found in Eastern Europe and in countries of the former Soviet Union. For instance, age-standardised rates of DALYs lost from IHD among males in Belarus, Ukraine and Turkmenistan were more than seven times higher than those in Spain and Israel (Table 2.7, Figure 2.7a), while age-standardised rates of DALYs lost from stroke among females in Turkmenistan and Kyrgyzstan were also at least seven times higher than those in countries with the lowest rates; Andorra, Switzerland and France (Table 2.7, Figure 2.7b).

Over the past 25 years, age-standardised rates of DALYs lost to CVD have decreased in Europe as a whole and in the EU. On average, the percentage decrease between 1990 and 2015 has been greater in the EU (-51% for both males and females) than in Europe as a whole (-34% for males, -37% for females). Geographically, most Northern, Western and Southern European countries have experienced steady decreases in both sexes. In Sweden, for instance, the CVD DALY rate fell by 52% and 50% between 1990 and 2015 among males and females respectively. In most Central and Eastern European countries, by contrast, relative similarity in the rates in 2015 and 1990 mask patterns of increases to the mid-2000s followed by decreases over the last decade (Table 2.8, Figures 2.8a, 2.8b).

1 Prevalence rates were age-standardised to the 2013 GBD world standard population.
2 DALY rates were age-standardised to the 2013 GBD world standard population.

Table 2.1 Incidence of CVD, IHD and stroke, by sex, 2015, Europe

Males Number of new cases

	CVD	IHD	Stroke
Albania	18,329	9,719	2,820
Andorra	392	192	34
Armenia	17,533	9,717	2,454
Austria*	49,715	24,558	3,836
Azerbaijan	46,044	26,303	6,713
Belarus	70,596	40,644	12,323
Belgium*	58,736	31,881	4,712
Bosnia and Herzegovina	30,372	16,610	3,836
Bulgaria*	71,531	40,317	11,496
Croatia*	35,980	20,786	5,024
Cyprus*	3,082	1,317	299
Czech Republic*	83,184	45,785	8,141
Denmark*	30,092	15,796	2,632
Estonia*	9,366	5,649	1,026
Finland*	32,148	16,054	2,926
France*	286,394	130,280	25,925
Georgia	29,007	14,898	5,964
Germany*	545,946	296,266	41,064
Greece*	65,077	33,471	7,427
Hungary*	80,163	45,574	9,199
Iceland	1,380	633	99
Ireland*	17,268	8,148	1,369
Israel	27,371	14,105	2,102
Italy*	359,888	188,435	32,574
Kazakhstan	78,332	40,980	15,001
Kyrgyzstan	20,774	9,792	4,573
Latvia*	15,933	9,028	2,616
Lithuania*	25,284	15,302	3,326
Luxembourg*	1,946	745	189
Macedonia	14,532	7,690	2,521
Malta*	1,986	971	163
Moldova	23,183	12,145	4,183
Montenegro	4,393	2,228	728
Netherlands*	86,970	41,755	6,518
Norway	27,231	13,864	1,971
Poland*	313,458	187,715	30,155
Portugal*	56,222	25,999	7,174
Romania*	177,005	101,754	28,384
Russia	1,111,622	651,841	203,725
Serbia	76,590	44,590	10,841
Slovakia*	38,319	21,593	4,344
Slovenia*	15,758	9,184	1,309
Spain*	210,618	96,900	18,656
Sweden*	64,686	33,784	5,506
Switzerland	36,959	19,501	2,883
Tajikistan	22,519	11,726	3,836
Turkey	248,105	128,627	24,000
Turkmenistan	17,346	8,173	3,729
Ukraine	363,323	208,991	58,396
United Kingdom*	324,446	178,985	20,326
Uzbekistan	94,434	47,582	16,825
EU	**3,061,198**	**1,628,032**	**286,314**
Europe	**5,441,564**	**2,968,582**	**675,872**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Incidence is defined as the number of newly diagnosed cases for the calendar year.

IHD data are based on surveillance data, survey data, outpatient and inpatient visits for angina and first acute myocardial infarction.

Stroke data are based on survey data and inpatient hospital data for first acute stroke.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.1 Incidence of CVD, IHD and stroke, by sex, 2015, Europe

Females Number of new cases

	CVD	IHD	Stroke
Albania	14,645	6,063	2,821
Andorra	373	154	36
Armenia	21,577	11,571	3,220
Austria*	51,261	23,839	4,407
Azerbaijan	43,985	22,720	7,347
Belarus	88,252	42,669	18,196
Belgium*	58,098	27,980	5,685
Bosnia and Herzegovina	27,164	12,113	4,340
Bulgaria*	69,733	32,778	13,088
Croatia*	36,901	18,131	6,333
Cyprus*	2,760	949	265
Czech Republic*	86,039	43,454	10,303
Denmark*	27,039	12,150	2,665
Estonia*	12,204	6,232	1,709
Finland*	31,981	14,527	3,278
France*	296,370	116,328	31,249
Georgia	33,509	16,479	6,567
Germany*	537,895	275,062	47,857
Greece*	66,290	30,414	8,668
Hungary*	88,722	42,931	11,933
Iceland	1,103	438	91
Ireland*	14,392	5,702	1,402
Israel	22,044	8,281	2,069
Italy*	371,869	172,503	40,542
Kazakhstan	92,565	46,202	17,556
Kyrgyzstan	21,668	10,003	4,398
Latvia*	20,808	9,631	4,360
Lithuania*	31,145	15,352	5,491
Luxembourg*	1,926	665	214
Macedonia	12,515	5,146	2,781
Malta*	1,809	706	162
Moldova	23,534	9,714	4,852
Montenegro	4,021	1,539	900
Netherlands*	77,051	31,623	7,271
Norway	21,868	9,219	2,129
Poland*	317,980	166,604	34,932
Portugal*	64,992	30,219	8,034
Romania*	173,805	83,093	33,169
Russia	1,384,080	676,221	303,883
Serbia	73,191	35,439	13,260
Slovakia*	35,251	15,022	5,147
Slovenia*	14,446	7,035	1,588
Spain*	220,957	89,017	21,558
Sweden*	53,220	24,321	5,181
Switzerland	34,465	15,370	3,367
Tajikistan	19,358	9,288	3,862
Turkey	256,215	121,272	29,114
Turkmenistan	17,262	7,661	3,664
Ukraine	467,604	231,107	87,603
United Kingdom*	298,270	141,705	23,375
Uzbekistan	98,090	47,651	17,571
EU	**3,063,270**	**1,438,020**	**339,869**
Europe	**5,842,358**	**2,784,341**	**879,493**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Incidence is defined as the number of newly diagnosed cases for the calendar year.

IHD data are based on surveillance data, survey data, outpatient and inpatient visits for angina and first acute myocardial infarction.

Stroke data are based on survey data and inpatient hospital data for first acute stroke.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.2 Incidence of cardiovascular disease, by sex, 1990 to 2015, Europe

Males Number of new cases

	1990	1995	2000	2005	2010	2015
Albania	11,684	11,756	13,471	15,367	17,218	18,329
Andorra	197	242	259	313	365	392
Armenia	13,126	14,050	15,086	16,245	16,923	17,533
Austria*	36,888	38,613	39,770	42,819	46,098	49,715
Azerbaijan	23,155	27,091	30,488	35,643	39,308	46,044
Belarus	56,492	59,865	62,771	65,270	66,354	70,596
Belgium*	48,747	51,355	51,186	52,482	55,582	58,736
Bosnia and Herzegovina	19,927	20,641	22,924	26,143	27,846	30,372
Bulgaria*	69,994	70,986	70,025	70,948	71,413	71,531
Croatia*	32,288	33,427	32,957	34,504	35,122	35,980
Cyprus*	2,123	2,363	2,427	2,542	2,896	3,082
Czech Republic*	76,536	76,729	73,938	76,033	78,519	83,184
Denmark*	29,392	29,690	28,489	28,115	29,218	30,092
Estonia*	9,301	8,959	8,940	9,202	9,063	9,366
Finland*	25,782	27,605	27,704	28,765	30,088	32,148
France*	227,565	236,749	244,924	254,442	269,093	286,394
Georgia	28,741	28,237	29,387	31,269	30,999	29,007
Germany*	457,617	477,677	479,590	496,044	512,230	545,946
Greece*	50,879	55,353	58,302	60,330	63,165	65,077
Hungary*	85,370	84,510	82,137	80,923	78,784	80,163
Iceland	935	1,006	1,061	1,160	1,291	1,380
Ireland*	13,429	13,913	14,184	14,929	16,068	17,268
Israel	16,341	19,621	21,545	22,465	25,567	27,371
Italy*	293,767	308,439	315,311	323,949	341,105	359,888
Kazakhstan	59,403	65,500	64,858	68,730	71,999	78,332
Kyrgyzstan	13,967	14,564	16,441	17,827	18,294	20,774
Latvia*	16,510	15,791	16,044	16,145	16,215	15,933
Lithuania*	22,417	21,576	22,293	24,232	24,699	25,284
Luxembourg*	1,337	1,425	1,433	1,511	1,706	1,946
Macedonia	10,082	10,605	11,835	12,806	13,788	14,532
Malta*	1,142	1,255	1,355	1,455	1,741	1,986
Moldova	20,090	20,131	19,825	20,865	22,293	23,183
Montenegro	2,728	3,199	3,546	3,939	4,160	4,393
Netherlands*	70,432	73,071	73,813	75,606	80,353	86,970
Norway	22,625	22,864	22,495	24,375	25,530	27,231
Poland*	267,526	273,333	275,332	284,614	297,124	313,458
Portugal*	47,733	51,332	52,865	53,385	54,279	56,222
Romania*	166,155	173,969	175,472	176,669	176,198	177,005
Russia	869,687	941,019	1,003,325	1,045,700	1,015,769	1,111,622
Serbia	61,499	69,597	75,383	76,205	77,153	76,590
Slovakia*	32,000	32,751	32,812	34,329	35,501	38,319
Slovenia*	10,952	11,511	12,122	13,267	14,692	15,758
Spain*	161,844	176,634	184,479	191,265	199,915	210,618
Sweden*	55,108	58,449	60,315	62,338	63,558	64,686
Switzerland	29,102	29,649	29,795	31,163	33,984	36,959
Tajikistan	13,499	14,306	14,750	16,959	19,153	22,519
Turkey	171,812	195,304	210,577	214,307	222,875	248,105
Turkmenistan	9,231	10,922	12,523	13,887	15,410	17,346
Ukraine	311,374	321,638	331,171	345,483	340,194	363,323
United Kingdom*	337,062	340,895	306,335	296,546	309,728	324,446
Uzbekistan	51,896	58,439	66,174	74,000	83,274	94,434
EU	2,649,897	2,748,371	2,744,556	2,807,390	2,914,152	3,061,198
Europe	4,467,489	4,708,615	4,824,243	4,987,513	5,103,901	5,441,564

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Incidence is defined as the number of newly diagnosed cases for the calendar year.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.2 Incidence of cardiovascular disease, by sex, 1990 to 2015, Europe

Females Number of new cases

	1990	1995	2000	2005	2010	2015
Albania	8,779	9,390	9,815	11,296	13,182	14,645
Andorra	211	253	265	309	348	373
Armenia	15,167	16,414	17,734	18,393	18,060	21,577
Austria*	46,418	47,682	47,105	48,455	49,029	51,261
Azerbaijan	25,956	28,208	30,041	34,163	37,844	43,985
Belarus	72,191	74,983	76,919	79,898	81,779	88,252
Belgium*	52,720	55,181	54,328	54,403	55,622	58,098
Bosnia and Herzegovina	18,711	19,129	20,701	23,236	25,053	27,164
Bulgaria*	58,432	61,345	62,342	65,555	67,813	69,733
Croatia*	32,829	34,076	33,317	34,759	36,079	36,901
Cyprus*	1,803	2,056	2,166	2,275	2,542	2,760
Czech Republic*	82,208	82,040	78,679	80,328	82,244	86,039
Denmark*	29,956	30,049	28,789	27,020	26,657	27,039
Estonia*	11,902	11,450	11,242	11,488	11,691	12,204
Finland*	28,801	30,023	30,155	30,202	30,912	31,981
France*	242,718	253,810	258,684	266,973	277,334	296,370
Georgia	36,402	34,553	34,263	35,494	35,483	33,509
Germany*	559,842	558,405	529,354	522,883	520,901	537,895
Greece*	46,496	51,482	54,998	57,528	62,678	66,290
Hungary*	84,052	85,449	85,361	86,496	86,035	88,722
Iceland	805	855	903	960	1,036	1,103
Ireland*	12,335	12,958	13,160	13,179	13,720	14,392
Israel	12,353	15,940	17,656	18,293	20,982	22,044
Italy*	300,865	321,833	324,775	333,960	351,954	371,869
Kazakhstan	79,880	83,181	78,946	81,566	83,226	92,565
Kyrgyzstan	17,910	17,466	18,706	19,029	19,452	21,668
Latvia*	21,110	20,394	20,437	20,543	20,830	20,808
Lithuania*	25,775	25,460	26,949	29,397	30,290	31,145
Luxembourg*	1,549	1,611	1,616	1,646	1,762	1,926
Macedonia	7,842	8,398	9,648	10,786	11,751	12,515
Malta*	1,092	1,183	1,299	1,515	1,663	1,809
Moldova	21,421	21,301	20,666	21,594	22,588	23,534
Montenegro	2,739	3,115	3,308	3,646	3,803	4,021
Netherlands*	69,857	71,718	72,254	71,819	73,831	77,051
Norway	21,681	21,962	21,723	21,285	21,387	21,868
Poland*	260,269	266,949	269,890	281,686	298,035	317,980
Portugal*	54,430	58,969	61,725	62,148	62,553	64,992
Romania*	148,898	158,451	162,455	168,356	171,304	173,805
Russia	1,156,911	1,197,544	1,231,935	1,267,341	1,247,500	1,384,080
Serbia	55,747	63,571	70,153	72,092	72,430	73,191
Slovakia*	27,366	28,935	29,983	31,589	32,986	35,251
Slovenia*	11,409	11,866	12,248	12,992	13,888	14,446
Spain*	173,235	188,871	197,899	200,832	209,965	220,957
Sweden*	48,984	53,107	54,845	53,513	52,651	53,220
Switzerland	30,805	31,728	31,783	31,900	32,972	34,465
Tajikistan	14,879	14,705	13,929	15,382	17,588	19,358
Turkey	151,858	175,174	193,244	202,176	219,920	256,215
Turkmenistan	10,449	11,793	13,006	13,973	15,354	17,262
Ukraine	427,067	423,320	419,299	434,439	434,977	467,604
United Kingdom*	327,953	331,089	311,589	283,318	289,055	298,270
Uzbekistan	60,544	65,860	71,750	78,643	87,236	98,090
EU	2,763,306	2,856,442	2,837,646	2,854,857	2,934,028	3,063,270
Europe	5,013,645	5,195,284	5,244,038	5,350,752	5,457,980	5,842,358

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Incidence is defined as the number of newly diagnosed cases for the calendar year.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.3 Prevalence of cardiovascular diseases, by sex, 2015, Europe

Males Number of cases

	CVD	IHD	Stroke	Peripheral Vascular Disease	Other CVD	Atrial Fibrillation
Albania	149,113	49,696	12,350	47,991	48,342	13,314
Andorra	3,528	1,071	206	1,463	669	593
Armenia	107,123	52,791	11,990	45,312	2,321	11,327
Austria*	399,912	117,332	27,792	161,216	60,683	89,216
Azerbaijan	271,484	116,094	31,800	98,745	11,652	27,564
Belarus	455,242	294,204	52,296	150,507	4,215	38,749
Belgium*	482,532	159,839	30,843	201,441	100,163	55,798
Bosnia and Herzegovina	223,139	87,833	18,614	86,073	51,084	20,479
Bulgaria*	490,216	193,345	46,782	179,626	127,780	42,988
Croatia*	274,063	106,965	24,629	97,878	83,322	16,757
Cyprus*	29,126	7,252	1,921	13,147	6,717	3,406
Czech Republic*	650,781	244,352	44,212	234,780	158,301	97,853
Denmark*	257,396	84,706	16,935	107,155	49,779	33,570
Estonia*	58,251	27,897	5,732	24,578	3,393	5,960
Finland*	255,075	78,629	18,212	101,556	36,693	55,203
France*	2,880,473	577,884	176,689	1,130,040	969,183	448,290
Georgia	183,691	75,207	24,318	69,033	15,353	16,957
Germany*	4,207,442	1,226,273	268,691	1,832,880	762,500	687,489
Greece*	471,804	146,738	34,367	217,965	54,247	77,428
Hungary*	555,656	253,112	49,872	232,842	77,062	50,729
Iceland	12,150	3,438	647	4,565	2,095	3,036
Ireland*	142,518	42,615	10,033	62,390	18,871	24,932
Israel	216,772	76,066	13,598	89,909	25,667	37,113
Italy*	2,659,408	767,740	174,207	1,221,358	342,285	447,545
Kazakhstan	526,851	249,833	69,178	173,382	74,393	44,634
Kyrgyzstan	135,297	58,930	18,947	43,533	7,347	11,690
Latvia*	96,921	50,209	11,037	38,871	2,789	9,555
Lithuania*	154,310	82,560	16,253	60,839	10,308	13,816
Luxembourg*	22,056	4,376	1,435	8,296	7,864	3,217
Macedonia	108,680	38,813	10,133	35,898	33,823	9,434
Malta*	17,219	5,490	1,210	7,661	2,772	2,163
Moldova	143,363	71,588	16,677	53,994	7,197	14,686
Montenegro	33,153	11,591	2,988	12,707	8,634	2,987
Netherlands*	764,474	213,205	45,522	283,686	155,482	173,011
Norway	219,231	55,271	12,666	79,476	37,812	64,835
Poland*	2,146,891	945,600	158,851	791,668	389,297	280,088
Portugal*	460,471	137,002	37,677	196,272	76,731	75,969
Romania*	1,103,013	510,400	113,362	452,068	168,729	63,670
Russia	7,406,191	4,974,852	799,661	2,178,594	288,234	585,746
Serbia	503,554	221,498	47,608	197,006	102,947	26,809
Slovakia*	297,476	121,065	22,383	92,156	78,042	41,966
Slovenia*	123,072	48,243	8,809	46,569	27,187	13,701
Spain*	1,993,922	472,650	131,331	759,410	511,122	387,306
Sweden*	492,943	167,487	33,608	182,703	79,520	113,656
Switzerland	358,386	99,256	19,380	135,919	121,391	31,759
Tajikistan	129,735	64,388	16,766	47,796	1,611	14,535
Turkey	2,534,406	638,700	139,165	833,593	1,066,960	109,185
Turkmenistan	111,810	46,816	16,819	37,202	2,328	10,611
Ukraine	2,441,740	1,634,545	250,432	830,096	21,582	203,081
United Kingdom*	2,810,080	934,103	293,225	1,106,705	374,511	493,453
Uzbekistan	667,969	330,497	73,388	202,850	12,989	62,499
EU	**24,297,499**	**7,727,071**	**1,805,621**	**9,845,756**	**4,735,333**	**3,808,737**
Total Europe	**41,240,109**	**16,980,048**	**3,465,250**	**15,301,400**	**6,683,979**	**5,170,360**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data

Notes: Prevalence is defined as the cumulative number of persons living with the disease at the end of the calendar year. 'Other CVD' is defined as other pulmonary disease, diseases of pericardium, valve disorders, tachycardia, ill-defined heart disease, other aneurysms, other disorders of arteries/veins. IHD data are based on surveillance data, survey data, outpatient and inpatient visits of angina and first acute myocardial infarction. Stroke data are based on survey data and inpatient hospital data for first acute stroke. Atrial Fibrillation data are based on survey data, primary care data, inpatient data and claims data. Peripheral vascular disease data are based on survey data of outpatient/inpatient visits and inpatient hospital data. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.3 Prevalence of cardiovascular diseases, by sex, 2015, Europe

Females Number of cases

	CVD	IHD	Stroke	Peripheral Vascular Disease	Other CVD	Atrial Fibrillation
Albania	129,804	26,972	12,465	50,858	40,788	10,315
Andorra	3,597	742	205	1,866	736	485
Armenia	132,176	56,764	16,446	63,030	3,769	10,885
Austria*	409,542	78,960	27,471	205,238	75,951	74,581
Azerbaijan	285,541	104,796	39,091	115,455	10,122	20,866
Belarus	564,904	246,932	84,854	275,446	9,374	45,456
Belgium*	489,834	108,312	32,692	254,512	105,673	47,863
Bosnia and Herzegovina	202,421	55,068	21,668	103,019	34,074	17,794
Bulgaria*	498,810	139,978	54,273	238,245	107,009	42,925
Croatia*	287,969	79,759	29,852	135,056	77,095	14,675
Cyprus*	29,743	4,904	1,789	15,133	8,198	2,842
Czech Republic*	683,935	195,895	52,621	302,226	175,083	82,990
Denmark*	229,517	48,931	15,982	123,319	42,467	24,467
Estonia*	82,318	27,820	9,903	45,305	4,049	7,345
Finland*	258,899	53,714	18,288	127,424	42,783	48,810
France*	2,968,354	398,664	189,440	1,506,760	861,041	383,702
Georgia	222,574	81,382	29,208	99,528	11,799	17,160
Germany*	4,083,162	855,807	258,083	2,059,546	834,043	551,601
Greece*	469,229	95,888	34,661	265,269	57,201	64,024
Hungary*	653,088	195,011	67,687	353,261	87,655	56,634
Iceland	10,252	2,083	604	5,048	1,963	1,785
Ireland*	126,358	24,594	9,466	69,622	19,128	15,130
Israel	190,655	34,670	12,852	108,015	24,012	27,936
Italy*	2,789,081	545,697	177,613	1,593,525	354,705	364,540
Kazakhstan	592,143	252,713	91,000	255,229	38,944	42,935
Kyrgyzstan	148,501	54,225	22,000	55,283	6,834	9,364
Latvia*	132,645	45,634	18,253	71,579	4,747	11,781
Lithuania*	206,080	73,487	28,133	108,764	14,284	16,427
Luxembourg*	21,723	3,376	1,437	10,067	6,963	2,847
Macedonia	93,852	22,447	11,389	41,497	23,515	7,891
Malta*	16,028	3,458	1,109	8,713	2,291	1,983
Moldova	153,291	52,755	22,644	78,702	5,024	13,679
Montenegro	30,815	7,146	3,681	15,126	6,919	2,628
Netherlands*	711,855	130,650	43,940	328,831	173,792	124,410
Norway	189,031	34,737	12,379	92,967	32,761	39,053
Poland*	2,286,796	712,963	198,721	1,125,796	334,627	292,660
Portugal*	508,465	131,422	38,632	257,754	78,912	64,868
Romania*	1,118,540	370,712	139,412	597,895	100,780	70,815
Russia	8,915,541	4,132,190	1,267,978	3,954,437	414,985	688,433
Serbia	490,766	144,016	58,392	245,553	88,149	26,152
Slovakia*	301,885	73,191	27,290	131,620	77,039	43,739
Slovenia*	122,849	31,579	10,220	60,398	26,270	12,102
Spain*	2,061,317	350,951	142,639	1,039,972	448,823	331,403
Sweden*	410,015	88,562	24,392	204,357	68,512	76,777
Switzerland	340,606	59,340	19,638	166,610	109,800	25,058
Tajikistan	111,699	47,608	19,036	45,792	879	8,765
Turkey	2,820,197	578,643	185,551	1,000,924	1,260,447	85,578
Turkmenistan	117,637	39,975	19,642	46,395	2,337	8,234
Ukraine	3,087,824	1,514,022	399,996	1,453,286	38,183	237,822
United Kingdom*	2,613,770	611,817	308,925	1,270,718	373,507	370,279
Uzbekistan	683,480	275,828	86,311	249,531	7,146	48,795
EU	24,571,804	5,481,737	1,962,924	12,510,903	4,562,628	3,202,221
Europe	44,089,112	13,306,789	4,399,956	21,034,502	6,735,188	4,599,289

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data

Notes: Prevalence is defined as the cumulative number of persons living with the disease at the end of the calendar year. 'Other CVD' is defined as other pulmonary disease, diseases of pericardium, valve disorders, tachycardia, ill-defined heart disease, other aneurysms, other disorders of arteries/veins. IHD data are based on surveillance data, survey data, outpatient and inpatient visits of angina and first acute myocardial infarction. Stroke data are based on survey data and inpatient hospital data for first acute stroke. Atrial Fibrillation data are based on survey data, primary care data, inpatient data and claims data. Peripheral vascular disease data are based on survey data of outpatient/inpatient visits and inpatient hospital data. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.4 Prevalence rates of cardiovascular diseases, by sex, 2015, Europe

Males Age-standardised prevalence rate per 100,000

	CVD	IHD	Stroke	Peripheral Vascular Disease	Other CVD	Atrial Fibrillation
Albania	8,673	2,813	707	2,813	2,817	772
Andorra	5,627	1,728	335	2,253	1,065	949
Armenia	7,157	3,509	809	3,104	151	764
Austria*	6,121	1,800	436	2,413	932	1,368
Azerbaijan	7,312	3,176	849	2,993	286	764
Belarus	8,630	5,576	1,002	2,985	78	739
Belgium*	5,774	1,925	375	2,341	1,217	663
Bosnia and Herzegovina	8,436	3,267	717	3,312	1,945	775
Bulgaria*	9,068	3,486	857	3,185	2,512	773
Croatia*	9,087	3,458	813	3,131	2,881	545
Cyprus*	5,280	1,311	351	2,356	1,235	618
Czech Republic*	8,712	3,216	599	3,151	2,164	1,284
Denmark*	5,956	1,939	399	2,445	1,156	787
Estonia*	7,197	3,437	711	3,020	425	739
Finland*	5,887	1,817	434	2,310	840	1,278
France*	6,101	1,234	383	2,310	2,071	948
Georgia	8,336	3,370	1,104	3,088	727	761
Germany*	5,768	1,685	374	2,426	1,047	948
Greece*	5,189	1,642	387	2,288	605	849
Hungary*	8,500	3,847	778	3,569	1,186	773
Iceland	5,987	1,694	325	2,227	1,048	1,497
Ireland*	5,327	1,583	377	2,356	710	931
Israel	5,540	1,953	349	2,288	658	947
Italy*	5,099	1,507	341	2,257	650	859
Kazakhstan	8,697	4,175	1,090	3,270	1,100	763
Kyrgyzstan	8,313	3,894	1,125	3,167	398	762
Latvia*	7,298	3,764	831	2,942	209	723
Lithuania*	8,226	4,394	874	3,248	556	740
Luxembourg*	6,311	1,241	412	2,345	2,296	915
Macedonia	8,996	3,111	822	3,057	2,887	771
Malta*	5,313	1,671	377	2,341	853	678
Moldova	7,266	3,639	830	2,919	337	738
Montenegro	8,774	2,967	776	3,327	2,431	773
Netherlands*	6,004	1,660	366	2,213	1,223	1,371
Norway	6,246	1,574	370	2,250	1,092	1,848
Poland*	8,830	3,843	673	3,333	1,613	1,157
Portugal*	5,764	1,722	475	2,388	965	949
Romania*	8,182	3,778	852	3,318	1,261	469
Russia	9,171	6,098	1,005	2,872	352	739
Serbia	8,274	3,589	782	3,201	1,729	437
Slovakia*	9,403	3,751	717	3,074	2,535	1,325
Slovenia*	8,003	3,111	582	3,001	1,785	884
Spain*	5,781	1,382	382	2,132	1,507	1,111
Sweden*	6,425	2,170	451	2,314	1,048	1,466
Switzerland	5,908	1,633	324	2,193	2,026	521
Tajikistan	6,795	3,383	796	2,817	69	762
Turkey	7,998	2,100	430	2,968	3,048	392
Turkmenistan	7,640	3,415	1,071	3,076	139	763
Ukraine	8,801	5,852	908	3,050	77	741
United Kingdom*	6,067	2,037	647	2,306	804	1,074
Uzbekistan	7,780	4,092	828	2,754	133	762
EU	**6,308**	**2,016**	**478**	**2,476**	**1,243**	**986**
Europe	**7,147**	**2,895**	**603**	**2,604**	**1,226**	**890**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Prevalence is defined as the cumulative number of persons living with the disease at the end of the calendar year.

'Other CVD' is defined as other pulmonary disease, diseases of pericardium, valve disorders, tachycardia, ill-defined heart disease, other aneurysms, other disorders of arteries/veins. IHD data are based on surveillance data, survey data, outpatient and inpatient visits of angina and first acute myocardial infarction. Stroke data are based on survey data and inpatient hospital data of first acute stroke. Atrial Fibrillation data are based on survey data, primary care data, inpatient data and claims data. Peripheral vascular disease data are based on survey data of outpatient/inpatient visits and inpatient hospital data. Data are age-standardised to the 2013 GBD world standard population. Data were not available for Monaco or San Marino. *Asterisk denotes EU member states.

Table 2.4 Prevalence rates of cardiovascular diseases, by sex, 2015, Europe

Females Age-standardised prevalence rate per 100,000

	CVD	IHD	Stroke	Peripheral Vascular Disease	Other CVD	Atrial Fibrillation
Albania	6,978	1,427	678	2,662	2,188	542
Andorra	4,453	938	272	2,198	932	564
Armenia	6,185	2,670	809	2,872	181	508
Austria*	4,831	956	352	2,318	903	839
Azerbaijan	6,438	2,408	864	2,762	212	507
Belarus	6,217	2,722	1,003	2,869	112	491
Belgium*	4,580	1,032	326	2,255	1,015	413
Bosnia and Herzegovina	6,372	1,741	735	3,124	1,091	543
Bulgaria*	6,759	1,870	792	3,004	1,540	543
Croatia*	6,925	1,905	782	2,947	1,968	329
Cyprus*	4,595	756	282	2,270	1,305	421
Czech Republic*	7,135	2,041	601	2,964	1,896	818
Denmark*	4,593	986	340	2,393	857	478
Estonia*	5,669	1,940	744	2,898	312	490
Finland*	4,677	996	363	2,221	769	833
France*	4,666	648	320	2,236	1,386	563
Georgia	7,087	2,506	959	2,876	412	506
Germany*	4,474	956	307	2,142	942	564
Greece*	4,052	842	324	2,205	510	518
Hungary*	6,552	1,971	760	3,339	899	543
Iceland	4,456	912	273	2,142	870	747
Ireland*	4,147	813	317	2,256	634	489
Israel	3,941	727	275	2,194	503	563
Italy*	3,975	824	279	2,176	512	485
Kazakhstan	6,825	2,908	1,018	3,016	442	507
Kyrgyzstan	7,165	2,771	1,030	2,937	314	506
Latvia*	5,582	1,936	824	2,818	219	487
Lithuania*	6,346	2,263	928	3,121	482	490
Luxembourg*	5,092	790	348	2,248	1,674	633
Macedonia	6,615	1,560	813	2,872	1,705	541
Malta*	4,219	911	310	2,248	614	495
Moldova	5,503	1,913	825	2,807	184	489
Montenegro	6,612	1,518	813	3,134	1,540	542
Netherlands*	4,783	885	313	2,131	1,194	801
Norway	4,554	856	316	2,163	795	920
Poland*	6,709	2,125	641	3,134	998	841
Portugal*	4,765	1,274	383	2,298	746	564
Romania*	6,120	2,041	824	3,114	565	370
Russia	6,481	3,001	971	2,750	316	489
Serbia	6,317	1,861	805	3,006	1,168	317
Slovakia*	6,932	1,658	664	2,896	1,847	975
Slovenia*	6,210	1,646	579	2,829	1,368	587
Spain*	4,593	791	336	2,213	1,024	700
Sweden*	4,507	994	293	2,170	773	776
Switzerland	4,542	797	279	2,121	1,492	311
Tajikistan	5,749	2,461	844	2,608	38	507
Turkey	7,392	1,540	483	2,720	3,213	233
Turkmenistan	6,423	2,305	1,009	2,835	116	507
Ukraine	6,499	3,146	909	2,930	87	490
United Kingdom*	4,678	1,117	596	2,156	670	635
Uzbekistan	6,430	2,771	784	2,550	65	506
EU	**4,921**	**1,127**	**430**	**2,372**	**934**	**605**
Europe	**5,612**	**1,692**	**597**	**2,515**	**919**	**552**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Prevalence is defined as the cumulative number of persons living with the disease at the end of the calendar year.

'Other CVD' is defined as other pulmonary disease, diseases of pericardium, valve disorders, tachycardia, ill-defined heart disease, other aneurysms, other disorders of arteries/veins. IHD data are based on surveillance data, survey data, outpatient and inpatient visits of angina and first acute myocardial infarction. Stroke data are based on survey data and inpatient hospital data of first acute stroke. Atrial Fibrillation data are based on survey data, primary care data, inpatient data and claims data. Peripheral vascular disease data are based on survey data of outpatient/inpatient visits and inpatient hospital data. Data are age-standardised to the 2013 GBD world standard population. Data were not available for Monaco or San Marino. *Asterisk denotes EU member states.

Figure 2.4a Age-standardised prevalence rate of CVD, males, latest available year, Europe

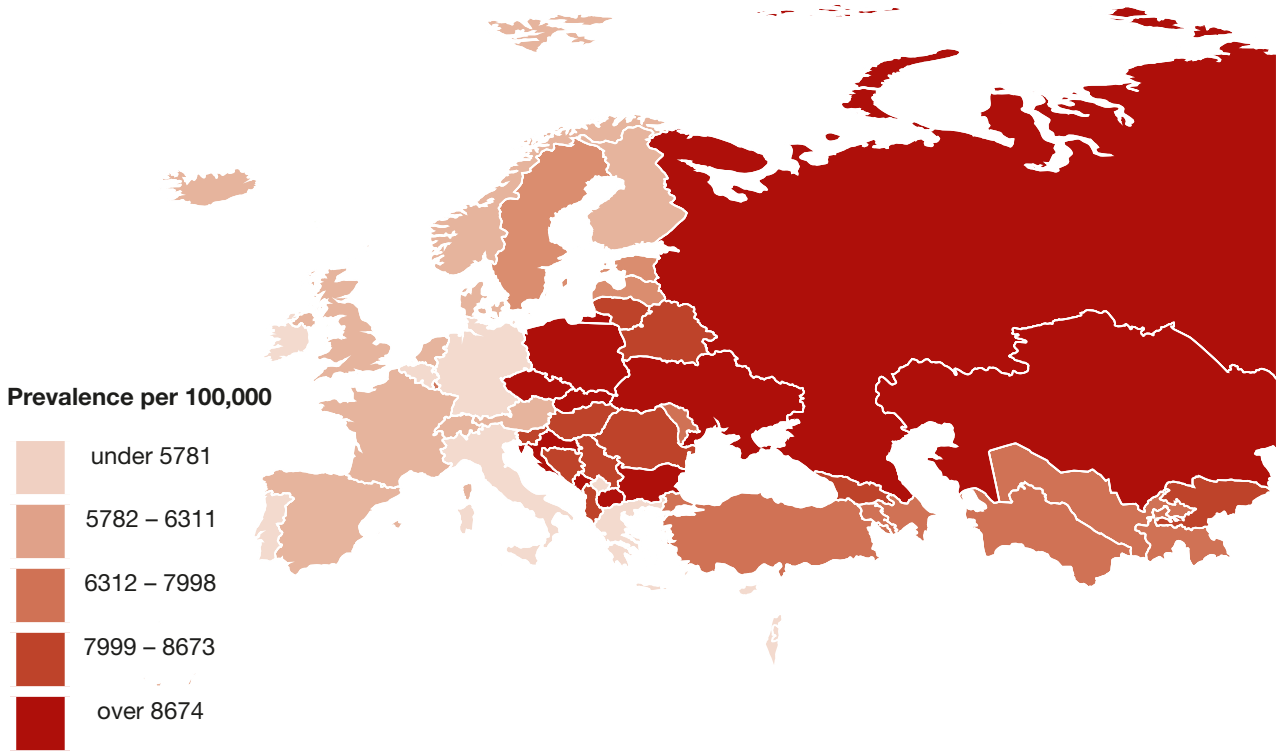


Figure 2.4b Age-standardised prevalence rate of CVD, females, latest available year, Europe

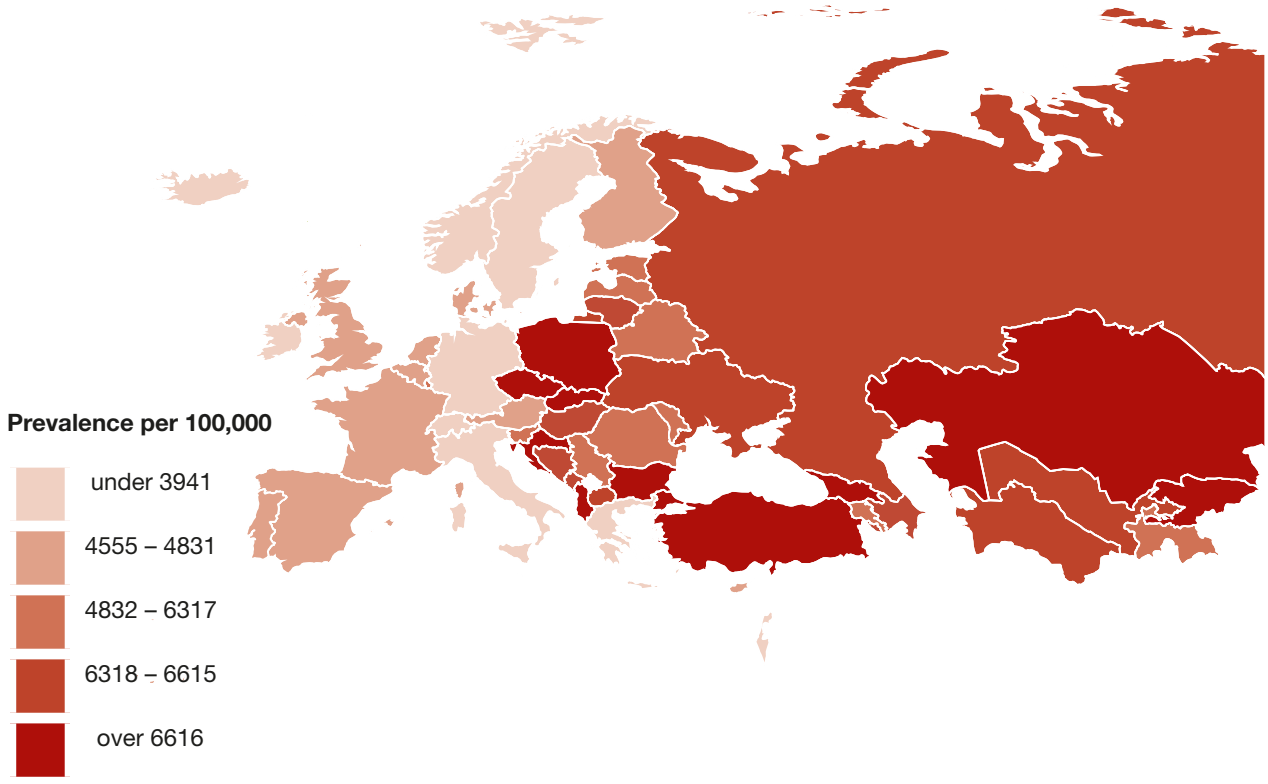


Table 2.5 Crude prevalence and age-standardised prevalence rate of CVD, by sex, 1990 to 2015, Europe

Males

	Number of cases						Age-standardised prevalence rate per 100,000					
	1990	1995	2000	2005	2010	2015	1990	1995	2000	2005	2010	2015
Albania	94,917	96,285	110,008	125,045	138,227	149,113	8,865	8,791	8,737	8,762	8,728	8,673
Andorra	1,763	2,168	2,330	2,851	3,290	3,528	6,228	6,093	5,940	5,862	5,728	5,627
Armenia	77,978	84,037	89,060	96,449	101,260	107,123	7,116	7,165	7,141	7,209	7,214	7,157
Austria*	254,341	268,578	290,471	324,667	363,287	399,912	6,320	6,274	6,206	6,223	6,255	6,121
Azerbaijan	137,428	158,296	171,790	199,688	224,589	271,484	7,605	7,771	7,449	7,480	7,414	7,312
Belarus	353,161	381,766	396,490	412,654	424,852	455,242	8,298	8,468	8,428	8,640	8,707	8,630
Belgium*	366,585	382,887	403,960	423,140	453,852	482,532	6,367	6,267	6,169	5,999	5,912	5,774
Bosnia and Herzegovina	137,305	142,481	160,247	185,914	202,453	223,139	8,428	8,550	8,501	8,585	8,400	8,436
Bulgaria*	484,325	484,024	472,799	476,587	478,500	490,216	9,359	9,306	9,104	9,165	9,145	9,068
Croatia*	223,963	233,601	235,364	251,463	263,702	274,063	9,391	9,277	9,148	9,174	9,094	9,087
Cyprus*	18,353	19,995	20,943	23,104	26,896	29,126	5,953	5,886	5,653	5,482	5,374	5,280
Czech Republic*	463,898	472,771	490,301	543,559	594,879	650,781	9,090	8,931	8,632	8,812	8,765	8,712
Denmark*	205,619	208,910	217,116	227,218	238,664	257,396	6,641	6,570	6,516	6,359	6,097	5,956
Estonia*	54,682	54,284	53,794	55,500	55,969	58,251	8,078	7,963	7,640	7,573	7,368	7,197
Finland*	174,186	183,292	197,176	215,116	236,611	255,075	6,948	6,660	6,441	6,254	6,112	5,887
France*	2,117,563	2,226,642	2,360,720	2,514,122	2,720,219	2,880,473	6,914	6,756	6,589	6,405	6,318	6,101
Georgia	195,021	190,603	194,945	200,036	194,496	183,691	8,560	8,406	8,447	8,552	8,447	8,336
Germany*	3,011,806	3,170,790	3,335,131	3,591,390	3,836,393	4,207,442	6,920	6,695	6,361	6,143	5,945	5,768
Greece*	352,304	376,272	403,405	427,941	454,813	471,804	5,656	5,555	5,469	5,335	5,325	5,189
Hungary*	483,043	484,138	495,978	519,642	532,032	555,656	8,801	8,702	8,613	8,726	8,592	8,500
Iceland	7,901	8,447	9,058	10,050	11,210	12,150	6,690	6,531	6,342	6,203	6,103	5,987
Ireland*	99,181	101,623	108,403	118,134	129,967	142,518	5,995	5,849	5,758	5,569	5,432	5,327
Israel	114,985	137,760	156,424	171,072	199,849	216,772	6,533	6,343	6,147	5,916	5,732	5,540
Italy*	2,023,591	2,160,890	2,218,414	2,334,995	2,506,576	2,659,408	5,977	5,918	5,595	5,392	5,278	5,099
Kazakhstan	385,156	421,733	405,724	435,816	467,763	526,851	8,522	8,761	8,786	8,857	8,787	8,697
Kyrgyzstan	92,788	97,309	107,590	116,038	119,407	135,297	8,214	8,282	8,281	8,410	8,373	8,313
Latvia*	96,153	94,212	94,054	95,004	96,339	96,921	8,194	7,984	7,722	7,595	7,567	7,298
Lithuania*	140,464	138,527	140,162	149,554	153,712	154,310	8,771	8,413	8,198	8,412	8,471	8,226
Luxembourg*	14,581	15,310	16,489	17,780	19,954	22,056	7,141	6,951	6,824	6,607	6,474	6,311
Macedonia	73,759	75,487	82,558	91,108	100,192	108,680	9,032	9,100	9,009	9,040	9,059	8,996
Malta*	9,385	10,330	11,341	12,576	15,422	17,219	5,939	5,790	5,600	5,448	5,394	5,313
Moldova	122,207	125,256	122,688	128,363	138,464	143,363	7,691	7,702	7,383	7,439	7,471	7,266
Montenegro	21,632	24,458	26,429	28,886	30,865	33,153	8,587	8,706	8,593	8,712	8,785	8,774
Netherlands*	519,190	541,073	573,967	626,666	699,768	764,474	6,767	6,514	6,310	6,207	6,151	6,004
Norway	173,282	174,142	184,698	194,292	217,243	219,231	6,770	6,627	6,777	6,696	6,797	6,246
Poland*	1,537,576	1,573,657	1,671,978	1,813,548	1,968,208	2,146,891	9,372	9,107	9,000	8,960	8,889	8,830
Portugal*	345,715	373,769	399,208	420,799	436,635	460,471	6,371	6,325	6,193	6,057	5,853	5,764
Romania*	977,841	1,016,562	1,038,248	1,043,077	1,070,815	1,103,013	8,602	8,581	8,467	8,250	8,205	8,182
Russia	5,711,643	6,135,460	6,346,632	6,571,822	6,633,674	7,406,191	9,776	9,845	9,630	9,728	9,446	9,171
Serbia	381,657	421,506	451,849	464,998	493,794	503,554	8,486	8,448	8,471	8,408	8,321	8,274
Slovakia*	217,765	226,137	237,139	255,058	275,924	297,476	9,558	9,618	9,575	9,600	9,522	9,403
Slovenia*	76,088	80,820	87,654	98,249	112,229	123,072	8,470	8,255	8,087	8,102	8,140	8,003
Spain*	1,407,952	1,526,596	1,624,157	1,739,207	1,840,690	1,993,922	6,583	6,498	6,329	6,117	5,847	5,781
Sweden*	397,029	411,983	423,015	445,099	469,199	492,943	6,935	6,958	6,854	6,813	6,648	6,425
Switzerland	260,324	261,536	275,305	294,348	328,538	358,386	6,792	6,407	6,238	6,040	6,011	5,908
Tajikistan	76,369	81,388	82,423	94,677	109,065	129,735	7,042	7,125	6,955	6,934	6,926	6,795
Turkmenistan	62,301	73,480	83,735	91,269	99,525	111,810	7,820	7,939	7,952	7,882	7,739	7,640
Ukraine	2,025,741	2,119,290	2,166,357	2,278,068	2,259,814	2,441,740	8,708	8,711	8,726	9,130	8,977	8,801
United Kingdom*	2,370,781	2,383,431	2,405,368	2,471,704	2,632,735	2,810,080	7,061	6,832	6,537	6,291	6,168	6,067
Uzbekistan	365,404	423,186	478,870	531,179	590,986	667,969	7,932	8,057	8,030	7,978	7,891	7,780
EU	**18,443,959**	**19,221,105**	**20,026,754**	**21,234,903**	**22,683,989**	**24,297,499**	**7,150**	**6,992**	**6,757**	**6,589**	**6,455**	**6,308**
Europe	**30,875,571**	**32,592,265**	**34,061,188**	**36,042,322**	**38,012,591**	**41,240,109**	**7,840**	**7,755**	**7,558**	**7,460**	**7,296**	**7,147**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Prevalence is defined as the cumulative number of persons living with the disease at the end of the calendar year.

Data are age-standardised to the 2013 GBD world standard population.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.5 Crude prevalence and age-standardised prevalence rate of CVD, by sex, 1990 to 2015, Europe

Females Number of cases | Age-standardised prevalence rate per 100,000

	1990	1995	2000	2005	2010	2015	1990	1995	2000	2005	2010	2015
Albania	81,448	87,286	88,622	99,648	114,212	129,804	7,338	7,273	7,167	7,080	6,991	6,978
Andorra	1,967	2,405	2,533	2,991	3,376	3,597	4,883	4,825	4,734	4,616	4,520	4,453
Armenia	90,136	97,241	105,005	108,796	107,915	132,176	6,123	6,126	6,083	6,128	6,200	6,185
Austria*	327,410	337,634	346,886	363,622	381,121	409,542	5,015	5,052	4,995	4,961	4,897	4,831
Azerbaijan	171,866	183,191	195,063	220,012	242,007	285,541	6,867	6,856	6,645	6,680	6,562	6,438
Belarus	446,783	470,888	488,961	508,668	525,531	564,904	6,087	6,139	6,109	6,185	6,245	6,217
Belgium*	399,494	417,213	432,724	443,241	461,880	489,834	5,001	4,986	4,910	4,740	4,636	4,580
Bosnia and Herzegovina	129,573	132,903	147,625	169,443	184,716	202,421	6,280	6,352	6,336	6,391	6,308	6,372
Bulgaria*	415,909	433,328	440,032	458,121	477,810	498,810	6,784	6,771	6,634	6,684	6,783	6,759
Croatia*	235,828	249,948	250,024	263,874	276,769	287,969	6,995	7,031	6,894	6,892	6,878	6,925
Cyprus*	18,155	20,454	21,770	23,745	27,116	29,743	5,149	5,137	4,944	4,746	4,646	4,595
Czech Republic*	533,506	546,224	559,337	598,058	635,872	683,935	7,398	7,374	7,192	7,244	7,176	7,135
Denmark*	207,674	212,811	216,492	216,552	217,745	229,517	5,037	5,061	5,056	4,907	4,666	4,593
Estonia*	71,933	70,050	70,637	74,367	77,433	82,318	6,009	5,881	5,728	5,765	5,735	5,669
Finland*	201,997	211,764	223,826	233,781	245,352	258,899	5,264	5,182	5,122	4,978	4,809	4,677
France*	2,250,925	2,372,524	2,519,351	2,651,542	2,807,837	2,968,354	5,175	5,137	5,081	4,891	4,801	4,666
Georgia	240,437	229,629	228,192	235,956	235,067	222,574	7,144	7,024	7,016	7,209	7,254	7,087
Germany*	3,598,206	3,619,672	3,618,684	3,694,574	3,815,216	4,083,162	5,179	5,063	4,849	4,678	4,554	4,474
Greece*	324,158	355,792	385,788	409,392	441,826	469,229	4,350	4,324	4,276	4,157	4,122	4,052
Hungary*	521,952	541,933	566,074	596,963	616,734	653,088	6,673	6,647	6,585	6,624	6,538	6,552
Iceland	6,873	7,406	7,965	8,587	9,405	10,252	4,905	4,831	4,751	4,585	4,521	4,456
Ireland*	93,759	98,794	104,651	110,002	116,874	126,358	4,598	4,563	4,519	4,339	4,199	4,147
Israel	92,405	119,755	138,421	151,397	176,807	190,655	4,490	4,398	4,284	4,117	4,013	3,941
Italy*	2,137,895	2,282,430	2,387,229	2,479,562	2,613,914	2,789,081	4,630	4,552	4,392	4,189	4,075	3,975
Kazakhstan	480,096	498,259	474,840	500,316	522,166	592,143	6,690	6,792	6,739	6,798	6,828	6,825
Kyrgyzstan	119,179	118,047	126,577	129,197	133,509	148,501	7,280	7,273	7,216	7,262	7,215	7,165
Latvia*	122,760	119,963	121,512	124,750	129,066	132,645	5,853	5,691	5,585	5,585	5,667	5,582
Lithuania*	164,879	166,935	175,573	189,808	198,990	206,080	6,489	6,253	6,222	6,376	6,430	6,346
Luxembourg*	16,039	16,805	17,604	18,483	19,969	21,723	5,578	5,523	5,449	5,290	5,184	5,092
Macedonia	56,515	59,728	67,859	76,528	85,078	93,852	6,558	6,591	6,574	6,559	6,586	6,615
Malta*	9,081	9,998	11,099	13,320	14,754	16,028	4,664	4,565	4,492	4,343	4,281	4,219
Moldova	134,146	136,988	134,015	139,285	147,259	153,291	5,790	5,752	5,587	5,564	5,624	5,503
Montenegro	20,643	23,068	24,744	27,055	28,723	30,815	6,453	6,552	6,536	6,550	6,608	6,612
Netherlands*	555,523	581,537	607,134	626,095	666,634	711,855	5,342	5,220	5,115	4,939	4,847	4,783
Norway	168,960	172,484	178,053	177,843	183,392	189,031	4,915	4,841	4,877	4,748	4,680	4,554
Poland*	1,596,866	1,685,811	1,789,321	1,950,446	2,115,793	2,286,796	6,936	6,882	6,790	6,821	6,798	6,709
Portugal*	378,316	411,726	441,193	461,342	479,025	508,465	5,237	5,228	5,161	5,026	4,826	4,765
Romania*	904,754	962,135	1,006,984	1,039,064	1,081,539	1,118,540	6,369	6,375	6,299	6,160	6,149	6,120
Russia	7,103,889	7,363,224	7,439,330	7,733,542	7,849,856	8,915,541	6,708	6,739	6,559	6,672	6,573	6,481
Serbia	352,402	392,082	426,057	444,087	470,737	490,766	6,376	6,346	6,375	6,339	6,303	6,317
Slovakia*	207,979	228,062	242,885	259,931	277,837	301,885	6,848	7,060	7,004	6,974	6,913	6,932
Slovenia*	86,151	91,791	98,245	106,332	115,259	122,849	6,473	6,388	6,284	6,261	6,253	6,210
Spain*	1,463,023	1,607,029	1,723,793	1,822,731	1,922,820	2,061,317	5,155	5,158	5,080	4,878	4,672	4,593
Sweden*	358,904	376,014	386,051	387,584	393,765	410,015	4,798	4,813	4,777	4,668	4,563	4,507
Switzerland	275,149	285,824	294,119	300,471	317,402	340,606	5,187	5,084	4,945	4,704	4,577	4,542
Tajikistan	82,750	80,940	75,487	84,076	98,334	111,699	6,005	6,000	5,819	5,805	5,818	5,749
Turkmenistan	71,819	81,367	90,041	96,118	104,518	117,637	6,669	6,668	6,621	6,564	6,491	6,423
Ukraine	2,656,872	2,665,507	2,680,479	2,779,717	2,832,226	3,087,824	6,397	6,345	6,322	6,526	6,564	6,499
United Kingdom*	2,380,412	2,413,847	2,430,788	2,387,062	2,478,873	2,613,770	5,115	5,080	5,014	4,750	4,688	4,678
Uzbekistan	419,477	464,952	510,148	559,111	612,322	683,480	6,774	6,806	6,687	6,614	6,530	6,430
EU	**19,583,490**	**20,442,225**	**21,195,686**	**22,004,342**	**23,107,825**	**24,571,804**	**5,405**	**5,356**	**5,244**	**5,093**	**4,997**	**4,921**
Europe	**34,207,789**	**35,751,151**	**37,014,753**	**38,675,783**	**40,472,363**	**44,089,112**	**5,931**	**5,912**	**5,806**	**5,741**	**5,657**	**5,612**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: Prevalence is defined as the cumulative number of persons living with the disease at the end of the calendar year.

Data are age-standardised to the 2013 GBD world standard population.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 2.5a Age-standardised prevalence of CVD, males, 1990 to 2015, selected European countries

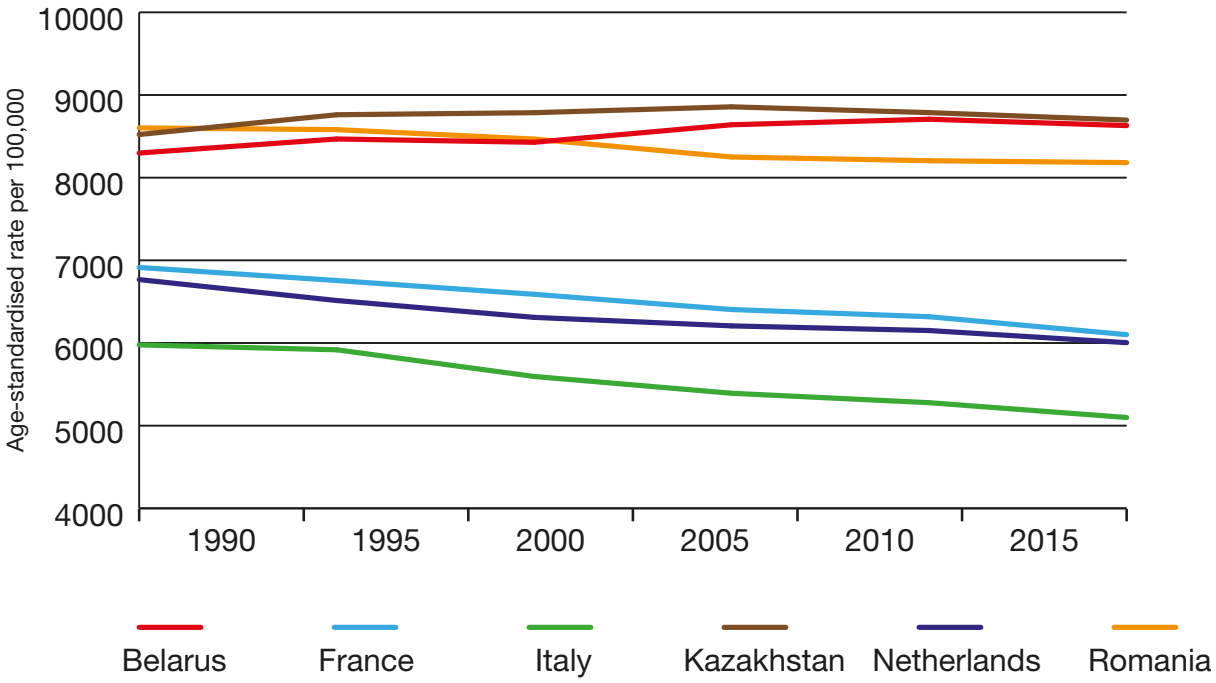


Figure 2.5b Age-standardised prevalence of CVD, females, 1990 to 2015, selected European countries

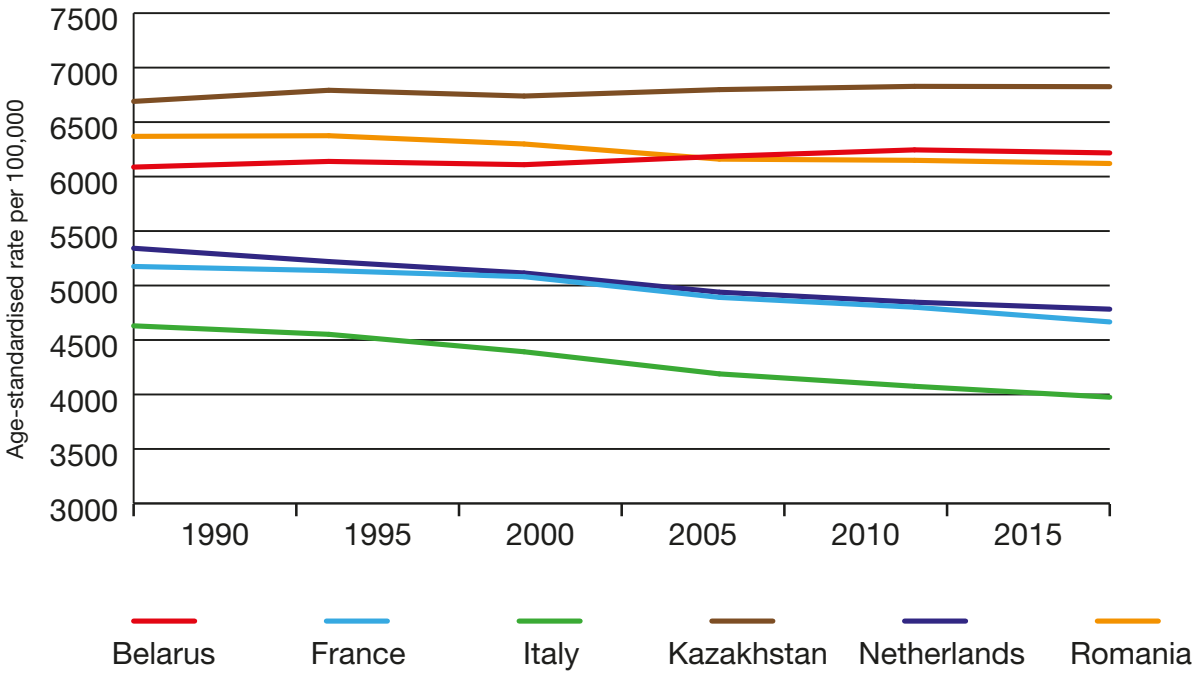


Table 2.6 Disability-adjusted life years (DALYs) lost by cause, by sex, 2015, Europe and EU

Males

	Europe		EU		Western Europe		Central Europe		Eastern Europe		Central Asia	
	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost
Cardiovascular disease	36,359,731	24.1	14,648,548	20.2	10,004,699	17.6	5,454,002	27.6	16,181,975	31.9	3,486,773	23.5
Ischaemic heart disease	21,083,130	14.0	8,085,443	11.1	5,480,178	9.6	2,989,400	15.1	9,792,142	19.3	2,096,036	14.1
Stroke	8,462,126	5.6	3,221,383	4.4	2,053,316	3.6	1,430,347	7.2	3,817,484	7.5	910,281	6.1
Cancer	24,131,440	16.0	15,040,451	20.7	12,108,864	21.3	3,727,340	18.8	5,973,120	11.8	1,178,200	7.9
Trachea, bronchus and lung cancers	6,357,621	4.2	3,906,197	5.4	3,039,743	5.3	1,085,408	5.5	1,582,149	3.1	252,298	1.7
Colon and rectum cancers	2,567,534	1.7	1,682,760	2.3	1,314,404	2.3	460,926	2.3	630,132	1.2	76,627	0.5
Breast cancer	49,906	0.0	33,990	0.0	29,563	0.1	6,270	0.0	9,693	0.0	1,836	0.0
Diarrhoea, lower respiratory, and other common infectious diseases	4,386,415	2.9	1,530,919	2.1	1,205,718	2.1	391,429	2.0	1,437,026	2.8	1,148,691	7.7
Diarrhoeal diseases	247,421	0.2	65,253	0.1	60,128	0.1	9,774	0.0	30,658	0.1	113,009	0.8
Sexually transmitted diseases exc. HIV	106,215	0.1	24,968	0.0	20,952	0.0	5,908	0.0	24,913	0.0	28,413	0.2
Lower Respiratory infections	3,373,291	2.2	1,174,875	1.6	897,125	1.6	318,862	1.6	1,178,329	2.3	880,242	5.9
Mental and substance use disorders	13,175,118	8.7	6,333,394	8.7	5,219,521	9.2	1,470,742	7.4	4,803,365	9.5	995,902	6.7
Depressive disorders	2,949,160	2.0	1,666,861	2.3	1,364,478	2.4	415,570	2.1	714,215	1.4	262,177	1.8
Alcohol use disorders	2,551,881	1.7	926,345	1.3	661,703	1.2	280,831	1.4	1,459,676	2.9	141,566	1.0
Anxiety disorders	1,148,324	0.8	709,594	1.0	618,974	0.8	266,174	1.3	363,948	0.7	67,501	0.5
Neurological disorders	6,265,535	4.2	3,974,937	5.5	3,445,581	6.1	762,538	3.9	1,121,753	2.2	442,524	3.0
Alzheimer's disease and other dementias	2,251,856	1.5	1,585,682	2.2	1,403,443	2.5	266,174	1.3	363,948	0.7	67,501	0.5
Chronic Respiratory diseases	4,841,414	3.2	2,840,576	3.9	2,409,944	4.2	578,766	2.9	1,046,580	2.1	423,300	2.9
Digestive diseases	2,664,974	1.8	1,303,144	1.8	1,012,237	1.8	347,767	1.8	1,029,167	2.0	204,146	1.4
Diabetes, urogenital, blood, and endocrine diseases	7,157,624	4.8	4,123,868	5.7	3,445,682	6.1	983,559	5.0	1,349,413	2.7	708,320	4.8
Diabetes	3,299,309	2.2	1,950,639	2.7	1,583,696	2.8	528,799	2.7	517,206	1.0	296,971	2.0
Musculo-skeletal disease	10,914,484	7.2	6,549,392	9.0	5,453,660	9.6	1,519,105	7.7	2,474,714	4.9	659,193	4.4
Unintentional injuries	7,974,533	5.3	3,085,049	4.2	2,367,038	4.2	842,706	4.3	3,443,634	6.8	1,002,292	6.8
Transport injuries	4,486,618	3.0	1,778,924	2.4	1,340,838	2.4	539,513	2.7	1,680,118	3.3	548,732	3.7
Self-harm and interpersonal violence	6,697,288	4.4	2,159,637	3.0	1,548,515	2.7	694,214	3.5	3,591,316	7.1	703,466	4.7
All causes	150,618,324	100.0	72,631,799	100.0	56,924,418	100.0	19,789,884	100.0	50,800,480	100.0	14,847,743	100.0

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: DALYs are defined as years of healthy life lost due to disease and are calculated as the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs).

Table 2.6 Disability-adjusted life years (DALYs) lost by cause, by sex, 2015, Europe and EU

Females	Europe		EU		Western Europe		Central Europe		Eastern Europe		Central Asia	
	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost	DALYs lost	% of total DALYs lost
Cardiovascular disease	28,310,564	22.1	11,329,461	17.2	7,705,169	14.5	4,225,076	26.2	13,117,995	32.6	2,427,418	21.4
Ischaemic heart disease	14,488,832	11.3	5,144,929	7.8	3,325,928	6.2	2,019,621	12.5	7,478,403	18.6	1,310,219	11.6
Stroke	8,618,726	6.7	3,228,574	4.9	2,090,056	3.9	1,383,340	8.6	4,156,172	10.3	759,920	6.7
Cancer	17,764,982	13.9	10,854,495	16.5	8,823,970	16.6	2,618,849	16.2	4,721,293	11.7	974,739	8.6
Trachea, bronchus and lung cancers	2,076,203	1.6	1,565,048	2.4	1,296,330	2.4	361,609	2.2	289,877	0.7	61,325	0.5
Colon and rectum cancers	1,963,016	1.5	1,175,888	1.8	922,613	1.7	318,567	2.0	597,859	1.5	67,401	0.6
Breast cancer	3,793,300	3.0	2,384,636	3.6	2,034,294	3.8	479,045	3.0	978,963	2.4	186,135	1.6
Diarrhoea, lower respiratory, and other common infectious diseases	2,976,358	2.3	1,246,632	1.9	1,056,373	2.0	254,096	1.6	634,646	1.6	852,447	7.5
Diarrhoeal diseases	227,182	0.2	76,390	0.1	71,960	0.1	9,315	0.1	25,424	0.1	86,608	0.8
Sexually transmitted diseases exc. HIV	123,805	0.1	44,373	0.1	33,447	0.1	15,027	0.1	35,976	0.1	32,638	0.3
Lower Respiratory infections	2,053,740	1.6	884,980	1.3	735,623	1.4	189,032	1.2	409,900	1.0	644,640	5.7
Mental and substance use disorders	11,674,753	9.1	6,339,285	9.6	5,375,053	10.1	1,331,768	8.3	3,274,467	8.1	869,614	7.7
Depressive disorders	4,721,199	3.7	2,545,675	3.9	2,123,468	4.0	572,186	3.5	1,302,620	3.2	365,493	3.2
Alcohol use disorders	716,789	0.6	232,185	0.4	181,919	0.3	51,795	0.3	444,337	1.1	33,754	0.3
Anxiety disorders	2,274,469	1.8	1,474,272	2.2	1,306,235	2.5	255,928	1.6	379,096	0.9	157,634	1.4
Neurological disorders	10,129,081	7.9	6,249,249	9.5	5,482,140	10.3	1,091,274	6.8	2,289,326	5.7	590,696	5.2
Alzheimer's disease and other dementias	3,911,749	3.1	2,675,310	4.1	2,384,047	4.5	412,112	2.6	771,237	1.9	99,367	0.9
Chronic Respiratory diseases	3,680,147	2.9	2,333,955	3.6	2,067,206	3.9	389,775	2.4	659,450	1.6	307,806	2.7
Digestive diseases	2,438,464	1.9	1,363,443	2.1	1,103,654	2.1	321,505	2.0	785,011	2.0	156,540	1.4
Diabetes, urogenital, blood, and endocrine diseases	7,716,015	6.0	4,044,656	6.2	3,329,161	6.3	998,575	6.2	1,832,514	4.6	791,717	7.0
Diabetes	3,452,381	2.7	1,779,083	2.7	1,387,491	2.6	536,707	3.3	786,871	2.0	328,856	2.9
Musculo-skeletal disease	14,725,958	11.5	8,852,792	13.5	7,539,127	14.2	1,838,359	11.4	3,489,946	8.7	802,604	7.1
Unintentional injuries	4,439,440	3.5	2,361,405	3.6	2,096,575	3.9	361,020	2.2	1,390,733	3.5	429,615	3.8
Transport injuries	1,638,235	1.3	685,927	1.0	505,739	0.9	214,933	1.3	674,573	1.7	149,782	1.3
Self-harm and interpersonal violence	1,653,959	1.3	645,038	1.0	537,337	1.0	145,410	0.9	783,362	1.9	145,472	1.3
All causes	128,186,265	100.0	65,707,475	100.0	53,265,379	100.0	16,118,931	100.0	40,187,276	100.0	11,324,254	100.0

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: DALYs are defined as years of healthy life lost due to disease and are calculated as the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs).

Figure 2.6a Disability-adjusted life years lost by cause, 2015, Europe

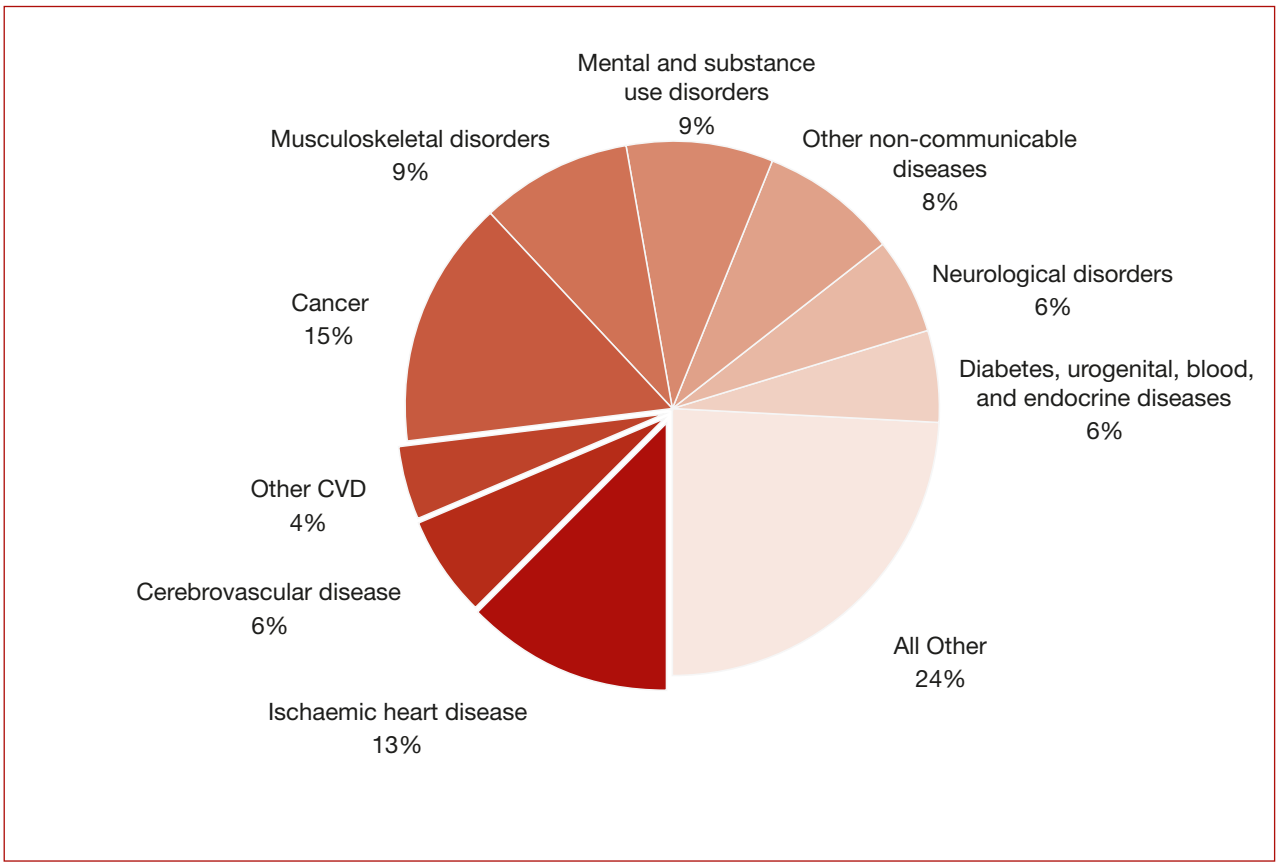


Figure 2.6b Disability-adjusted life years lost by cause, 2015, EU

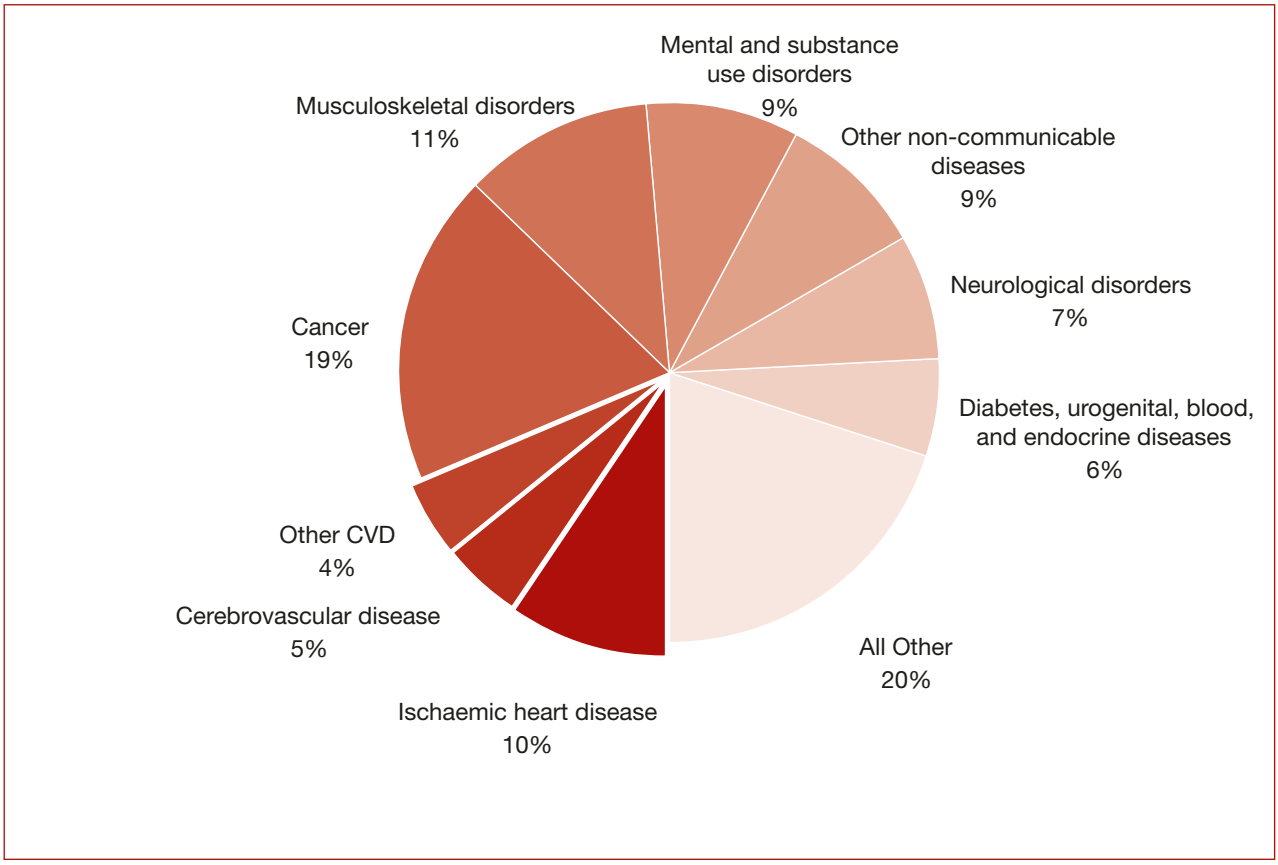


Table 2.7 Age-standardised DALYs rate for IHD, stroke and other CVD, by sex, 2015, Europe

Males Age-standardised DALYs lost per 100,000

	IHD	Stroke	Other CVD
Albania	3,752	2,306	572
Andorra	1,393	472	171
Armenia	6,202	1,981	64
Austria*	1,883	497	183
Azerbaijan	7,449	2,319	138
Belarus	10,683	3,217	53
Belgium*	1,634	607	270
Bosnia and Herzegovina	2,572	1,657	335
Bulgaria*	5,451	2,882	735
Croatia*	3,299	1,641	342
Cyprus*	2,256	599	215
Czech Republic*	3,464	1,081	413
Denmark*	1,545	681	222
Estonia*	4,042	1,222	180
Finland*	2,343	682	196
France*	1,249	538	378
Georgia	7,155	3,941	364
Germany*	1,969	581	285
Greece*	2,641	961	101
Hungary*	4,039	1,487	322
Iceland	1,842	455	167
Ireland*	2,038	521	159
Israel	1,355	543	157
Italy*	1,458	631	139
Kazakhstan	8,113	3,731	528
Kyrgyzstan	8,093	4,423	169
Latvia*	5,688	2,266	156
Lithuania*	5,859	1,767	281
Luxembourg*	1,360	540	373
Macedonia	3,632	3,068	380
Malta*	2,094	558	177
Moldova	6,375	2,688	114
Montenegro	4,064	2,733	292
Netherlands*	1,443	551	256
Norway	1,510	526	188
Poland*	3,747	1,393	314
Portugal*	1,272	1,113	204
Romania*	4,550	2,893	350
Russia	7,773	3,561	235
Serbia	3,582	2,392	390
Slovakia*	4,206	1,402	421
Slovenia*	1,718	871	262
Spain*	1,302	527	238
Sweden*	1,796	571	199
Switzerland	1,335	375	243
Tajikistan	5,681	2,658	54
Turkey	2,547	1,004	379
Turkmenistan	9,238	3,929	76
Ukraine	9,615	2,697	61
United Kingdom*	1,811	622	229
Uzbekistan	7,511	2,966	60
EU	**2,087**	**825**	**269**
Europe	**3,619**	**1,457**	**270**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: DALYs are defined as years of healthy life lost due to disease and are calculated as the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs).

Data are age-standardised to the 2013 GBD world standard population.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 2.7 Age-standardised DALYs rate for IHD, stroke and other CVD, by sex, 2015, Europe

Females Age-standardised DALYs lost per 100,000

	IHD	Stroke	Other CVD
Albania	1,732	1,610	378
Andorra	358	222	111
Armenia	2,629	1,305	59
Austria*	867	380	175
Azerbaijan	3,852	1,700	83
Belarus	4,154	1,802	41
Belgium*	696	449	219
Bosnia and Herzegovina	1,222	1,208	171
Bulgaria*	2,441	1,864	381
Croatia*	1,650	1,157	232
Cyprus*	596	347	181
Czech Republic*	1,676	786	317
Denmark*	698	507	166
Estonia*	1,716	782	119
Finland*	852	478	151
France*	434	343	230
Georgia	2,610	1,949	143
Germany*	885	432	235
Greece*	1,135	766	89
Hungary*	1,935	936	208
Iceland	565	284	124
Ireland*	724	389	124
Israel	563	362	140
Italy*	613	451	109
Kazakhstan	3,683	2,360	181
Kyrgyzstan	4,245	2,667	107
Latvia*	2,241	1,470	87
Lithuania*	2,183	1,096	142
Luxembourg*	588	401	285
Macedonia	1,719	2,351	214
Malta*	913	405	138
Moldova	3,491	1,723	58
Montenegro	1,611	2,338	198
Netherlands*	580	425	208
Norway	625	394	147
Poland*	1,445	852	161
Portugal*	571	680	156
Romania*	2,118	1,941	117
Russia	3,119	2,130	134
Serbia	1,862	1,927	247
Slovakia*	2,004	841	284
Slovenia*	743	557	200
Spain*	522	374	171
Sweden*	822	434	148
Switzerland	536	282	180
Tajikistan	3,873	2,388	40
Turkey	1,053	727	359
Turkmenistan	4,854	2,495	60
Ukraine	4,620	1,703	39
United Kingdom*	740	523	189
Uzbekistan	4,284	1,954	38
EU	**900**	**588**	**189**
Europe	**1,687**	**1,033**	**181**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.
Notes: DALYs are defined as years of healthy life lost due to disease and are calculated as the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs).
Data are age-standardised to the 2013 GBD world standard population.
Data were not available for Monaco or San Marino.
*Asterisk denotes EU member states.

Figure 2.7a Age-standardised DALYs rate for IHD, 2015, Europe

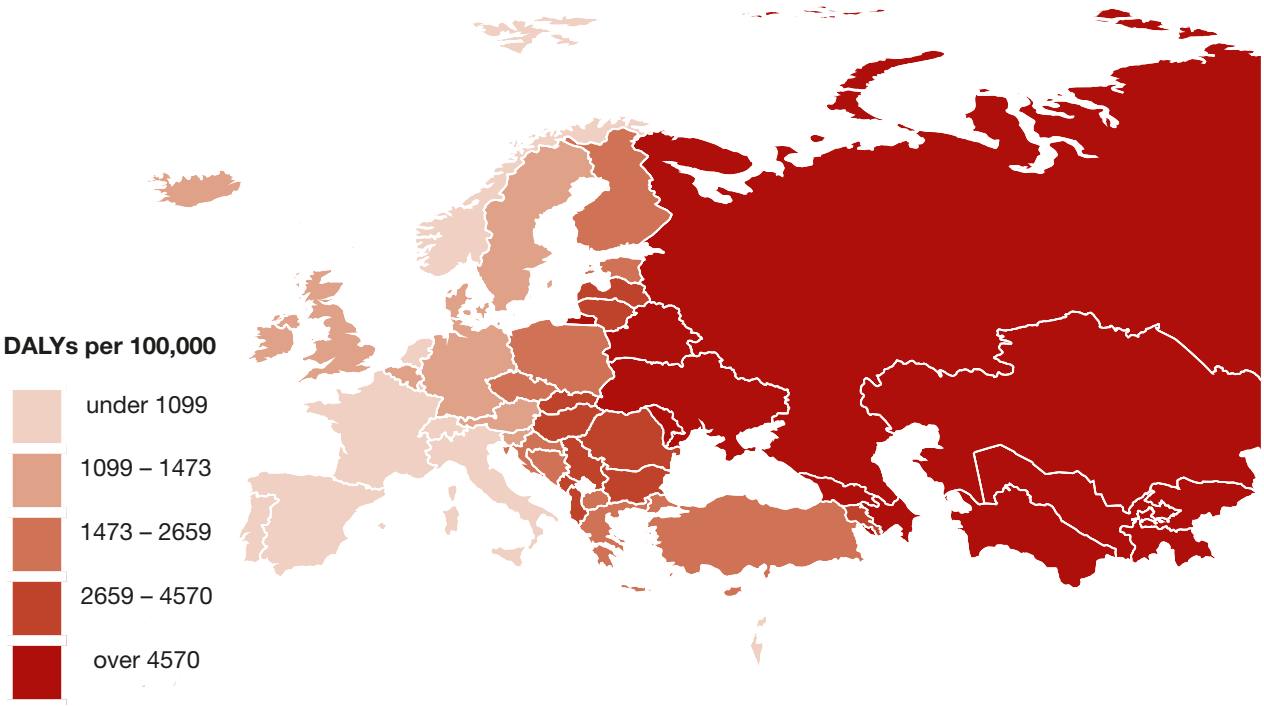


Figure 2.7b Age-standardised DALYs rate for stroke, 2015, Europe

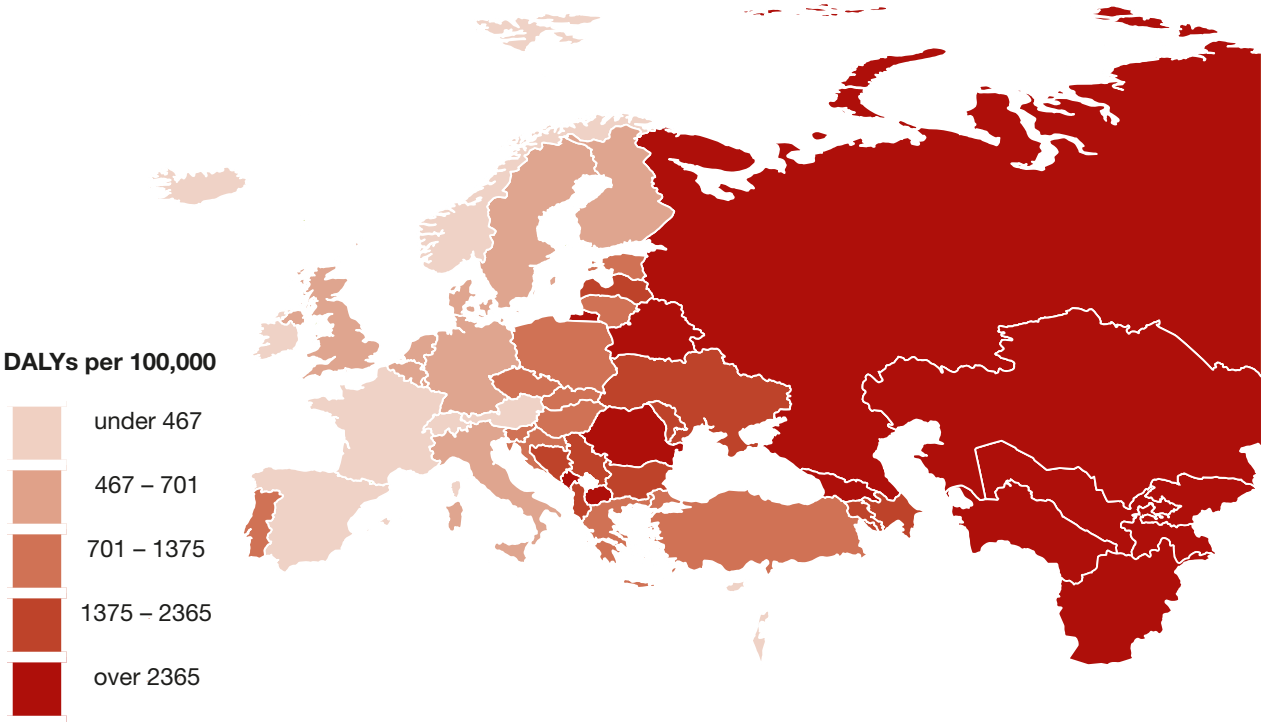


Table 2.8 Age-standardised rate of DALYs lost from cardiovascular disease, by sex, 1990 to 2015, Europe

Males Age-standardised DALYs lost per 100,000

	1990	1995	2000	2005	2010	2015
Albania	8,244	8,335	8,239	7,958	7,526	7,321
Andorra	3,719	3,284	2,876	2,539	2,345	2,409
Armenia	10,899	13,097	11,911	11,202	9,744	8,964
Austria*	7,276	6,662	5,539	4,098	3,532	3,144
Azerbaijan	15,547	15,985	15,187	13,822	12,800	10,540
Belarus	13,189	16,654	17,602	17,974	16,308	15,409
Belgium*	5,879	5,116	4,527	3,586	3,001	2,884
Bosnia and Herzegovina	10,109	10,080	8,566	7,041	6,097	5,651
Bulgaria*	13,315	14,677	14,145	12,951	11,261	10,525
Croatia*	10,679	9,779	9,276	7,791	6,788	5,959
Cyprus*	7,530	7,359	6,485	4,933	4,061	3,505
Czech Republic*	12,850	10,788	8,983	7,446	6,343	5,516
Denmark*	7,387	6,359	4,859	3,867	3,273	2,885
Estonia*	14,659	17,183	13,833	11,600	8,426	6,989
Finland*	9,149	7,473	6,231	5,211	4,506	3,968
France*	4,637	4,130	3,783	3,108	2,683	2,600
Georgia	14,713	14,556	14,541	14,372	13,575	12,962
Germany*	7,842	6,646	5,511	4,422	3,730	3,421
Greece*	6,286	5,979	5,696	4,992	4,394	4,176
Hungary*	13,443	12,921	11,077	9,875	8,667	6,906
Iceland	5,709	4,974	4,078	3,399	3,023	2,841
Ireland*	6,777	6,084	5,233	3,944	3,423	3,146
Israel	6,045	5,429	4,138	3,282	2,550	2,407
Italy*	5,505	4,778	4,115	3,402	2,811	2,747
Kazakhstan	13,530	18,816	19,350	19,829	15,600	13,718
Kyrgyzstan	13,319	15,831	15,351	15,600	15,088	13,776
Latvia*	15,182	19,331	14,515	14,671	11,339	9,877
Lithuania*	11,786	14,082	11,156	12,000	10,232	9,067
Luxembourg*	7,289	6,029	4,951	3,889	3,047	2,638
Macedonia	10,946	12,059	11,760	10,725	9,157	8,121
Malta*	6,768	5,437	5,000	3,869	3,486	3,203
Moldova	12,463	16,183	13,160	13,672	12,786	9,910
Montenegro	9,348	10,669	10,978	9,730	8,357	8,117
Netherlands*	6,347	5,605	4,826	3,638	2,893	2,768
Norway	7,252	6,087	4,961	3,651	3,045	2,714
Poland*	13,574	12,306	9,843	8,371	7,408	6,438
Portugal*	7,250	6,298	5,357	4,163	3,303	3,007
Romania*	11,896	14,210	12,111	11,084	10,262	9,121
Russia	14,700	20,866	20,530	21,600	16,618	13,841
Serbia	9,872	11,381	11,274	9,975	8,267	7,123
Slovakia*	13,322	11,718	11,146	9,928	8,407	6,765
Slovenia*	8,716	7,536	6,548	5,281	4,120	3,554
Spain*	5,400	4,759	4,203	3,573	2,868	2,540
Sweden*	6,539	5,600	4,707	3,967	3,380	3,123
Switzerland	5,381	4,616	3,794	3,050	2,526	2,329
Tajikistan	11,191	12,183	12,429	11,932	10,634	9,140
Turkey	9,514	8,833	7,190	5,724	4,485	4,390
Turkmenistan	15,604	18,006	18,448	17,154	15,468	14,163
Ukraine	13,173	17,954	17,590	19,100	14,906	13,581
United Kingdom*	7,661	6,542	5,405	4,271	3,458	3,147
Uzbekistan	13,772	15,359	15,193	14,983	13,324	12,441
EU	**7,782**	**7,046**	**5,956**	**4,967**	**4,194**	**3,789**
Europe	**9,528**	**10,391**	**9,434**	**8,814**	**7,080**	**6,297**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.
Notes: DALYs are defined as years of healthy life lost due to disease and are calculated as the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs).
Data are age-standardised to the 2013 GBD world standard population.
Data were not available for Monaco or San Marino.
*Asterisk denotes EU member states.

Table 2.8 Age-standardised rate of DALYs lost from cardiovascular disease, by sex, 1990 to 2015, Europe

Females Age-standardised DALYs lost per 100,000

	1990	1995	2000	2005	2010	2015
Albania	5,086	4,899	5,220	5,127	4,785	4,222
Andorra	1,443	1,296	1,059	889	857	857
Armenia	6,852	7,424	6,846	6,277	5,210	4,487
Austria*	3,927	3,498	3,070	2,275	1,923	1,818
Azerbaijan	9,700	9,667	9,607	8,784	8,043	6,055
Belarus	7,267	8,585	8,852	8,208	7,068	6,504
Belgium*	3,191	2,722	2,496	1,986	1,708	1,590
Bosnia and Herzegovina	6,373	6,580	5,179	4,394	3,844	3,399
Bulgaria*	8,283	8,438	8,418	7,134	6,154	5,609
Croatia*	6,189	5,682	5,527	4,345	3,749	3,456
Cyprus*	3,865	3,743	3,122	2,192	1,658	1,378
Czech Republic*	6,842	5,907	5,091	4,170	3,501	3,109
Denmark*	3,758	3,383	2,633	2,133	1,835	1,609
Estonia*	7,257	7,801	6,696	5,214	3,468	3,363
Finland*	4,079	3,375	2,850	2,283	2,002	1,827
France*	2,224	1,965	1,831	1,493	1,315	1,246
Georgia	8,451	8,002	7,789	7,005	5,909	5,485
Germany*	4,057	3,390	2,922	2,379	2,064	1,923
Greece*	4,044	3,520	3,178	2,748	2,340	2,294
Hungary*	7,278	6,664	5,816	4,903	4,263	3,634
Iceland	2,904	2,516	2,110	1,641	1,270	1,175
Ireland*	3,689	3,174	2,706	2,052	1,523	1,456
Israel	3,929	3,152	2,226	1,791	1,343	1,298
Italy*	2,985	2,558	2,207	1,812	1,518	1,510
Kazakhstan	7,876	10,585	10,399	10,099	8,016	6,981
Kyrgyzstan	8,677	10,080	9,728	9,758	8,787	7,642
Latvia*	7,735	8,887	6,808	6,280	4,890	4,442
Lithuania*	6,296	7,018	5,493	5,173	4,318	3,828
Luxembourg*	3,894	3,122	2,598	2,183	1,715	1,525
Macedonia	7,936	8,685	8,131	7,129	6,354	5,179
Malta*	3,783	2,975	2,608	2,187	1,857	1,708
Moldova	8,939	11,488	9,140	8,673	7,690	5,722
Montenegro	5,981	6,942	7,059	6,100	5,172	4,744
Netherlands*	3,783	2,975	2,608	2,187	1,857	1,708
Norway	8,939	11,488	9,140	8,673	7,690	5,722
Poland*	5,981	6,942	7,059	6,100	5,172	4,744
Portugal*	2,944	2,812	2,564	2,040	1,659	1,517
Romania*	3,180	2,714	2,385	1,867	1,609	1,434
Russia	6,699	6,079	5,033	4,016	3,374	2,927
Serbia	4,393	3,658	3,140	2,416	1,898	1,659
Slovakia*	7,785	8,170	7,447	6,539	5,595	4,925
Slovenia*	7,697	10,009	9,815	9,690	7,494	6,233
Spain*	6,917	7,964	7,963	6,756	5,383	4,532
Sweden*	7,077	6,485	5,975	5,175	4,377	3,542
Switzerland	4,785	4,110	3,423	2,693	2,179	1,948
Tajikistan	2,978	2,507	2,170	1,796	1,442	1,355
Turkey	3,083	2,658	2,430	2,086	1,770	1,709
Turkmenistan	2,575	2,289	1,951	1,568	1,379	1,225
Ukraine	8,533	9,683	10,111	9,516	8,203	6,954
United Kingdom*	5,511	4,911	3,809	3,205	2,496	2,466
Uzbekistan	10,173	11,475	11,291	10,373	9,134	8,074
EU	**4,133**	**3,687**	**3,205**	**2,640**	**2,221**	**2,035**
Europe	**5,384**	**5,710**	**5,215**	**4,728**	**3,819**	**3,391**

Source: Global Burden of Disease database http://www.healthdata.org/gbd/data.

Notes: DALYs are defined as years of healthy life lost due to disease and are calculated as the sum of years lost due to premature death (YLLs) and years lived with disability (YLDs).

Data are age-standardised to the 2013 GBD world standard population.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 2.8a Aged-standardised DALYs lost from CVD, males, 1990 to 2015, selected European countries

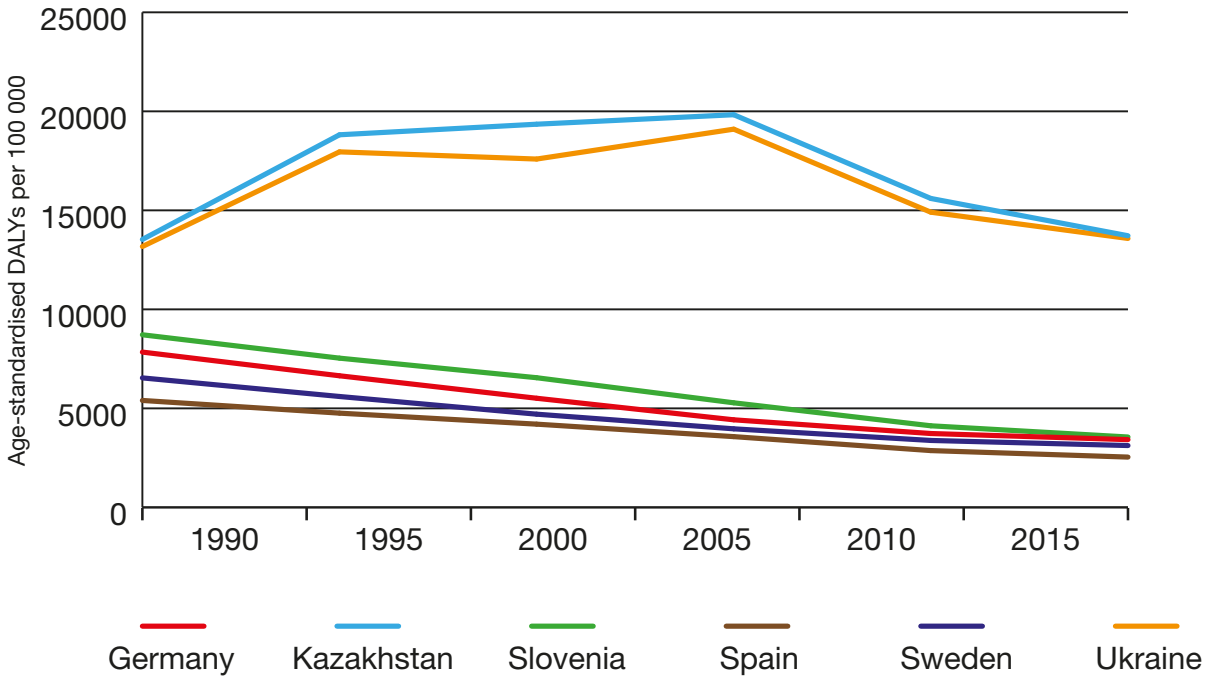
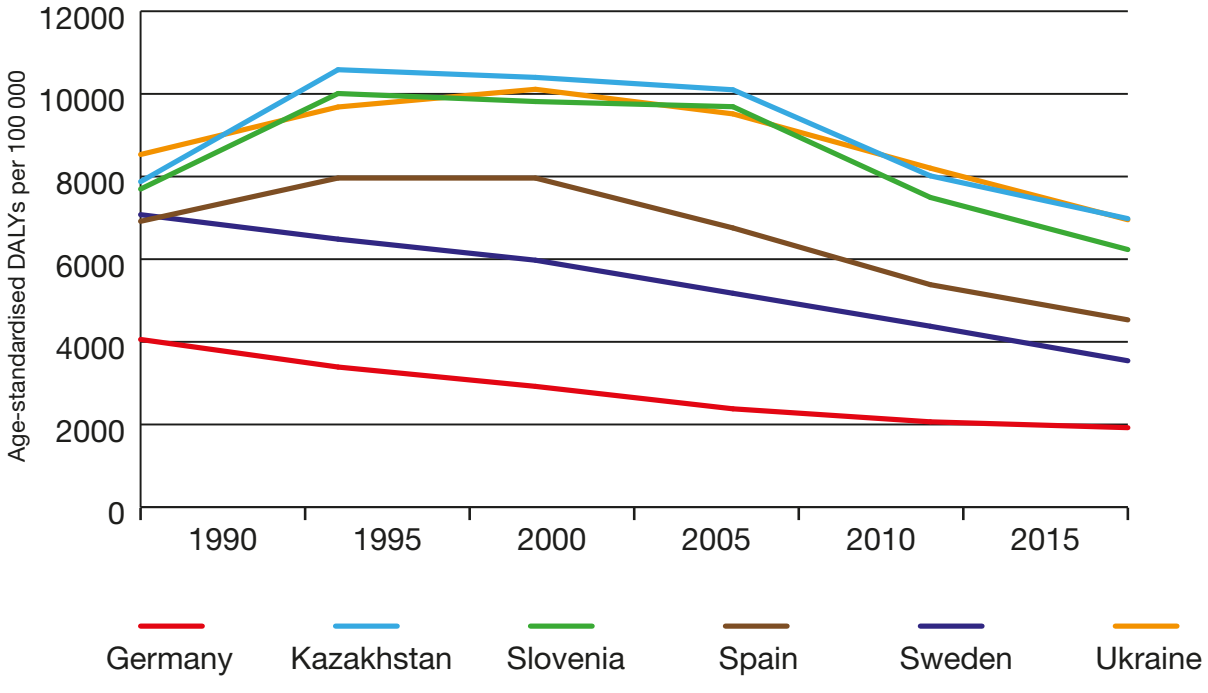


Figure 2.8b Aged-standardised DALYs lost from CVD, females, 1990 to 2015, selected European countries



3. Treatment

Treatment of CVD in European countries can be measured along several dimensions. Here we present data on inpatient admissions, average length of hospital stay, hospital discharge rates, medication, surgical procedures and case fatality rates.

Inpatient admission rates and average length of stay

Data on inpatient admission rates and average length of hospital stay for various cardiovascular conditions are provided by the WHO European Hospital Mortality Database for 31 European countries, 24 of which are EU member states. Inpatient admission rates refer to the number of patients admitted to hospital for a given condition per 1,000 population, while average length of hospital stay describes the mean number of days that patients with a given condition stay in hospital.

For CVD as a whole, in the latest available year, inpatient admission rates in countries were 30% higher for males than females on average. Admission rates for acute myocardial infarction (AMI) were more than two times higher in males than females, while those for heart failure and cerebrovascular diseases were 10% higher in males than females on average (Table 3.1).

Significant variation in admission rates was also apparent between countries, reflecting a combination of differences in the severity of CVD burden, as well as differences in access to and the efficiency of health care systems. This variation did not follow a clear geographic pattern. Within the EU, admission rates for all CVD, were lowest in Cyprus for both sexes (6.1/1,000 in males, 2.9/1,000 in females) and highest in Lithuania (45.4/1,000 in males, 50.1/1,000 in females). Of the seven non-EU countries for which data were available, inpatient admission rates for all CVD were lowest in Israel (15.8/1,000 in males, 10.4/1,000 in females) and highest in Norway (28.5/1,000 in males, 19.1/1,000 in females). High inpatient admission rates for acute myocardial infarction (AMI), heart failure and cerebrovascular diseases were also observed in Lithuania and Germany while lower rates were found in Cyprus and Turkey (Table 3.1).

In contrast to hospital admission rates, the average length of hospital stay for CVD, AMI, heart failure, and cerebrovascular diseases was higher for females than for males on average. For CVD as a whole, females spent 12% longer in hospital than males; for AMI, rates of stay were 17% higher among females, while for heart failure and stroke women spent 13% and 7% longer in hospital than males on average (Table 3.1).

Comparing between countries, within the EU the average length of hospital stay for CVD as a whole varied two-fold in males from 5.5 days in Denmark to 11.0 days in Hungary, and almost three-fold among females from 5.8 days in Denmark to 15.9 days in Finland. Amongst non-EU countries, the average length of hospital stay was lowest in Turkey (4.2 days in males and 4.1 days in females) and highest in TFYR Macedonia (11.5 days in males, 11.6 days in females), although, as with inpatient admission rates, data were available for only seven of 25 non-EU countries. For specific cardiovascular conditions, the duration of stay was consistently low in Turkey for both sexes, whereas the longest periods of stay were reported in Germany and Luxembourg for AMI, in Hungary, Belgium and the UK for heart failure, and in Finland and the UK for cerebrovascular disease (Table 3.1).

Hospital discharge rates

Hospital discharge rates – which measure the number of patients per 100,000 population who leave hospital after receiving care – come from the WHO's Health for All Database for the European region. These data provide a third indicator of the burden of CVD on national health systems.

The average hospital discharge rate for CVD as a whole increased steadily in Europe from 1,919 discharges per 100,000 population in 1990 to just over 2,500/100,000 in 2013 (the most recent available year for the European average) (Table 3.2, Figure 3.2). In the EU, the average hospital discharge rate has also risen, from 1,977/100,000 in 1990, to just over 2,400/100,000 in 2012, with little change in this figure seen since 2004 (Table 3.2, Figure 3.2).

The average hospital discharge rate for IHD in Europe as a whole increased from 608/100,000 in 1990 to around 800/100,000 in 2004 after which it plateaued (Table 3.3, Figure 3.3). In the EU, the average hospital discharge rate

for IHD rose from 574/100,000 in 1990 to 716/100,000 in 2003, but since then has fallen to around 600 per 100,000 population in 2009 – roughly 24% lower than the European average (Table 3.3, Figure 3.3). For stroke, hospital discharge rates in Europe rose from around 300/100,000 in 1990 to just under 450 per 100,000 population in 2010, while in the EU, rates increased from 309/100,000 in 1990 to around 400/100,000 in the early 2000s before decreasing slightly to approximately 390 per 100,000 population in 2009 – about 13% lower than the European average (Table 3.4, Figure 3.4).

For the latest available year, hospital discharge rates for CVD were, within the EU, lowest in Cyprus (672/100,000)[1] and highest in Lithuania (4,765 per 100,000). Outside of the EU, hospital discharge rates for CVD were lowest in Andorra (824/100,000) and highest in Belarus (6,305/100,000) (Table 3.2). The lowest rates of hospital discharge for IHD and stroke within the EU were also found in Cyprus (198/100,000 and 120/100,000 respectively), and the highest rates were again found in Lithuania (1,469/100,000 and 968/100,000) (Table 3.3, 3.4). Outside of the EU, hospital discharge rates for IHD varied more than 18-fold from 172 per 100,000 in Andorra to 3,223 per 100,000 in Belarus (Table 3.3), while the rates for stroke varied more than 13-fold from 89 per 100,000 in Tajikistan to 1,222 per 100,000 in Belarus (Table 3.4).

Medications for treatment and prevention of CVD

Prescription data on antihypertensive and cholesterol-lowering drugs in 2000 and 2013 are provided for the 23 European OECD countries, 19 of which are in the EU. For most countries, these data relate to prescriptions of the defined daily dose (DDD)[2] among outpatients, with the exceptions of the Czech Republic, Estonia, Italy and Sweden, where the data also include hospital inpatient prescriptions.

Between 2000 and 2013, the use of antihypertensives increased in all European OECD countries for which data are available. The largest increases were observed in Estonia, where prescriptions of antihypertensives nearly tripled and in Luxembourg where prescriptions quadrupled (Table 3.5, Figure 3.5a). In 2013, prescriptions of antihypertensive drugs were highest in Germany (575 DDD prescriptions/1,000 people/day) and Hungary (543 DDD prescriptions/1,000 people/day), around three times greater than those in Austria (184 DDD prescriptions/1,000 people/day) and more than four times greater than those in Turkey (124 DDD prescriptions/1,000 people/day) (Table 3.5, Figure 3.5a).

Prescriptions of cholesterol-lowering drugs also increased between 2000 and 2013 in all European OECD countries for which data are available. The smallest increase was observed in France, where the prescription rate rose by 1.5 times, while the largest increases were seen in Denmark and Estonia with increases of 14 times and 29 times respectively. In 2013, the highest levels of per capita cholesterol-lowering drug consumption were found in Slovakia (153 DDD prescriptions/1,000 people/day) and the UK (135 DDD prescriptions/1,000 people/day), while the lowest rates were found in Austria (44 DDD prescriptions/1,000 people/day) and Turkey (26 DDD prescriptions/1,000 people/day) (Table 3.5, Figure 3.5b). According to the OECD, these cross-national differences in drug use are a product of differences in the prevalence of elevated blood pressure and high cholesterol respectively, as well as variation in clinical practice[3].

While the OECD data refer mainly to outpatient drug use, the European Society of Cardiology EUROASPIRE project collects self-reported data on drug prescriptions for hospital patients with diagnosed CVD conditions. These data are not necessarily representative of national prescribing patterns, although they do provide some indication of the scale of medication use in the 24 countries for which data are available. In 2013/14, antiplatelet drugs were the most commonly used form of medication. Within EU countries, their reported use ranged from 85.1% of hospital patients in Lithuania to 98.9% of hospital patients in Cyprus. The use of statins was also high, and varied from 73.5% in Lithuania to 96.1% in Greece, while the use of beta-blockers ranged from 67.8% in the UK to 89.5% in Spain. The greatest variation between EU countries was found for use of ACE inhibitors/angiotensin receptor blockers (ARBs), with 49.0% of hospital patients in Belgium reporting use of such drugs compared to 82.2% of hospital patients in the Czech Republic. Among hospital patients in the five non-EU countries for which data were available, anti-platelet use ranged from 93.4% in Russia and Ukraine to 98.2% in Serbia; beta-blocker use varied from 77.7% in Ukraine to 96.7% in Bosnia Herzegovina; use of ACE inhibitors/ARBs ranged from 64.0% in Russia to 86.7% in Serbia; while use of statins ranged from 74.6% in Russia to 92.3% in Serbia (Table 3.6). It is important to note, however, that EUROASPIRE data were available for only one-fifth of all non-EU countries.

Surgical procedures for treating CVD

The European Commission's Eurostat database collates data on the use of surgical procedures for treating CVD in 30 countries, 25 of which are in the EU. Rates of surgery for treating stroke (evacuation of subdural haematoma and intracranial haemorrhage) have increased since 2006 in most countries for which data were available, with the

exception of Cyprus. A similar upward trend was observed in rates of transluminal coronary angioplasty in most countries, with the exceptions of Belgium, Denmark, Greece and Luxembourg. By contrast, most countries have experienced a fall in the rate of heart bypass anastomosis surgery (Table 3.7, Figures 3.7a-3.7c).

Comparing between countries reveals considerable differences in rates of surgical procedures, although variation in data quality, health care provision and information collection procedures might account for some of these differences – for example, in some countries, data do not include private hospitals. Interestingly, differences between countries do not reflect a clear geographical pattern. For the latest available year, within the EU, rates of evacuation of subdural haematoma and intracranial haemorrhage ranged from 0.9/100,000 in Poland to 23.2/100,000 in Finland. Rates of transluminal coronary angioplasty procedures were lowest in Romania (95.2/100,000) and highest in Germany (385.9/100,000), while for heart bypass anastomosis surgery, the lowest rates were found in Spain (17.8/100,000) and the highest rates in Denmark (72.8/100,000). Of the five non-EU countries with available data, rates of evacuation of subdural haematoma and intracranial haemorrhage were lowest in TFYR Macedonia (8.8/100,000) and highest in Norway (13.7/100,000); rates of transluminal coronary angioplasty procedures were lowest in Turkey (114.0/100,000) and highest in Norway (215.1/100,000), while rates of heart bypass anastomosis surgery were lowest in TFYR Macedonia (26.2) and highest in Serbia (73.3/100,000) (Table 3.7, Figures 3.7d-3.7f).

Case fatality rates

Case fatality rates describe the proportion of individuals diagnosed with a particular condition that die of the disease within a given period of time. The OECD provides information on case fatality rates standardised by age and sex to the OECD standard population for adults aged 45 years and above in a number of European countries.

In 2013, admission-based case fatality rates for AMI showed more than three-fold variation, from 4.5% in Sweden to 15.4% in Latvia (Table 3.8). For ischaemic stroke, the lowest age-sex standardised rates were found in Finland (5.1%) and Norway (5.4%), while the highest rates were again observed in Latvia (18.4%). Overall, case fatality rates for stroke were higher than those for AMI, although rates for AMI exceeded those for stroke in eight countries: Austria, Finland, Germany, Hungary, Israel, the Netherlands, Norway and Switzerland (Table 3.8). It is difficult to make meaningful aggregate comparisons between EU and non-EU member countries, given that data are available for only four non-EU countries.

1 Note that the most recent data available for Cyprus come from 2008, which is older than that for other countries.

2 Defined daily dose (DDD) is the assumed average maintenance dose per day for a drug used for its main indication in adults. DDDs do not necessarily reflect the actual average dose used in a particular country.

3 OECD (2015). http://www.oecd-ilibrary.org/sites/health_glance-2015-en/10/04/index.html?itemId=/content/chapter/health_glance-2015-68-en&mimeType=text/html.

Table 3.1 Hospital inpatient admission rates and average length of stay for cardiovascular diseases, latest available year, Europe

Males

	Latest available year	All cardiovascular diseases		Acute myocardial infarction		Heart failure		Cerebrovascular diseases	
		Inpatients per 1,000 population	Average length of stay, days	Inpatients per 1,000 population	Average length of stay, days	Inpatients per 1,000 population	Average length of stay, days	Inpatients per 1,000 population	Average length of stay, days
Austria*	2012	40.0	9.8	2.5	7.6	2.9	9.9	5.7	17.8
Belgium*	2009	23.8	7.1	2.3	6.5	2.2	11.8	2.8	13.1
Croatia*	2013	21.8	8.6	2.5	9.0	1.1	9.8	3.9	11.7
Cyprus*	2012	6.1	6.6	0.7	5.8	0.5	6.8	0.8	8.7
Czech Republic*	2012	30.7	10.3	2.6	5.7	3.9	10.2	5.2	20.5
Denmark*	2009	21.7	5.5	2.9	4.3	1.8	6.7	3.0	9.9
Finland*	2012	28.2	10.9	2.9	6.4	3.3	9.1	5.5	26.0
France*	2012	23.9	6.6	1.6	5.8	3.3	9.4	2.5	10.0
Germany*	2012	40.3	9.7	3.8	10.2	4.6	11.0	5.7	16.5
Hungary*	2012	35.5	11.0	2.4	7.3	3.7	11.9	8.7	12.9
Iceland	2009	17.4	7.2	2.1	6.6	1.7	8.2	2.1	13.7
Ireland*	2012	14.0	7.8	1.9	6.4	1.4	11.1	1.7	16.5
Israel	2010	15.8	5.5	1.8	5.7	1.7	7.0	1.9	10.6
Italy*	2012	24.0	8.6	2.8	7.4	3.6	9.9	4.2	13.4
Latvia*	2012	31.2	6.6	2.4	6.4	0.2	8.2	6.2	9.3
Lithuania*	2012	45.4	8.3	4.1	9.4	4.6	8.7	7.3	12.9
Luxembourg*	2012	20.3	7.9	1.2	7.6	2.2	10.0	2.0	16.1
Malta*	2012	17.6	9.2	3.4	7.7	3.3	10.3	2.1	17.1
Netherlands*	2012	19.5	5.8	2.4	5.5	1.8	8.7	2.2	8.4
Norway	2010	28.5	4.5	5.7	3.7	2.1	5.9	3.3	8.9
Poland*	2012	28.1	6.8	2.3	6.0	4.4	8.6	3.2	11.8
Romania*	2012	29.0	7.5	1.1	6.6	5.2	7.0	5.1	8.5
Serbia	2012	22.0		3.0		1.0		4.3	
Slovakia*	2011	27.4	6.8	2.3	4.3	2.3	8.1	4.6	10.0
Slovenia*	2012	23.0	7.9	2.3	6.8	2.6	10.5	2.5	15.4
Spain*	2011	14.5	7.7	1.6	7.5	2.2	8.8	2.4	10.5
Sweden*	2010	26.5	5.8	4.1	4.4	3.8	6.3	4.5	10.6
Switzerland	2012	21.5	8.6	3.2	6.9	2.0	10.7	3.1	16.1
TFYR Macedonia	2007	16.3	8.7	1.8	6.9	0.3	7.1	2.7	13.4
Turkey	2011	17.8	4.2	0.9	4.3	1.2	5.7	1.6	7.7
United Kingdom*	2011	14.7	8.7	1.8	6.9	1.3	11.8	2.3	17.8

Source: European Hospital Morbidity Database (WHO) http://data.euro.who.int/hmdb/index.php.

Notes: Inpatient admission rates describe the number of inpatients admitted to hospital per 1,000 population.

Data are crude rates.

*Asterisk denotes EU member states.

Average length of stay only provided for those countries in which it is reported as greater than one whole day.

Table 3.1 Hospital inpatient admission rates and average length of stay for cardiovascular diseases, latest available year, Europe

Females

	Latest available year	All cardiovascular diseases: Inpatients per 1,000 population	All cardiovascular diseases: Average length of stay, days	Acute myocardial infarction: Inpatients per 1,000 population	Acute myocardial infarction: Average length of stay, days	Heart failure: Inpatients per 1,000 population	Heart failure: Average length of stay, days	Cerebrovascular diseases: Inpatients per 1,000 population	Cerebrovascular diseases: Average length of stay, days
Austria*	2012	33.6	9.9	1.3	8.6	3.0	13.5	5.1	17.7
Belgium*	2009	16.8	9.0	1.0	8.5	2.1	13.7	2.5	15.2
Croatia*	2013	17.1	9.5	1.4	9.5	1.2	10.9	3.9	12.3
Cyprus*	2012	2.9	7.0	0.2	9.3	0.2	7.3	0.6	8.8
Czech Republic*	2012	26.6	13.9	1.5	7.2	3.5	11.9	5.2	25.9
Denmark*	2009	15.2	5.8	1.4	5.0	0.9	7.3	2.6	10.2
Finland*	2012	25.7	15.9	2.0	9.1	4.1	13.5	5.0	34.4
France*	2012	15.9	7.5	0.7	6.8	3.1	9.9	2.1	11.0
Germany*	2012	33.4	9.3	2.0	10.5	4.8	10.9	5.1	16.0
Hungary*	2012	35.6	13.1	1.6	8.7	4.0	15.2	10.5	13.1
Iceland	2009	11.3	8.4	1.2	7.3	1.1	10.4	1.4	14.1
Ireland*	2012	9.5	9.1	0.9	7.9	1.1	12.6	1.5	19.5
Israel	2010	10.4	6.1	0.7	6.8	1.4	6.5	1.6	11.3
Italy*	2012	16.9	9.9	1.4	8.5	3.4	10.3	4.0	14.2
Latvia*	2012	31.7	6.8	1.5	7.1	0.3	9.7	7.6	9.3
Lithuania*	2012	50.1	8.1	2.3	9.8	5.3	8.6	11.2	11.2
Luxembourg*	2012	15.5	9.0	0.5	6.3	2.4	11.5	1.6	16.4
Malta*	2012	13.5	12.8	1.3	11.4	3.8	12.7	1.8	26.2
Netherlands*	2012	13.3	6.2	1.1	5.9	1.7	8.7	2.0	9.0
Norway	2010	19.1	4.9	2.9	4.6	1.7	6.2	2.9	9.2
Poland*	2012	24.6	6.8	1.3	6.5	4.1	8.4	3.2	11.5
Romania*	2012	28.0	7.5	0.6	7.3	5.8	7.4	5.6	8.5
Serbia	2012	17.2		1.6		0.8		3.9	
Slovakia*	2011	26.1	7.8	1.3	5.0	2.2	8.4	4.5	10.7
Slovenia*	2012	19.2	8.1	1.2	8.1	2.8	10.1	2.5	15.5
Spain*	2011	11.2	7.9	0.7	8.0	2.5	8.7	2.0	11.0
Sweden*	2010	20.8	6.4	2.5	5.2	3.1	7.0	4.2	10.9
Switzerland	2012	15.8	9.1	1.3	8.4	1.8	11.6	2.6	16.9
TFYR Macedonia	2007	12.5	11.6	0.7	7.5	0.3	15.0	2.5	18.0
Turkey	2011	14.9	4.1	0.4	3.8	1.2	5.4	1.5	7.7
United Kingdom*	2011	11.1	10.7	1.1	9.0	1.2	13.0	2.3	20.5

Source: European Hospital Morbidity Database (WHO) http://data.euro.who.int/hmdb/index.php.

Notes: Inpatient admission rates describe the number of inpatients admitted to hospital per 1,000 population.

Data are crude rates.

*Asterisk denotes EU member states.

Average length of stay only provided for those countries in which it is reported as greater than one whole day

Table 3.2 Rates of hospital discharges from CVD, 1990 to 2015, Europe

Discharges per 100,000 population

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania		417	540	520	614	665	646	648	703	763	761	857	844	858	929			
Andorra			586	610	799	799	729	701	677	683	753	726	707	747	749	824		
Armenia	1,225	762	639	599	676	786	833	931	972	1,035	1,142	1,224	1,262	1,393	1,666	1,737	2,028	
Austria*	3,024	3,361	3,674	3,615	3,714	3,677	3,781	3,749	3,776	3,813	3,784	3,697						
Azerbaijan	1,481	595	472	484	515	541	570	572	616	641	672	653	584	683	778	708	778	866
Belarus		3,444	4,577	4,749	5,049	5,226	5,309	5,165	5,374	5,599	5,750	5,784	6,126	6,184	6,401	6,276	6,305	
Belgium*		2,235	2,356	2,347	2,324	2,275	2,299	2,233	2,204	2,168	2,173							
Bosnia and Herzegovina																		
Bulgaria*	1,779	1,774	1,869	2,013	2,292	2,600	2,911	2,835	3,024	3,180	3,331	3,712	3,617					
Croatia*	1,265	1,232	1,760	1,692	1,730	1,781	1,798	1,850	1,947	1,926	1,904	1,892	1,847					
Cyprus*	809	549	818	927	837	818	845	830	773	920	672							
Czech Republic*		3,051	3,261	3,430	3,436	3,522	3,618	3,514	3,368	3,254	3,151	3,168	3,086					
Denmark*	2,292	2,201	2,543	2,546	2,574	2,514	2,558	2,559	2,538	2,471	2,423	2,501	2,634					
Estonia*	2,338	2,664	3,176	3,188	3,126	3,267	3,354	3,222	3,351	3,374	3,504	3,342						
Finland*	3,293	3,858	3,785	3,654	3,646	3,662	3,670	3,121	3,033	2,913								
France*			2,307	2,303	2,295	2,260	2,275	2,283	2,302	2,268	2,267	2,282						
Georgia	1,635	507	454	427	520	531	642	649	762	837	975	971	982	998	1,116	1,341	1,647	
Germany*		2,955	3,267	3,305	3,307	3,527	3,417	3,310	3,323	3,392	3,463	3,500						
Greece*	1,593	2,010	2,309	2,432	2,531	2,592	2,672	2,708	2,797	2,786								
Hungary*		3,171	4,239	4,039	4,248	4,448	4,453	4,495	4,376	3,861	3,858	3,785	3,678					
Iceland	1,935		1,863	1,919	1,878	1,819	1,710	1,830	1,545	1,480	1,564	1,440						
Ireland*		1,440	1,420	1,492	1,475	1,447	1,421	1,268	1,241	1,202	1,181	1,163	1,154					
Israel	1,754	2,047	1,911	1,925	1,834	1,749	1,659	1,638	1,600	1,502	1,482							
Italy*	2,128	2,349	2,582	2,572	2,557	2,444	2,429	2,389	2,330	2,248	2,179	2,120						
Kazakhstan	1,597	1,207	1,314	1,389	1,519	1,638	1,785	1,805	1,856	1,817	1,899	1,970	1,858	2,031	2,074	2,044	2,049	2,002
Kyrgyzstan	1,257	903	1,041	1,036	975	1,000	977	1,130	1,257	1,385	1,326	1,364	1,403	1,473	1,498	1,451	1,447	1,449
Latvia*	2,445	2,598	3,151	3,161	3,214	3,343	3,473	3,736	3,936	4,034	4,052	3,359	3,078					
Lithuania*	2,687	3,201	4,102	3,902	3,928	4,089	4,152	4,268	4,201	4,240	4,438	4,522	4,765					
Luxembourg*			2,610	2,364	2,439	2,424	2,382	2,236	2,249	2,172								
Malta*			666	665	592	741	835	726	753	660	948	1,185	1,346					
Monaco															4,004			3,754
Montenegro	1,059	1,249	1,400	1,539	1,583	1,759	1,733	1,636	1,710	1,670	1,654	1,677	1,881	1,774	1,736	1,705		
Netherlands*	1,414	1,583	1,403	1,369	1,411	1,451	1,544	1,558	1,572	1,580	1,626	1,694						
Norway		2,194	2,349	2,366	2,388	2,500	2,480	2,467	2,495	2,449	2,452	2,368	2,368					
Poland*	1,814	2,052				2,880	2,926	2,556	2,645	2,550	3,085	2,885						
Portugal*		945	1,118	1,156	1,207	1,223	1,222	1,211	1,201	1,340	1,397	1,353	1,307					
Republic of Moldova	1,727	1,580	1,543	1,535	1,821	1,983	2,032	2,023	2,100	2,153	2,300	2,327	2,418	2,503	2,532	2,516	2,599	
Romania*	1,737	2,024	2,422	2,741	2,965	2,798	2,882	2,589	3,159	2,826	3,057	3,178	2,982					
Russian Federation	2,226	2,255	2,763	3,020	3,020	3,108	3,267	3,414	3,479	3,547	3,601	3,620	3,634	3,634	3,680	3,653		
San Marino														1,642	1,569	1,521		1,291
Serbia			1,455	1,587	1,554	1,691	1,797	1,812	1,823	1,932	2,182	2,160	2,228	2,188	2,198			
Slovakia*		2,534	2,443	2,569	2,539	2,502	2,565	2,680	2,688	2,463	2,684	2,697	2,689					
Slovenia*	1,424	1,560	1,685	1,738	1,718	1,745	1,792	1,851	1,960	1,940	1,918	1,976						
Spain*	775	1,059	1,333	1,342	1,359	1,368	1,359	1,339	1,323	1,323	1,315	1,295						
Sweden*	2,796	2,996	2,630	2,556	2,483	2,444	2,409	2,398	2,388	2,413	2,390	2,334						
Switzerland					1,699	1,649	1,678	1,680	1,719	1,735	1,744	1,729						
Tajikistan	939	653	533	561	622	678	735	771	879	918	925	933	979	1,008	1,084	1,065	1,065	944
TFYR Macedonia		1,184	1,267	1,398	1,424	1,381	1,475	1,554	1,430	1,443	1,587	1,553	1,722					
Turkey	541	926	954	1,009	1,104	1,211	1,262	1,146	1,048	1,183	1,180	1,442	1,502					
Turkmenistan		821	1,405	1,247	1,359	1,462	1,385	1,225	1,249	1,368	1,426	1,522	1,698	1,767	1,933	1,984	2,075	2,110
Ukraine	2,792	2,568	2,612	2,791	2,964	3,105	3,280	3,462	3,586	3,688	3,781	3,744	3,854	3,861	3,848	3,913		
United Kingdom*			1,422	1,405	1,401	1,389	1,378	1,353	1,321	1,304	1,311	1,305	1,291					
Uzbekistan		1,217	959	1,059	1,178	1,234	1,269	1,394	1,444	1,552	1,558	1,586	1,633	1,604	1,615	1,688	1,664	1,792
EU	**1,977**	**2,223**	**2,282**	**2,385**	**2,374**	**2,389**	**2,414**	**2,442**	**2,472**	**2,472**	**2,394**	**2,415**	**2,374**	**2,429**	**2,416**			
Europe	**1,919**	**2,029**	**2,073**	**2,156**	**2,152**	**2,225**	**2,300**	**2,341**	**2,395**	**2,438**	**2,419**	**2,445**	**2,453**	**2,501**	**2,516**	**2,521**		

Source: WHO Europe, Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/.

Notes: Hospital discharge rates describe the number of patients who leave hospital after receiving care per 100,000 population.

Data are crude rates.

Blank cells indicate data were not available.

*Asterisk denotes EU member states.

Table 3.3 Rates of hospital discharges from IHD, 1990 to 2015, Europe

Discharges per 100,000 population

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania		121	157	146	172	191	195	194	198	216	212	273	241	273	202			
Andorra				126	142	186	156	120	149	150	179	157	140	154	165	172		
Armenia	521	318	282	258	288	324	350	382	411	434	469	505	539	596	717	710	820	
Austria*	394	594	757	923	940	946	989	983	995	992	956	881						
Azerbaijan	499	201	154	162	155	166	184	175	179	186	214	230	229	266	303	289	326	376
Belarus		1,635	2,212	2,296	2,278	2,452	2,541	2,569	2,641	2,720	2,713	2,863	3,052	3,100	3,206	3,171	3,223	
Belgium*		689	736	719	716	711	721	678	653	632	616							
Bosnia and Herzegovina																		
Bulgaria*	545	553	542	542	489	579	663	721	854	932	1,017	1,273	1,196					
Croatia*	334	309	495	457	458	490	491	503	486	470	469	490	488					
Cyprus*	339	222	332	360	293	247	271	284	198	280	198							
Czech Republic*		1,223	1,041	1,107	1,058	1,097	1,062	983	905	851	776	771	715					
Denmark*	700	684	790	803	844	817	831	823	766	732	684	695	720					
Estonia*	936	990	1,095	1,075	1,019	1,025	1,037	992	1,087	1,003	1,002	904						
Finland*	1,153	1,369	1,160	1,140	1,128	1,138	1,091	923	865	791								
France*			503	512	517	521	521	513	519	504	496	498						
Georgia	677	181	194	193	236	263	311	333	404	399	483	463	480	464	475	559	723	
Germany*		947	1,060	1,011	1,005	1,083	1,042	977	959	938	916	890						
Greece*	521	722	777	829	867	872	921	936	970	951								
Hungary*		961	1,113	943	879	895	904	876	857	791	809	775	716					
Iceland	790		724	763	769	738	639	704	576	571	574	525						
Ireland*		477	457	485	493	478	455	422	418	392	375	354	352					
Israel	834	938	823	815	765	704	641	619	577	516	501							
Italy*	493	520	600	593	607	599	606	589	570	550	529	503						
Kazakhstan	522	436	419	519	521	552	583	606	533	547	684	721	681	750	772	732	711	708
Kyrgyzstan	365	156	322	324	307	328	357	385	364	394	497	681	584	642	657	689	726	736
Latvia*	1,163	1,166	1,266	1,288	1,284	1,364	1,368	1,419	1,502	1,503	1,532	1,252	1,066					
Lithuania*	1,327	1,526	1,415	1,378	1,362	1,395	1,400	1,414	1,361	1,362	1,362	1,385	1,469					
Luxembourg*			818	868	907	927	856	738	689	606								
Malta*			184	204	185	260	304	271	239	189	290	351	350					
Monaco															385			217
Montenegro		342	421	487	487	559	595	541	555	521	509	565	705	643	611	555		
Netherlands*	543	612	523	510	521	522	553	539	529	527	526	528						
Norway		890	876	944	938	981	971	952	981	972	952	899	880					
Poland*	541	598				958	886	774	778	742	884	811						
Portugal*		225	275	272	284	283	286	277	255	330	341	317	299					
Republic of Moldova	665	562	492	437	519	571	578	547	588	592	656	659	693	707	686	710	733	
Romania*		637	752	809	848	723	649	473	492	364	367	374	330					
Russian Federation	888	936	1,103	1,168	1,178	1,201	1,258	1,313	1,330	1,369	1,352	1,381	1,368	1,366	1,368	1,331		
San Marino														284	272	272		180
Serbia			373	423	400	460	486	490	507	570	650	644	677	673	670			
Slovakia*		1,089	955	954	917	874	862	884	836	737	810	780	749					
Slovenia*	349	347	366	381	394	401	392	411	433	417	397	411						
Spain*	202	278	363	361	365	362	356	338	328	317	302	289						
Sweden*	868	959	890	895	859	831	794	762	743	740	688	621						
Switzerland					518	499	501	502	498	484	489	469						
Tajikistan		174	122	136	169	176	195	217	249	264	265	266	288	288	309	292	285	256
TFYR Macedonia		321	480	573	623	658	616	665	605	551								
Turkey	100	149	216	226	250	291	303	365	454	534	524	651	666					
Turkmenistan		269	416	396	407	436	410	358	389	433	454	506	565	620	697	733	765	822
Ukraine	728	665	1,197	1,284	1,380	1,450	1,555	1,646	1,712	1,766	1,825	1,809	1,860	1,858	1,866	1,905		
United Kingdom*			523	521	519	508	504	488	471	458	444	421	403					
Uzbekistan		321	300	347	392	398	444	443	472	513		448	461	449	477	553	565	600
EU	**574**	**648**	**705**	**703**	**706**	**716**	**702**	**663**	**653**	**630**	**628**	**610**						
Europe	**608**	**641**	**738**	**757**	**767**	**787**	**796**	**792**	**799**	**802**	**803**	**808**	**805**					

Source: WHO Europe, Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/.

Notes: Hospital discharge rates describe the number of patients who leave hospital after receiving care per 100,000 population.

Data are crude rates.

Blank cells indicate data were not available.

*Asterisk denotes EU member states.

Table 3.4 Rates of hospital discharges from stroke, 1990 to 2015, Europe

Discharges per 100,000 population

	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania		45	80	82	80	91	91	97	113	131	141	164	160	220	155			
Andorra				107	123	113	101	117	106	107	84	94	92	82	127	123		
Armenia	194	132	130	129	147	163	161	172	162	177	187	195	205	224	264	257	285	
Austria*	195	432	679	577	587	545	580	577	571	560	550	565						
Azerbaijan	113	53	45	48	53	48	52	52	62	65	71	73	77	82	87	87	101	109
Belarus		569	896	912	949	1,037	1,083	1,063	1,092	1,143	1,154	1,163	1,218	1,226	1,258	1,236	1,222	
Belgium*		362	390	393	391	377	378	368	363	358	353							
Bosnia and Herzegovina																		
Bulgaria*	293	323	426	468	586	666	717	592	616	615	622	613	589					
Croatia*	297	281	411	394	396	392	383	409	437	426	411	410	393					
Cyprus*	143	89	140	149	137	146	150	122	128	171	120							
Czech Republic*		558	619	625	633	631	626	615	601	572	543	550	547					
Denmark*	430	394	452	435	424	411	404	384	373	364	356	358	363					
Estonia*	380	497	492	490	527	562	602	615	611	639	707	717						
Finland*	681	820	658	661	645	646	633	561	564	550								
France*			222	220	221	219	223	228	227	223	229	228						
Georgia	192	54	74	74	79	80	95	98	102	132	142	149	165	164	166	193	202	
Germany*		487	462	464	463	542	512	497	506	513	526	530						
Greece*	274	330	404	424	438	434	415	448	464	449								
Hungary*		598	832	845	969	1,082	1,208	1,276	1,217	1,051	1,049	1,022	995					
Iceland	244		237	228	206	254	206	207	180	149	190	179						
Ireland*		234	250	258	251	247	252	171	169	165	165	168	163					
Israel	203	253	259	258	247	250	249	247	246	237	235							
Italy*	394	436	489	494	504	491	485	480	470	457	446	432						
Kazakhstan	176	169	210	234	278	293	321	351	355	362	377	405	382	460	473	494	500	494
Kyrgyzstan	145	124	153	155	142	142	145	174	188	229	236	226	245	272	287	290	297	303
Latvia*	445	542	640	674	704	724	748	817	864	881	872	728	642					
Lithuania*	512	671	780	701	763	800	818	862	858	852	918	907	968					
Luxembourg*			232	184	164	163	173	167	165	168								
Malta*			79	77	65	73	61	54	72	59	69	107	158					
Monaco															338			323
Montenegro		163	169	185	194	201	197	197	183	192	203	206	258	250	250	280		
Netherlands*	175	193	184	185	193	200	212	224	229	226	229	239						
Norway		382	320	321	328	353	345	342	345	331	331	309	306					
Poland*	191	232				370	417	345	355	344	388	336						
Portugal*		287	334	342	348	339	337	329	310	307	312	306	290					
Republic of Moldova	293	270	318	290	383	418	429	475	518	540	543	608	612	663	623	607	604	
Romania*		280	328	404	442	461	516	523	669	629	580	587	575					
Russian Federation	370	458	595	653	668	684	720	760	769	787	818	818	807	832	855	871		
San Marino														256	337	336		335
Serbia			338	360	362	380	400	431	420	410	455	459	471	451	439			
Slovakia*		491	452	473	475	465	473	518	515	458	483	462	461					
Slovenia*	249	255	230	230	222	225	228	228	235	226	218	232						
Spain*	112	176	213	221	224	228	227	223	225	223	223	221						
Sweden*	613	617	506	474	465	455	452	451	445	435	440	429						
Switzerland					212	210	204	207	218	211	216	222						
Tajikistan	109	31	38	44	52	42	47	56	65	66	64	69	76	84	91	96	114	89
TFYR Macedonia		199	218	240	224	237	223	269	247	261								
Turkey	72	110	155	166	174	193	212	152	96	100	100	136	149					
Turkmenistan		82	132	134	147	162	169	145	153	183	192	209	246	242	244	258	300	295
Ukraine	486	467	540	585	629	671	723	770	798	830	859	862	901	916	917	949		
United Kingdom*			204	206	214	213	212	212	210	207	213	223	225					
Uzbekistan		112	79	94	99	102	105	116	117	116	127	120	124	148	147	143	154	185
EU	**309**	**342**	**368**	**373**	**384**	**400**	**404**	**394**	**400**	**390**	**392**	**387**						
Europe	**301**	**332**	**379**	**396**	**408**	**425**	**438**	**437**	**439**	**438**	**446**	**446**	**447**					

Source: WHO Europe, Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/.

Notes: Hospital discharge rates describe the number of patients who leave hospital after receiving care per 100,000 population.

Data are crude rates.

Blank cells indicate data were not available.

*Asterisk denotes EU member states.

Figure 3.2 Rates of hospital discharges for CVD, 1990 to 2010, EU and Europe

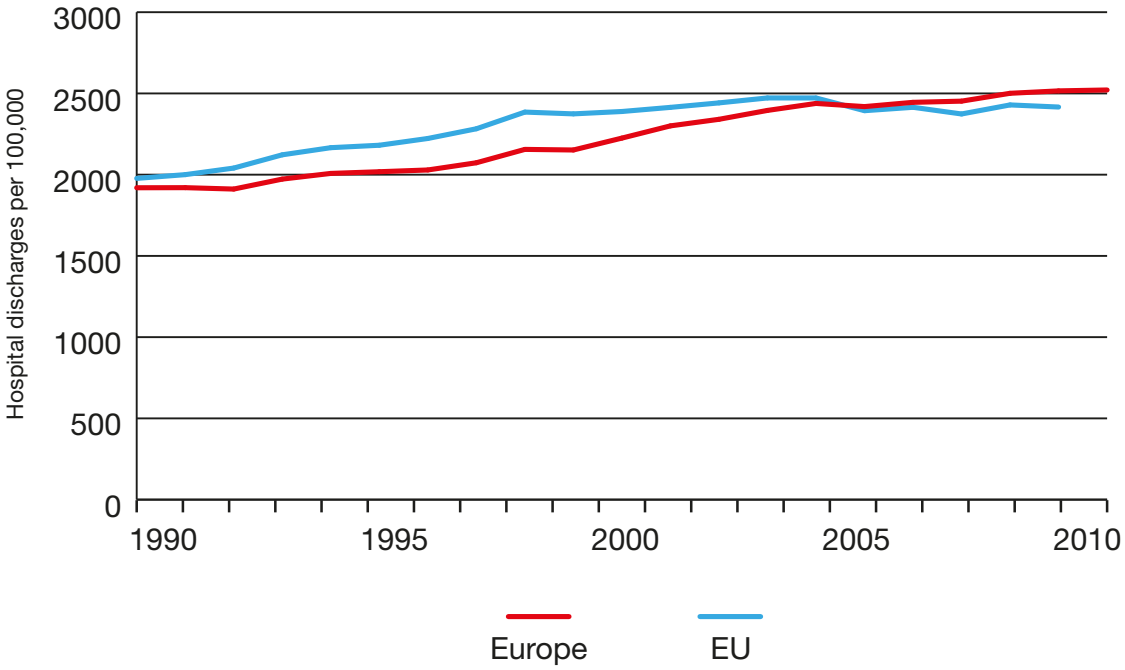


Figure 3.3 Rates of hospital discharges for IHD, 1990 to 2010, EU and Europe

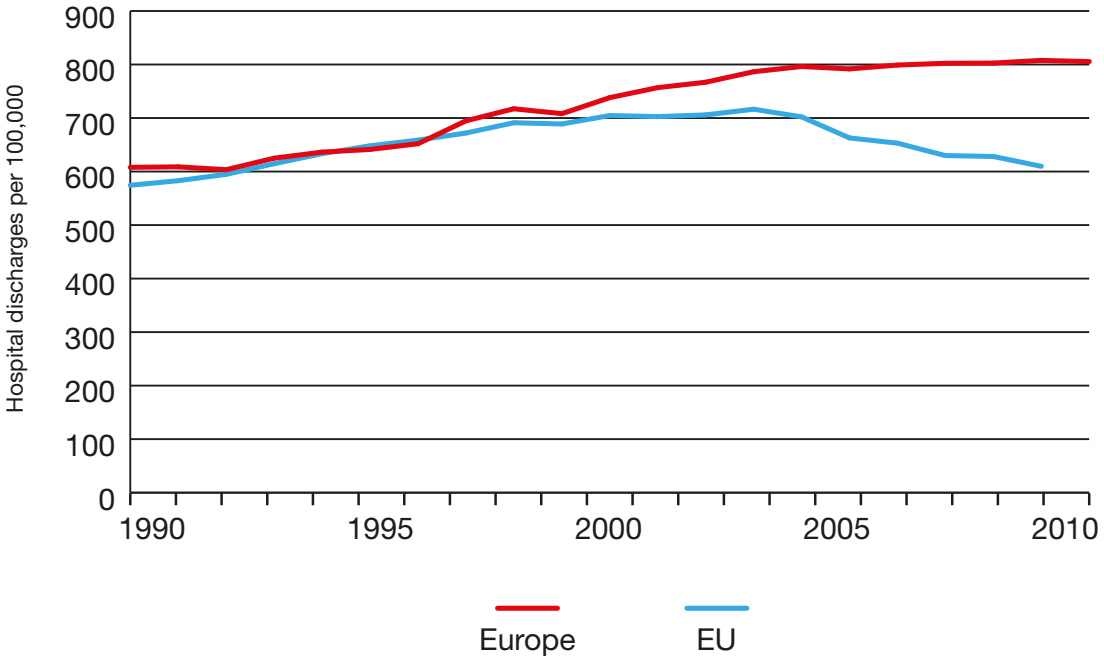


Figure 3.4 Rates of hospital discharges for stroke, 1990 to 2010, EU and Europe

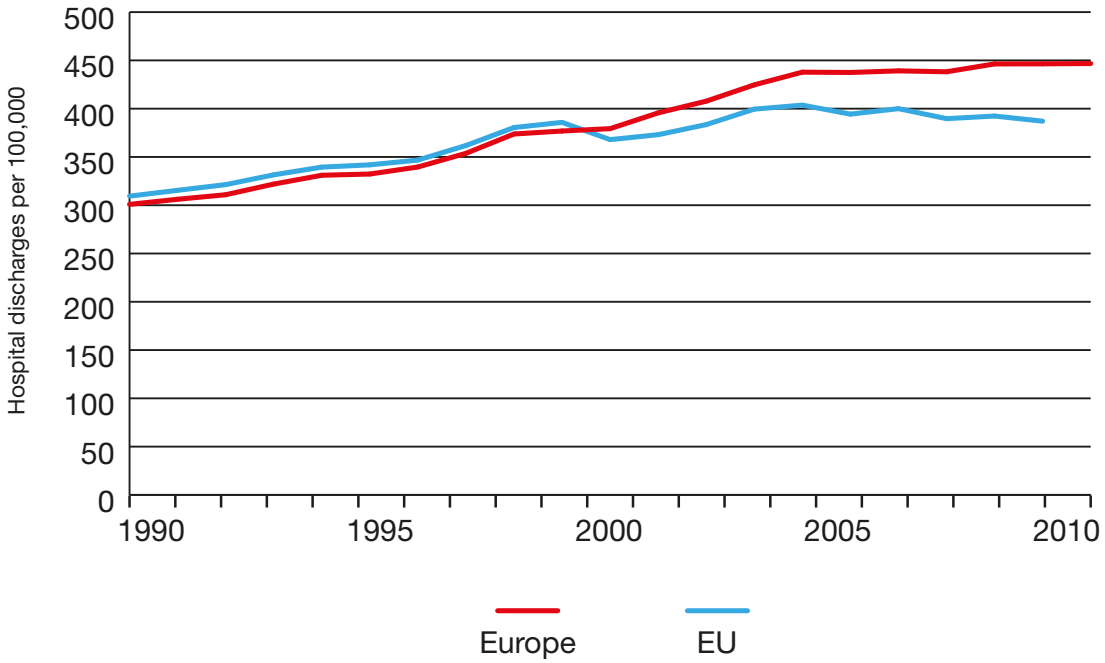


Table 3.5 Antihypertensive and cholesterol-lowering drug prescriptions, 2000 and 2013, Europe

	2000	2013	2000	2013
	Antihypertensive drugs (DDD) per 1,000 people per day		Cholesterol-lowering drugs (DDD) per 1,000 people per day	
Austria*		184		69
Belgium*	187	328	41	130
Czech Republic*	187	442	23	103
Denmark*	210	398	9	126
Estonia*	90	323	2	44
Finland*	221	427	18	102
France*	171	266	61	92
Germany*	249	575	21	73
Greece*	206	194		103
Hungary*	259	543	31	105
Iceland	179	274	34	91
Israel		217		109
Italy*	234	399	27	83
Luxembourg*	56	223		117
Netherlands*	188	303	57	112
Norway	190	279	32	120
Portugal*	161	250	19	102
Slovakia*	162	410	14	153
Slovenia*		414		110
Spain*	163	269	29	96
Sweden*	190	368	18	86
Turkey		124		26
United Kingdom*		380		135

Source: OECD Health Data 2015 http://www.oecd-ilibrary.org/

Notes: These data generally refer to prescriptions for outpatients only, except for in the Czech Republic, Estonia, Italy and Sweden where data also include hospital inpatient prescriptions. The data for Spain refer to outpatient prescriptions for prescribed drugs covered by the National Health System (public insurance). Data for Luxembourg are underestimated due to incomplete consideration of products with multiple active ingredients.

Defined daily dose (DDD) is the assumed average maintenance dose per day for a drug used for its main indication in adults. DDDs are assigned to each active ingredient(s) in a given therapeutic class by international expert consensus. For instance, the DDD for oral aspirin equals 3 grams, which is the assumed maintenance daily dose to treat pain in adults. DDDs do not necessarily reflect the average daily dose actually used in a given country.

The volume of hypertension drugs prescriptions presented refers to the sum of five ATC2 categories which can all be prescribed against hypertension (antihypertensives, diuretics, beta-blocking agents, calcium channel blockers and agents acting on the renin-angiotensin system).

Rates are crude rates.

Blank cells indicate data not available.

*Asterisk denotes EU member states.

Figure 3.5a Antihypertensive drug prescriptions, 2000 and 2013, Europe

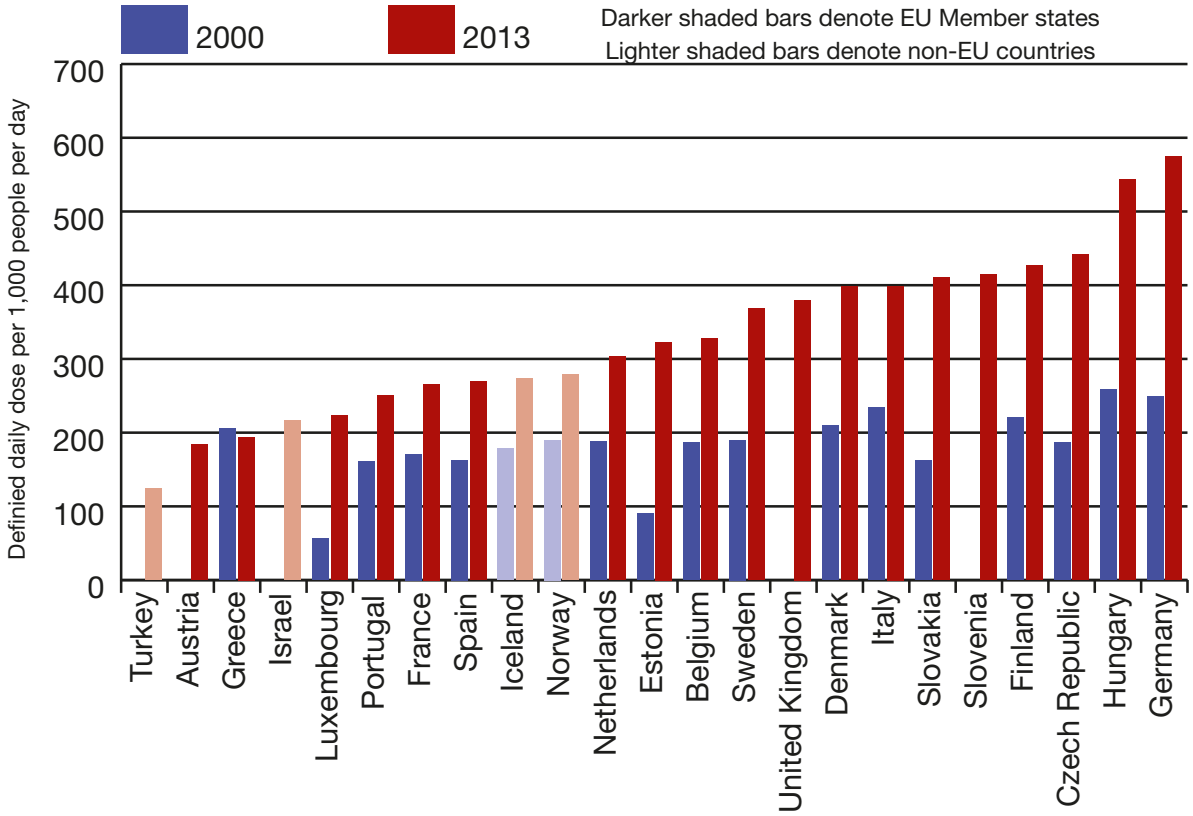


Figure 3.5b Lipid-modifying drug prescriptions, 2000 and 2013, Europe

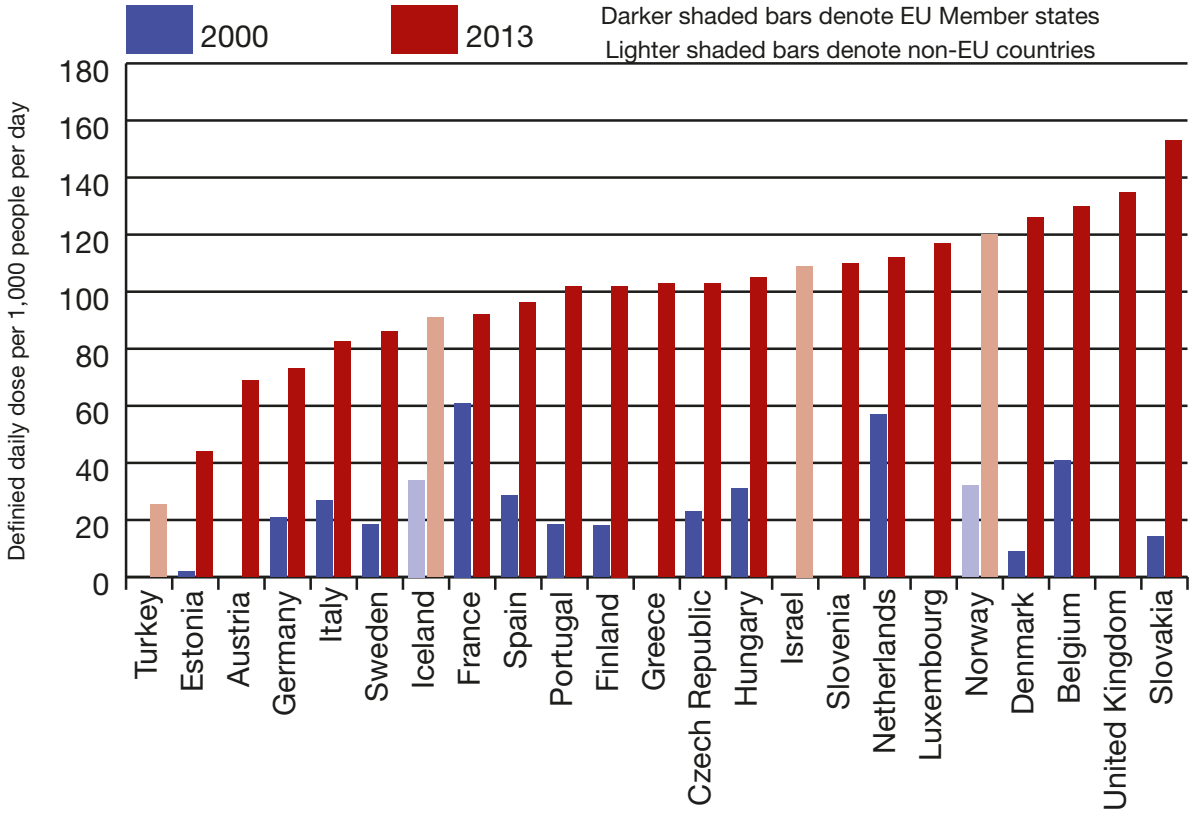


Table 3.6 Reported medication, hospital patients with established IHD, 2013/14, EUROASPIRE IV Survey populations, Europe

IHD hospital patients receiving medication

	Anti-platelets (%)	Beta-blockers (%)	ACE inhibitors/ARBs (%)	Statins (%)
Belgium*	95.6	79.9	49.0	94.2
Bosnia Herzegovina	97.8	96.7	85.4	87.6
Bulgaria*	90.8	83.3	78.3	75.0
Croatia*	96.5	74.9	79.8	80.7
Cyprus*	98.9	80.0	81.1	95.6
Czech Republic*	91.8	85.5	82.2	93.0
Finland*	91.3	79.5	60.1	81.9
France*	97.9	82.0	82.0	94.2
Germany*	89.0	83.4	81.7	83.2
Greece*	96.1	78.4	62.7	96.1
Ireland*	98.5	78.6	73.1	92.5
Latvia*	96.9	87.9	81.0	93.1
Lithuania*	85.1	84.3	79.3	73.5
Netherlands*	96.4	74.5	66.7	86.5
Poland*	91.7	82.7	77.9	81.9
Romania*	92.1	87.5	71.0	87.3
Russian Federation	93.4	80.1	64.0	74.6
Serbia	98.2	94.1	86.7	92.3
Slovenia*	94.3	86.1	79.1	88.9
Spain*	97.1	89.5	72.1	91.9
Sweden*	97.5	88.9	81.6	90.0
Turkey	95.8	84.0	75.6	78.6
Ukraine	93.4	77.7	74.0	79.9
United Kingdom*	88.7	67.8	75.7	84.1

Source: Kotseva et al (2015) EUROASPIRE IV: A European Society of Cardiology survey on the lifestyle, risk factors and therapeutic management of coronary patients from 24 European countries. European Journal of Preventive Cardiology.

Notes: ACE = angiotensin converting enzyme, ARB = angiotensin receptor blocker.

Comparable data available only for those countries shown.

These data refer to the use of medication by hospital patients specifically rather than the population as a whole.

*Asterisk denotes EU member states.

Table 3.7 Rates of surgical procedures for treating CVD, 2006 to 2014, Europe

	Total patients per 100,000 inhabitants																										
	Evacuation of subdural haematoma and intracranial haemorrhage									Transluminal coronary angioplasty									Bypass anastomosis for heart revascularisation								
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2006	2007	2008	2009	2010	2011	2012	2013	2014	2006	2007	2008	2009	2010	2011	2012	2013	2014
Austria*										228.5	231.1	231.5	229.9	239.9	240.7	238.5	258.8	276.8	50.8	51.7	51.0	47.5	47.3	45.3	43.5	45.2	46.9
Belgium*								15.3		245.6	233.3	237.5	231.8	230.7	225.3	223.6	225.4		80.6	76.1	72.8	72.5	70.4	67.9	64.4	63.8	
Croatia*							15.3	17.0	18.1							183.3	227.8	265.4							53.4	45.9	53.9
Cyprus*	17.0	21.4	18.3	10.8	13.0			0.9	1.4	10.0	72.5	41.4	3.7	11.8			74.8	129.6	52.2	12.3	5.2	5.7	5.9			36.6	45.0
Czech Republic*										211.6	209.8	208.7	211.0	208.1	203.1	212.4	201.4	214.0	69.7	60.9	56.6	56.6	54.0	49.6	50.1	50.1	48.8
Denmark*	13.9	14.0	14.1	14.4	15.0	16.1	15.4	16.1	17.6	212.6	200.8	189.9	206.4	185.8	179.4	176.4	173.3	170.4	87.7	89.5	78.5	79.1	74.2	73.9	68.0	71.9	72.8
Estonia*										146.5	163.5	179.5	183.0	182.1	210.1	228.0	241.4	217.4	55.4	57.2	56.8	53.3	47.2	44.3	32.7	31.7	30.4
Finland*	22.5	23.0	24.4	22.2	24.1	24.2	26.1	25.4	23.2	158.5	145.9	149.0	149.0	150.0	157.3	167.6	166.7	190.8	70.1	62.1	60.6	54.8	59.4	49.1	47.5	43.3	40.8
France*	7.7	8.2	8.4	8.9	9.1	9.1	9.3	9.3	9.1	186.3	185.6	189.4	194.4	198.7	198.0	208.6	213.6	225.8	30.1	30.8	31.3	30.2	28.4	28.5	29.6	30.0	29.8
Germany*	14.4	14.8	15.7	16.8	17.3	17.6	18.3	19.3	19.5	293.6	302.2	312.7	319.4	338.8	348.8	354.9	364.4	385.9	75.3	76.4	73.2	70.9	68.5	67.3	67.2	67.0	66.6
Greece*										185.9	183.1	168.5	177.0														
Hungary*	11.2	10.5	11.1	10.8	11.1	10.2	10.8	12.2	11.8	140.8	142.5	150.9	156.8	150.7	145.6	148.8	188.0	201.2	36.7	30.5	25.0	21.6	21.9	24.1	24.7	32.1	28.9
Ireland*	5.9	6.4	6.3	6.6	6.6	5.9	5.7	5.5	6.2	106.5	99.3	101.4	100.5	109.7	104.0	106.4	111.6	122.4	24.6	22.6	23.8	23.5	21.4	21.1	21.6	20.6	23.4
Italy*										190.0	192.9	195.3	187.1	195.2	193.2	202.8	204.1	203.1	48.6	47.5	45.5	42.4	40.8	38.5	37.8	36.3	35.4
Lithuania*					9.3	10.8	11.9	12.9	11.4					120.6	175.7	213.5	230.6	249.5					53.0	64.4	62.1	59.8	63.9
Luxembourg*							11.9	9.6	7.4	185.8	144.0	170.5	177.0	177.3	192.5	172.9	153.3	154.4	59.7	61.0	64.1	51.4	47.3	44.6	43.7	40.3	42.6
Malta*							4.8	6.4	11.5							202.4	176.2	198.2	90.8	73.6	71.6	69.1	56.9	54.0	45.3	44.6	47.7
Netherlands*	2.5	2.7	2.6	2.7	2.8					208.1	211.6	218.4	231.6	241.1					58.2	58.2	58.2	57.6	54.4				
Norway								14.6	13.7								212.1	215.2								44.0	38.2
Poland*								0.8	0.9	74.9	70.8	87.3	65.1	87.1	110.8	138.8	180.9	230.7	52.5	52.4	40.0	38.0	43.2	52.3	54.6	58.8	53.3
Portugal*										89.0	100.7	108.3	104.9	108.8	113.4	109.5	118.6	117.0	43.7	43.0	42.0	40.1	37.3	38.7	38.0	38.1	37.2
Romania*				5.6	5.9	5.6	6.0	4.3	4.1				47.8	53.3	69.1	82.7	82.5	95.2				19.5	18.9	18.9	22.8	22.5	23.5
Serbia									11.8									193.4									73.3
Slovenia*	2.4	2.4	2.5	1.7	1.7	2.3	2.5	5.5	6.4	110.4	148.7	144.2	162.0	159.8	167.8	185.9	161.5	186.9	36.0	38.3	40.7	38.3	35.9	36.2	40.6	34.5	39.2
Spain*	7.3	7.7	7.8	8.3	8.2	8.5	8.2	7.9	8.3	97.4	105.1	102.2	112.1	114.7	117.3	118.0	126.0	126.0	17.4	17.9	18.6	17.6	17.7	18.3	17.7	17.8	17.8
Sweden*	15.0	14.8	15.3	16.5	15.6	16.0	16.4	16.7	16.4	176.6	173.8	182.4	178.8	183.7	189.0	196.8	192.6	204.0	51.1	53.1	46.7	42.1	40.1	37.5	34.6	32.2	30.5
Switzerland	10.7	10.6	14.0							178.5	171.0	195.5							51.8	50.2	49.4						
TFYR Macedonia					7.3	9.1	8.2	9.3	8.8					130.4	143.1	154.7	147.1	184.7					21.0	41.2	33.3	28.3	26.2
Turkey														76.9	91.2	114.0							64.0	63.9	67.0		
United Kingdom*	5.6	5.7	5.9	6.3	6.4	6.3	6.2	6.3	6.1	107.2	106.3	113.1	116.6	120.8	122.5	123.7	124.5	126.5	37.8	38.4	36.5	33.2	31.2	30.4	28.8	28.7	27.9

Source: European Commission, Eurostat database http://ec.europa.eu/eurostat/data/database.

Notes: Data are crude rates. Comparable data available only for those countries shown. Blank cells indicate data were not available.

*Asterisk denotes EU member states.

Figure 3.7a Rates of evacuation of subdural haematoma and intracranial haemorrhage, latest available year, Europe

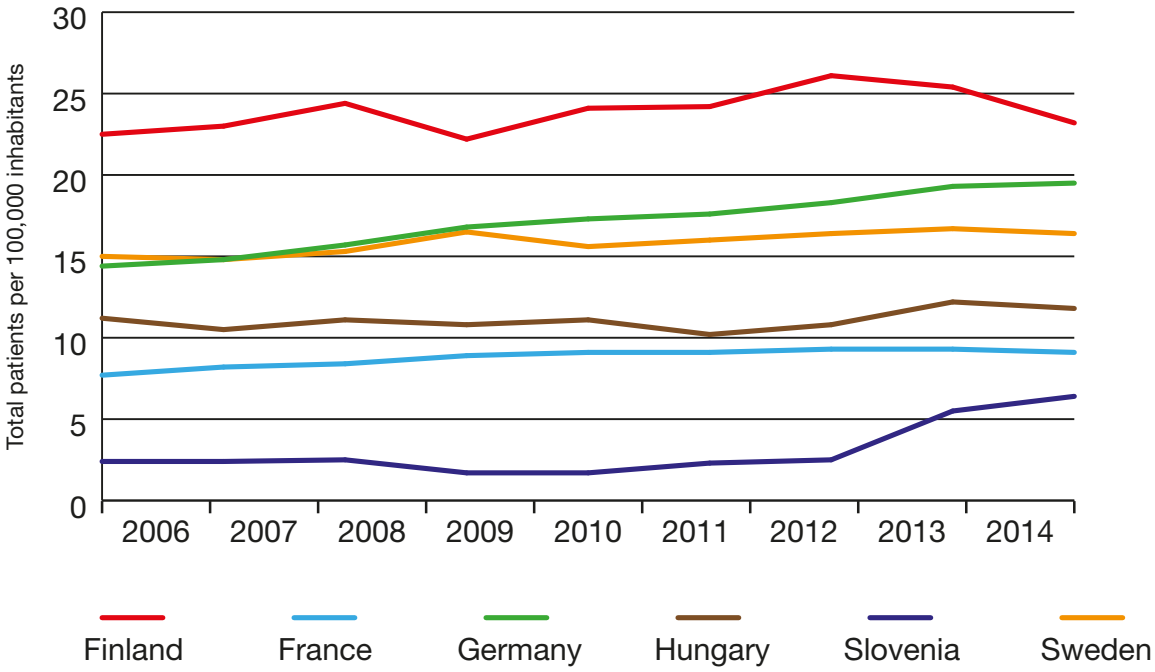


Figure 3.7b Rates of transluminal coronary angioplasty, latest available year, Europe

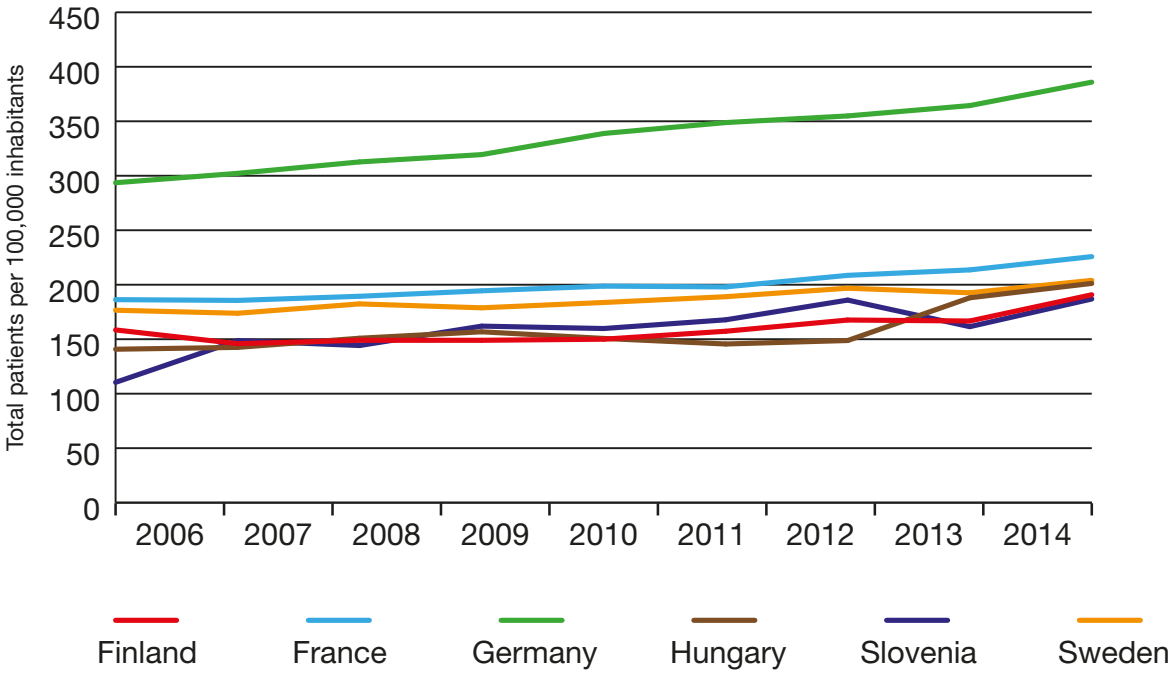


Figure 3.7c Rates of bypass anastomosis for heart revascularisation, latest available year, Europe

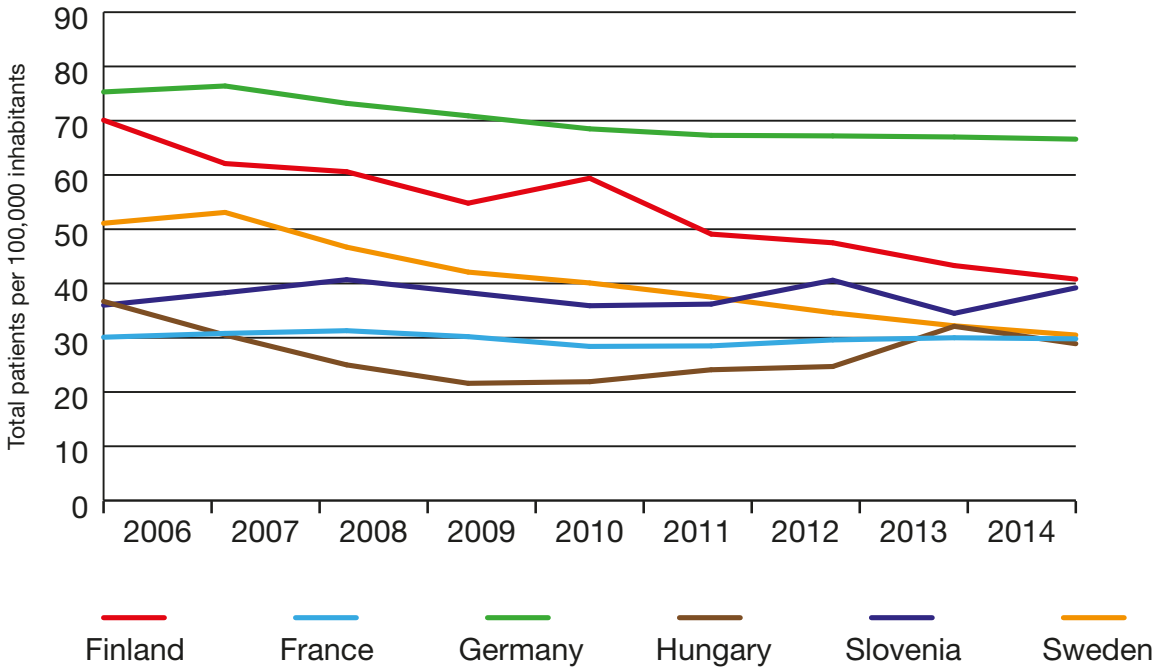


Figure 3.7d Rates of evacuation of subdural haematoma and intracranial haemorrhage, latest available year, Europe

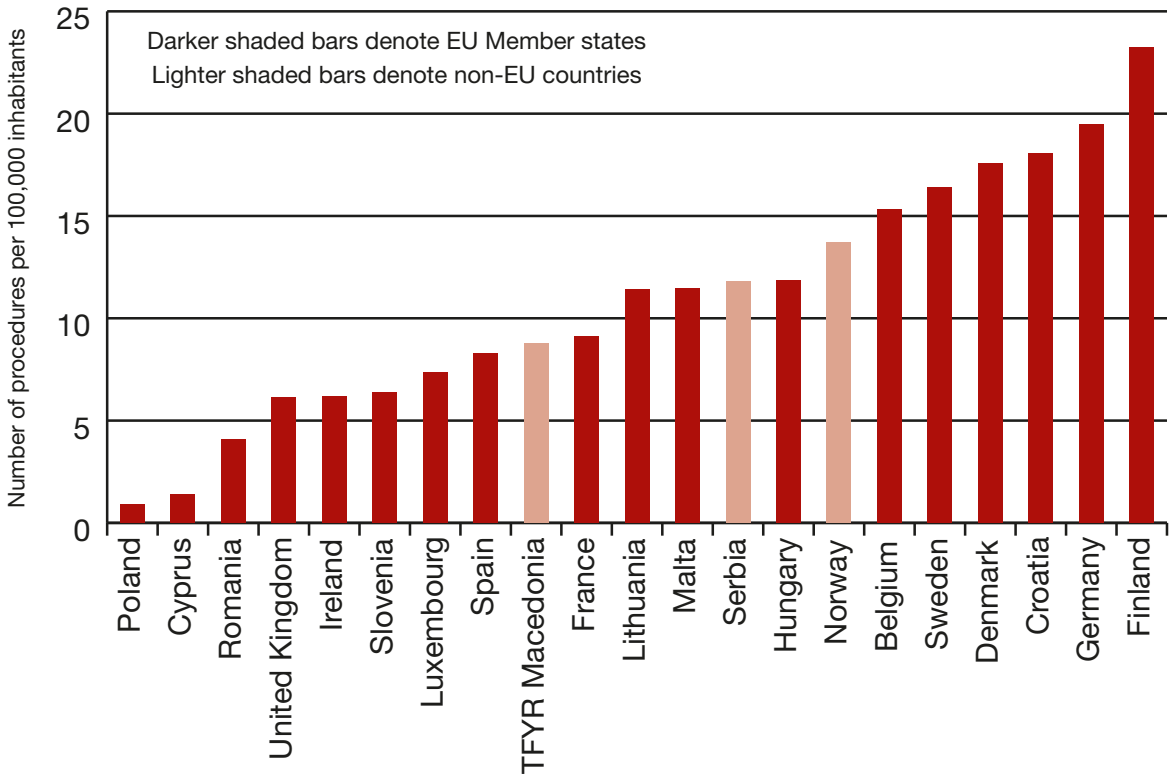


Figure 3.7e Rates of transluminal coronary angioplasty, latest available year, Europe

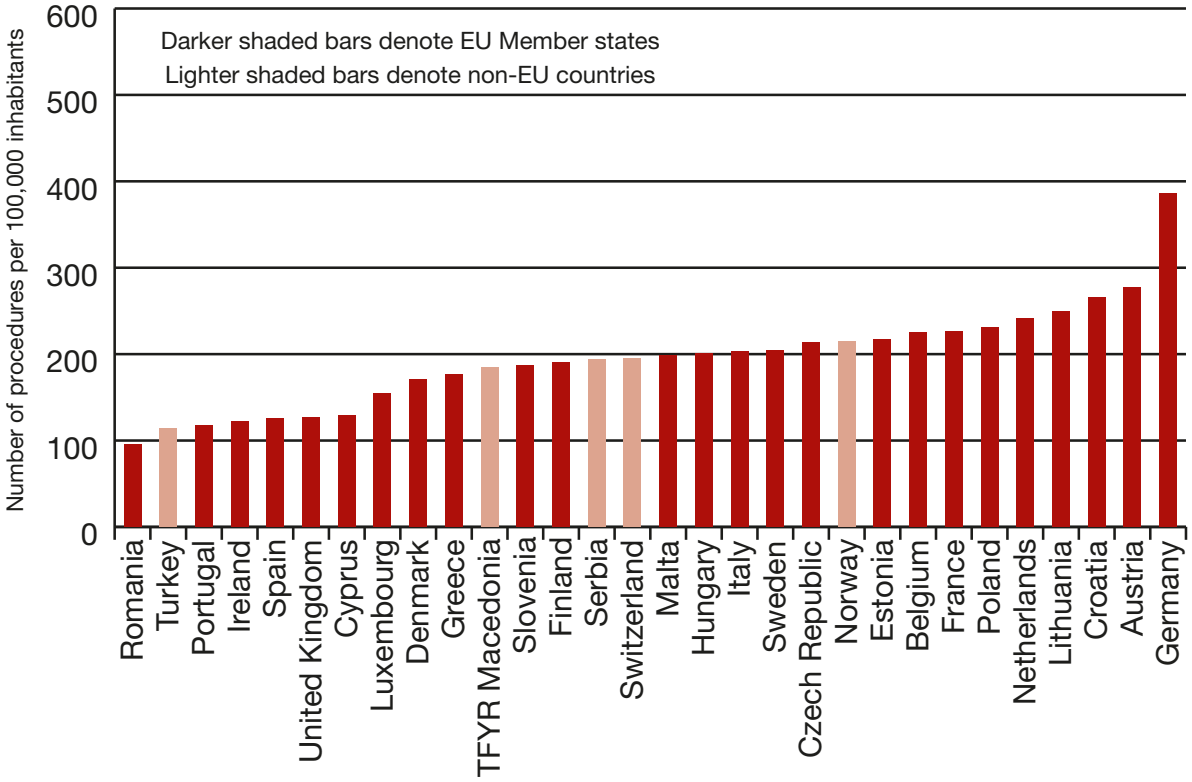


Figure 3.7f Rates of bypass anastomosis for heart revascularisation, latest available year, Europe

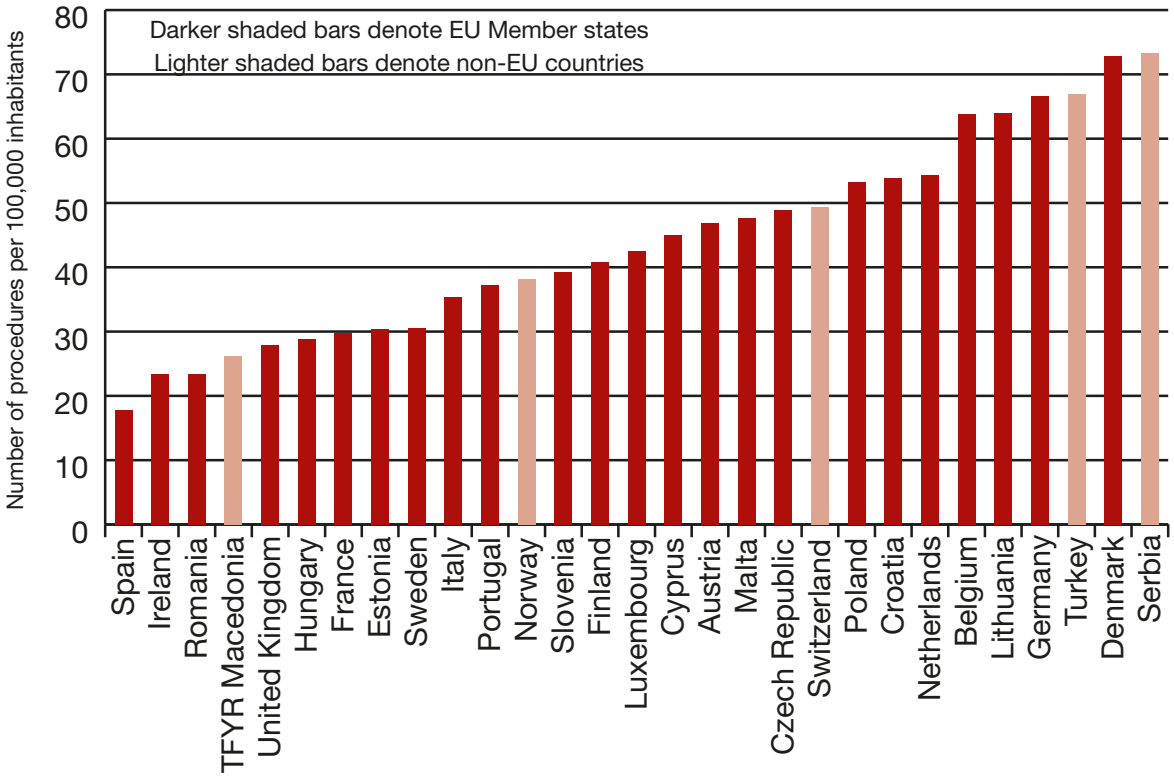


Table 3.8 Age-sex-standardised 30-day case fatality rate after admission for cardiovascular diseases, adults aged 45 years and over, 2013, Europe

	Acute myocardial infarction	Ischaemic stroke
	Age-sex standardised rate (%)	Age-sex standardised rate (%)
Austria*	10.0	6.4
Belgium*	7.3	9.3
Czech Republic*	6.7	9.6
Denmark*	5.7	9.1
Estonia*	11.5	13.0
Finland*	6.5	5.1
France*	7.2	7.9
Germany*	8.7	6.4
Hungary*	13.9	9.6
Iceland	6.9	8.0
Ireland*	6.4	9.7
Israel	6.7	6.0
Italy*	5.5	6.2
Latvia*	15.4	18.4
Luxembourg*	7.0	9.1
Netherlands*	7.6	7.1
Norway	6.7	5.4
Poland*	4.7	
Portugal*	9.4	10.2
Slovak Rep.*	7.2	10.8
Slovenia*	5.2	13.2
Spain*	7.8	9.7
Sweden*	4.5	6.4
Switzerland	7.7	6.9
United Kingdom*	7.6	9.2

Source: OECD Health Data 2015 http://www.oecd-ilibrary.org/social-issues-migration-health/health-at-a-glance_19991312.
Notes: Rates are 'admission based' rates, reflecting fatalities occurring in the same hospital only.
Rates are age-sex standardised to the world standard population (45+ years).
Blank cells indicate that data were not available.
*Asterisk denotes EU member states.

4. Determinants of CVD

This chapter reports on the proportion of the CVD burden attributable to eight major CVD risk factors. These risk factors fall into two groups: behavioural risk factors (diet, low physical activity, smoking, alcohol use), and medical risk factors (high systolic blood pressure, high total cholesterol, high fasting plasma glucose, and high body mass index (BMI)). The data come from the Global Burden of Disease project, and are modelled using data on the exposure, relative risk and theoretical minimum risk exposure for each risk factor.

The CVD burden attributable to a given risk factor is determined based on the *average* level of that risk factor in each population: some subgroups and individuals within each population may have higher or lower levels of certain CVD risk factors, and hence the CVD burden attributable to certain risk factors in these subgroups and individuals may differ from that in the population as a whole. Finally, the burden attributable to each individual risk factor includes the individual contribution of this risk factor as well as its interaction with other risk factors. Hence, the sum of the CVD burden attributable to the eight risk factors exceeds 100%.

Determinants of CVD deaths

Across the four European regions and also in the EU, of the four behavioural risk factors, dietary factors made the largest contribution to the population-level CVD mortality burden in both sexes in 2015[1]. Comparing between European regions and taking into account interactions between risk factors, dietary factors made the greatest average contribution to CVD deaths in Central Asia (67% in males, 61% in females) and the smallest contribution in Western Europe (47% in males, 38% in females). Alcohol use made the smallest contribution to CVD deaths in all regions for both sexes on average, with evidence of a protective effect at the population level in some countries[2].

Of the four medical risk factors, high systolic blood pressure made the greatest average contribution to CVD mortality in all four European regions and also in the EU in both sexes. The absolute size of its contribution was lowest in Western Europe (51% in males, 50% in females) and highest in Central Europe (62% in males, 60% in females). High total cholesterol levels made the next largest average contribution of around 20 to 30% in both sexes, while high BMI and high fasting plasma glucose made the smallest contributions of the four medical risk factors, each responsible for around 20% or less of the CVD mortality burden. Comparing the EU to Europe as a whole, the relative rankings of the risk factor contributions to the CVD mortality burden were comparable, although the absolute size of most risk factor contributions were slightly lower in the EU (exceptions were smoking in females and physical activity in both sexes) (Table 4.1, Figures 4.1a, 4.1b).

Determinants of CVD DALYs

The relative contribution of the key risk factors, to CVD DALYs lost is similar to that for CVD mortality in 2015. Of the behavioural risk factors, dietary factors made the largest population-level contribution in all regions and in the EU on average. Comparing between the regions, this contribution ranged from 43% among females in Western Europe to 70% among males in Central Asia. High systolic blood pressure made the largest contribution of all the medical risk factors, with the absolute size of this contribution ranging from 53% in Western Europe in both sexes to 64% among males in Central Europe. Smoking made a noticeably larger contribution to CVD DALYs in males compared to females in all regions and in the EU (Table 4.2, Figures 4.2a, 4.2b). Comparing the EU to Europe as a whole, the relative rankings of the risk factor contributions to the CVD morbidity burden was comparable, although the absolute size of most risk factor contributions were slightly lower in the EU (Table 4.2, Figures 4.2a, 4.2b).

1 At the individual level, smoking makes the greatest contribution to increasing the risk of CVD mortality, but the greater population prevalence of poor diet makes this risk factor the most meaningful at the aggregate level.

2 Whilst high levels of alcohol consumption increase the risk of CVD, low levels of alcohol intake may reduce the risk of certain CVDs. In countries where the average level of alcohol consumption is low, this risk factor may show a protective effect at the population level (negative attributable burden), despite higher, harmful levels of alcohol intake in several subgroups and individuals.

Table 4.1 Percentage of CVD deaths attributable to selected risk factors, by sex, 2015, Europe

Males %

	Dietary risk factors	Low physical activity	Smoking	Alcohol use	High systolic blood pressure	High total cholesterol	High fasting plasma glucose	High BMI
Albania	56.3	4.8	23.7	1.6	59.7	25.6	16.3	16.8
Andorra	47.1	7.8	12.0	-1.6	51.9	28.8	15.2	11.1
Armenia	65.6	7.4	31.4	-1.7	62.5	28.7	13.9	19.0
Austria*	49.3	7.3	12.3	-0.3	55.5	30.3	14.1	16.2
Azerbaijan	68.8	6.9	30.7	-0.6	59.4	30.0	15.4	23.0
Belarus	66.0	7.5	27.8	7.2	61.7	38.6	16.4	23.4
Belgium*	47.5	8.0	12.2	-1.3	49.4	28.1	15.2	14.2
Bosnia and Herzegovina	49.9	6.4	21.2	1.1	56.5	26.5	12.6	13.7
Bulgaria*	56.9	5.5	19.7	1.2	63.0	27.8	14.5	18.9
Croatia*	58.2	6.5	16.9	2.0	61.2	29.4	17.1	18.5
Cyprus*	49.3	9.2	22.2	-1.4	55.4	32.6	16.3	17.2
Czech Republic*	61.8	7.5	16.9	-1.2	57.8	32.8	17.5	17.9
Denmark*	48.2	7.1	14.5	-0.9	55.8	28.9	15.1	14.8
Estonia*	58.1	6.2	18.4	1.2	66.6	31.0	11.8	20.8
Finland*	52.9	8.0	10.8	-2.6	59.1	30.7	15.5	17.7
France*	42.4	7.5	10.0	-1.3	48.6	26.2	13.2	12.4
Georgia	61.9	6.2	24.5	0.8	64.2	20.5	13.2	18.3
Germany*	47.1	7.0	11.2	-2.0	53.0	28.3	16.8	17.4
Greece*	45.8	7.1	19.0	-0.1	51.2	27.9	14.9	16.9
Hungary*	61.5	5.8	17.9	1.1	66.9	34.9	13.5	19.4
Iceland	50.7	9.1	10.5	-3.2	46.5	36.8	16.7	17.5
Ireland*	53.5	9.4	14.1	-1.7	52.9	32.2	11.7	18.6
Israel	43.9	8.1	12.8	-2.8	52.8	26.4	17.8	17.2
Italy*	47.8	7.3	11.2	-0.9	50.4	22.9	13.1	13.8
Kazakhstan	68.2	7.1	33.2	0.1	59.3	30.2	14.2	23.3
Kyrgyzstan	68.6	6.7	29.4	-0.3	51.8	27.7	13.1	21.1
Latvia*	59.3	8.3	22.9	-0.8	60.5	34.3	15.6	20.5
Lithuania*	62.5	10.6	20.5	-0.4	61.3	38.4	17.4	20.5
Luxembourg*	48.2	6.8	13.3	-1.1	59.3	24.1	14.7	17.1
Macedonia	53.0	6.3	22.5	2.5	61.0	26.7	14.4	19.6
Malta	53.5	11.1	13.5	-2.7	61.7	33.1	16.9	19.8
Moldova	64.5	7.6	22.0	0.7	64.2	29.4	15.0	25.7
Montenegro	55.2	5.1	23.6	2.7	60.7	25.8	15.1	18.3
Netherlands*	44.0	5.7	13.2	-1.1	57.4	25.6	11.8	14.0
Norway	46.1	8.0	10.5	-3.2	54.0	32.7	15.5	13.1
Poland*	59.2	6.8	19.1	-0.5	61.2	33.5	15.4	19.2
Portugal*	45.5	8.0	10.1	1.5	49.5	22.6	13.9	17.2
Romania*	56.6	6.7	17.0	3.4	62.7	26.9	14.3	20.9
Russia	59.8	6.2	27.5	6.1	60.0	33.6	17.6	22.0
Serbia	54.0	6.9	18.8	1.0	59.6	30.9	15.1	20.4
Slovakia*	63.3	7.2	17.0	-0.3	62.3	37.0	16.1	19.8
Slovenia*	48.5	5.6	11.3	2.3	59.3	27.1	13.4	16.6
Spain*	44.2	7.6	12.6	0.3	49.8	24.6	14.8	14.7
Sweden*	49.7	7.9	8.2	-2.6	51.5	27.7	13.4	13.3
Switzerland	47.6	7.8	11.8	-2.0	49.2	30.9	14.7	13.8
Tajikistan	66.6	6.5	19.3	-1.5	58.7	28.1	12.2	11.1
Turkey	55.6	9.7	24.4	0.4	54.7	29.3	18.0	24.4
Turkmenistan	71.2	5.9	18.7	-0.2	61.5	30.1	14.8	27.3
Ukraine	65.9	5.9	27.0	4.8	64.7	35.8	16.4	19.9
United Kingdom*	49.5	10.2	11.8	-2.7	47.5	27.6	15.1	17.8
Uzbekistan	65.7	6.2	17.4	-0.1	63.1	29.7	13.3	23.9
EU	**50.4**	**7.4**	**13.6**	**-0.7**	**54.3**	**28.0**	**14.8**	**16.8**
Europe	**56.2**	**6.9**	**19.2**	**1.9**	**57.6**	**30.5**	**15.8**	**19.3**

Source: Global Burden of Disease (2015) https://vizhub.healthdata.org/gbd-compare/

Notes: The CVD burden attributable to each individual risk factor includes the individual contribution of each risk factor as well as its interaction with other risk factors. Hence, the sum of the CVD burden attributable to each risk factor exceeds 100%. Dietary risk factors include the combined effect of sodium, low whole grains, low fruit, vegetables, nuts and seeds, omega 3, poly-unsaturated fatty acids, fibre, high trans fat, processed meat. Negative values indicate a protective effect. Estimated attributable burden derives from multiple data sources including published literature, surveys and census data. Data were not available for Monaco or San Marino. *Asterisk denotes EU member states.

Table 4.1 Percentage of CVD deaths attributable to selected risk factors, by sex, 2015, Europe

Females %

	Dietary risk factors	Low physical activity	Smoking	Alcohol use	High systolic blood pressure	High total cholesterol	High fasting plasma glucose	High BMI
Albania	47.5	4.6	6.0	1.3	58.4	23.5	14.8	13.9
Andorra	37.7	7.4	5.4	-1.9	49.1	26.1	13.6	7.7
Armenia	58.5	6.1	9.0	-0.5	63.9	29.1	14.1	21.2
Austria*	43.6	7.3	6.1	-1.0	55.0	28.0	12.0	13.7
Azerbaijan	62.6	5.6	7.8	0.5	58.4	30.0	15.2	27.0
Belarus	59.7	6.6	5.6	12.2	59.7	39.4	15.4	20.6
Belgium*	37.8	7.6	7.7	-0.8	48.4	24.9	13.1	11.1
Bosnia and Herzegovina	39.9	4.7	11.5	1.0	57.3	23.8	11.3	12.9
Bulgaria*	47.9	6.4	8.2	-0.2	61.7	26.5	13.2	16.9
Croatia*	49.6	6.9	9.6	0.4	60.6	28.9	15.4	15.2
Cyprus*	37.8	8.3	8.6	-1.8	52.0	26.5	13.2	13.4
Czech Republic*	53.1	7.7	10.6	-1.9	54.2	33.7	15.0	14.4
Denmark*	40.0	6.8	11.9	-0.7	54.7	27.7	13.3	11.1
Estonia*	53.7	5.7	6.2	-1.2	66.4	33.1	10.8	20.3
Finland*	43.4	7.5	4.9	-2.9	57.0	30.6	16.8	14.3
France*	34.3	7.0	5.4	-2.6	41.8	22.8	10.9	9.2
Georgia	55.0	4.6	5.9	-0.3	59.5	21.1	12.9	16.8
Germany*	37.9	6.6	6.8	-3.0	55.2	26.2	14.1	14.0
Greece*	37.5	7.5	11.2	-2.3	52.3	26.1	13.9	14.0
Hungary*	52.3	7.0	8.7	-0.1	66.6	34.5	11.9	15.5
Iceland	40.6	8.3	8.3	-2.2	49.9	32.1	14.2	13.2
Ireland*	44.1	9.1	11.1	-0.4	54.1	27.4	11.7	12.3
Israel	36.1	7.6	6.9	-1.4	51.6	23.1	15.3	13.7
Italy*	39.6	7.5	7.4	-1.6	50.4	22.0	10.9	11.8
Kazakhstan	61.5	6.6	6.9	0.7	54.3	29.0	14.3	24.9
Kyrgyzstan	63.3	5.6	6.0	-0.1	51.2	29.0	13.8	23.0
Latvia*	53.1	8.2	6.9	-1.7	59.1	35.7	15.9	19.1
Lithuania*	56.9	9.4	5.6	-0.7	59.0	38.8	17.3	18.4
Luxembourg*	38.1	6.6	8.6	-1.5	52.8	22.2	11.8	12.3
Macedonia	42.1	6.0	13.7	0.5	60.4	22.3	12.7	21.2
Malta	45.5	10.2	8.6	-1.6	62.2	32.1	15.2	16.8
Moldova	59.3	6.5	4.2	9.0	65.2	31.6	16.5	26.0
Montenegro	44.9	4.3	17.8	2.4	60.3	19.4	13.3	18.1
Netherlands*	34.0	5.0	10.9	-0.1	53.3	22.6	9.9	10.9
Norway	38.1	7.3	9.0	-2.8	46.5	28.6	12.6	9.1
Poland*	48.7	7.4	9.9	-0.9	57.4	31.7	11.1	14.7
Portugal*	36.8	7.7	2.9	-0.5	44.6	21.7	12.4	14.6
Romania*	48.7	8.0	8.2	1.9	62.8	26.4	12.9	20.6
Russia	52.3	5.4	6.9	8.9	57.0	34.4	16.4	21.6
Serbia	45.4	7.3	11.4	-0.5	60.0	30.6	13.3	19.4
Slovakia*	55.2	7.8	5.5	-1.4	60.1	36.2	15.0	17.0
Slovenia*	39.5	4.9	5.7	0.6	57.5	25.4	10.9	12.1
Spain*	34.7	6.7	4.4	0.8	43.5	22.5	12.2	12.4
Sweden*	43.7	7.9	8.5	-0.9	50.7	29.3	11.7	11.0
Switzerland	38.0	7.3	6.7	-2.4	46.2	28.7	12.5	11.9
Tajikistan	61.5	5.3	1.7	-0.3	57.4	29.8	12.1	18.0
Turkey	44.7	8.1	10.8	0.5	57.9	25.6	16.3	25.4
Turkmenistan	65.1	5.0	5.3	0.5	56.8	30.7	14.3	26.5
Ukraine	59.9	4.9	5.7	8.6	61.3	38.3	16.0	19.5
United Kingdom*	38.4	9.0	10.3	-2.2	45.9	25.7	12.5	12.6
Uzbekistan	59.9	5.9	5.6	-0.7	57.6	30.8	13.1	25.8
EU	**41.5**	**7.3**	**7.7**	**-1.3**	**52.8**	**26.4**	**12.6**	**13.7**
Europe	**48.3**	**6.4**	**5.0**	**3.1**	**55.6**	**30.4**	**14.3**	**17.7**

Source: Global Burden of Disease (2015) https://vizhub.healthdata.org/gbd-compare/

Notes: The CVD burden attributable to each individual risk factor includes the individual contribution of each risk factor as well as its interaction with other risk factors. Hence, the sum of the CVD burden attributable to each risk factor exceeds 100%. Dietary risk factors include the combined effect of sodium, low whole grains, low fruit, vegetables, nuts and seeds, omega 3, poly-unsaturated fatty acids, fibre, high trans fat, processed meat. Negative values indicate a protective effect. Estimated attributable burden derives from multiple data sources including published literature, surveys and census data. Data were not available for Monaco or San Marino. *Asterisk denotes EU member states.

Figure 4.1a Percentage of CVD deaths attributable to selected risk factors, males, 2015, European regions

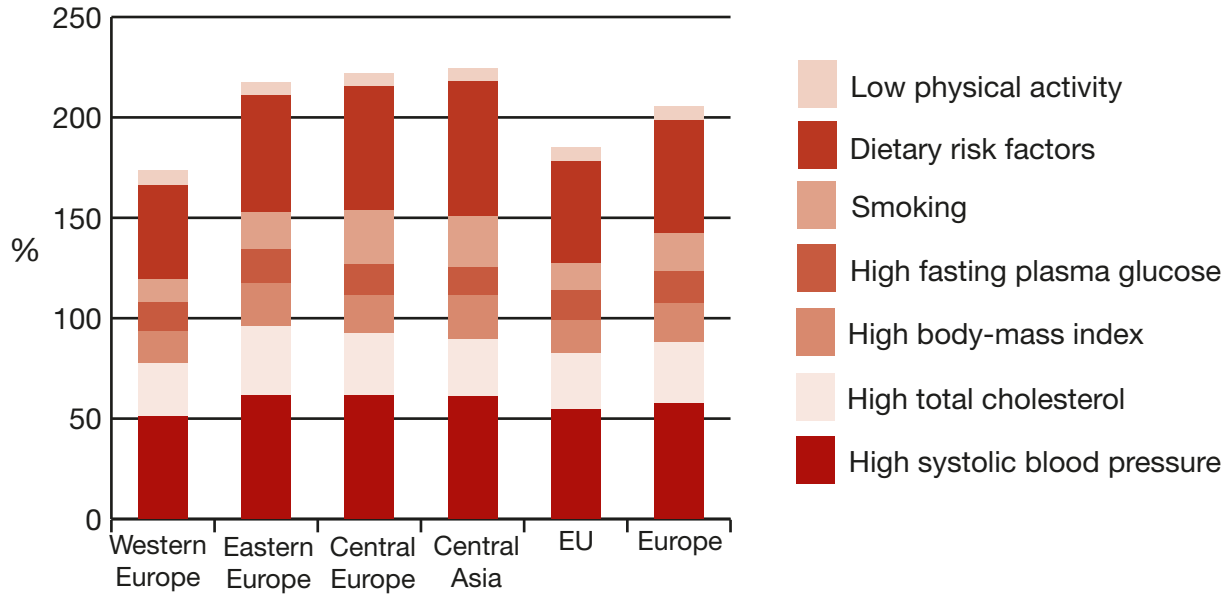


Figure 4.1b Percentage of CVD deaths attributable to selected risk factors, females, 2015, European regions

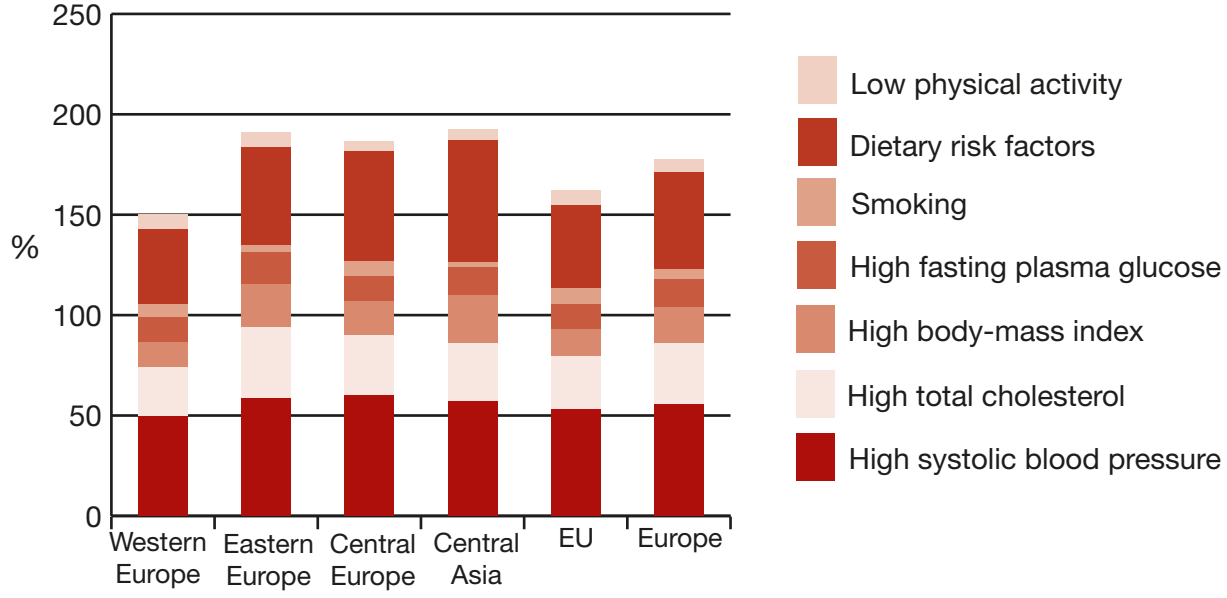


Table 4.2 Percentage of CVD DALYs attributable to selected risk factors, by sex, 2015, Europe

Males %

	Dietary risk factors	Low physical activity	Smoking	Alcohol use	High systolic blood pressure	High total cholesterol	High fasting plasma glucose	High BMI
Albania	58.0	4.9	26.7	1.3	60.5	29.1	16.2	20.7
Andorra	49.8	7.9	17.4	-0.7	54.8	31.8	15.1	15.3
Armenia	70.3	7.3	36.8	-1.7	64.8	34.4	14.5	25.1
Austria*	51.6	7.5	18.8	0.5	57.8	32.9	14.0	20.6
Azerbaijan	71.9	6.8	36.2	-0.4	60.5	35.3	15.5	27.7
Belarus	68.4	7.0	33.6	11.8	64.1	42.2	16.1	28.2
Belgium*	51.1	8.3	17.4	-0.7	52.8	31.7	15.4	18.9
Bosnia and Herzegovina	55.4	6.5	28.1	1.6	60.3	30.9	13.4	19.3
Bulgaria*	60.2	5.3	26.6	2.0	65.4	30.9	14.7	23.3
Croatia*	61.0	6.3	22.4	2.6	63.8	32.0	17.4	23.0
Cyprus*	53.1	9.7	29.1	-1.3	57.8	37.5	16.7	22.6
Czech Republic*	63.2	7.1	22.7	-0.2	60.4	34.6	17.2	22.2
Denmark*	50.3	7.1	18.5	-0.1	58.6	30.2	15.0	19.1
Estonia*	59.2	5.6	24.1	2.5	68.4	32.5	11.6	25.5
Finland*	54.6	7.9	15.8	-1.5	61.4	32.0	15.7	21.8
France*	45.0	7.6	16.5	-0.4	52.7	28.5	13.2	16.8
Georgia	66.1	6.1	30.3	1.3	65.3	24.6	13.8	24.2
Germany*	49.1	7.1	16.6	-1.6	53.5	30.6	15.8	21.4
Greece*	51.2	7.5	27.1	0.1	53.4	33.6	15.0	23.6
Hungary*	64.3	5.6	23.2	1.9	68.9	37.9	13.9	24.7
Iceland	53.3	9.3	14.5	-2.8	48.9	39.6	16.6	23.1
Ireland*	56.9	9.8	18.7	-1.2	56.7	36.4	12.9	24.3
Israel	46.8	8.4	18.7	-3.1	54.9	31.2	18.1	22.1
Italy*	51.5	7.6	16.5	-0.7	52.8	26.5	13.8	17.5
Kazakhstan	69.9	6.8	37.5	0.6	60.9	34.0	14.1	26.5
Kyrgyzstan	70.3	6.2	34.8	0.3	52.9	30.6	13.0	26.1
Latvia*	60.3	7.5	27.7	-0.1	62.8	36.1	14.8	24.4
Lithuania*	64.1	10.0	26.5	0.6	64.1	41.1	17.1	24.6
Luxembourg*	49.8	6.8	18.4	-0.4	61.8	26.6	14.3	21.6
Macedonia	57.9	6.2	29.8	2.9	63.4	31.0	15.0	25.2
Malta*	55.9	11.7	18.6	-2.5	63.8	36.3	16.9	25.0
Moldova	67.7	7.0	28.0	5.4	66.5	32.1	15.1	31.6
Montenegro	59.2	5.3	29.9	2.7	63.3	30.2	15.6	23.6
Netherlands*	46.7	5.8	17.8	-0.4	59.2	28.5	11.9	18.2
Norway	47.9	8.0	15.2	-2.5	57.8	34.4	15.1	17.5
Poland*	61.8	6.5	25.6	0.6	64.3	35.9	15.4	24.4
Portugal*	49.7	8.2	16.5	2.4	53.5	25.4	13.9	22.3
Romania*	60.8	6.6	22.7	4.1	65.6	30.4	14.9	26.7
Russia	61.5	5.4	32.0	10.3	61.5	36.2	17.2	25.5
Serbia	58.5	6.7	24.6	1.5	62.5	34.9	15.6	26.0
Slovakia*	64.5	6.8	22.7	0.7	64.9	39.0	15.9	23.7
Slovenia*	52.0	5.5	15.9	2.8	62.6	29.8	13.8	21.2
Spain*	47.3	7.9	19.6	0.8	53.1	28.2	14.8	19.6
Sweden*	51.1	8.0	10.9	-1.8	53.4	29.4	13.4	17.2
Switzerland*	49.2	7.9	16.4	-1.6	50.2	32.7	14.6	17.3
Tajikistan	69.7	6.2	22.8	-1.6	60.3	32.7	12.3	14.6
Turkey	57.0	9.6	29.3	0.3	53.8	33.0	17.7	28.4
Turkmenistan	71.7	5.5	18.2	0.0	61.6	32.9	14.7	32.4
Ukraine	68.7	5.4	32.7	9.5	67.1	39.1	16.2	24.1
United Kingdom*	53.0	11.0	16.4	-2.3	51.3	31.9	15.1	23.9
Uzbekistan	68.1	6.0	19.0	0.2	65.0	34.2	13.4	30.2
EU	**53.8**	**7.5**	**19.6**	**0.0**	**57.3**	**31.2**	**14.8**	**21.7**
Europe	**59.7**	**6.6**	**26.4**	**4.5**	**60.2**	**34.1**	**15.8**	**24.1**

Source: Global Burden of Disease (2015) https://vizhub.healthdata.org/gbd-compare/

Notes: The CVD burden attributable to each individual risk factor includes the individual contribution of each risk factor as well as its interaction with other risk factors. Hence, the sum of the CVD burden attributable to each risk factor exceeds 100%. Dietary risk factors include the combined effect of sodium, low whole grains, low fruit, vegetables, nuts and seeds, omega 3, poly-unsaturated fatty acids, fibre, high trans fat, processed meat. Negative values indicate a protective effect. Estimated attributable burden is calculated via multiple data sources including published literature, surveys and census data. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 4.2 Percentage of CVD DALYs attributable to selected risk factors, by sex, 2015, Europe

Females %

	Dietary risk factors	Low physical activity	Smoking	Alcohol use	High systolic blood pressure	High total cholesterol	High fasting plasma glucose	High BMI
Albania	48.8	4.5	4.6	1.3	58.8	24.2	14.6	18.8
Andorra	37.3	6.9	8.6	-0.8	49.7	24.5	12.8	10.1
Armenia	61.4	5.9	2.4	-0.5	65.6	30.1	14.4	28.1
Austria*	44.0	7.1	9.9	0.4	55.3	26.9	11.5	16.7
Azerbaijan	65.4	5.4	2.7	0.5	58.7	32.0	15.2	35.0
Belarus	62.0	6.3	5.9	15.0	61.9	39.0	15.4	27.0
Belgium*	40.0	7.6	11.6	0.3	50.1	25.2	13.1	15.4
Bosnia and Herzegovina	45.2	4.6	15.9	1.2	61.0	25.0	12.1	18.8
Bulgaria*	49.6	6.1	12.2	0.8	63.3	26.1	13.2	21.7
Croatia*	50.9	6.5	13.2	1.4	62.3	27.7	15.5	19.3
Cyprus*	38.8	7.9	11.2	-1.3	52.2	25.9	12.8	18.6
Czech Republic*	52.9	7.1	14.1	-1.0	55.6	31.7	14.3	17.8
Denmark*	41.2	6.4	16.1	1.2	56.4	26.0	13.1	15.8
Estonia*	54.2	5.3	8.4	-0.2	67.4	31.3	10.8	25.1
Finland*	43.5	7.0	8.8	-1.4	57.9	27.8	15.6	18.4
France*	34.6	6.5	9.5	-1.5	42.4	21.6	10.5	12.7
Georgia	58.2	4.4	3.9	-0.3	59.9	21.9	13.2	22.6
Germany*	38.6	6.4	10.5	-1.8	53.3	25.4	13.4	17.4
Greece*	39.9	7.4	14.8	-1.5	51.8	26.6	14.0	19.2
Hungary*	54.0	6.7	13.7	0.7	67.5	33.9	12.2	21.0
Iceland	40.9	7.9	12.2	-1.5	49.6	30.4	13.6	18.5
Ireland*	45.8	8.8	16.7	1.0	54.6	27.3	11.4	18.6
Israel	36.8	7.3	10.1	-1.4	51.9	23.2	15.2	18.7
Italy*	41.3	7.4	10.1	-0.8	50.9	22.0	11.3	14.6
Kazakhstan	63.4	6.2	5.5	1.9	55.6	29.3	14.1	31.3
Kyrgyzstan	64.4	5.1	4.4	0.0	51.1	28.4	13.5	30.0
Latvia*	54.9	7.7	9.2	-1.0	61.3	34.2	15.5	24.4
Lithuania*	57.8	8.8	7.6	0.3	61.1	36.8	17.0	23.8
Luxembourg*	38.0	6.1	12.5	-0.4	53.5	21.0	11.3	16.2
Macedonia	47.0	5.8	19.1	1.4	62.5	23.6	13.4	27.6
Malta*	46.3	10.2	10.4	-0.9	63.8	31.2	14.8	22.2
Moldova	62.2	6.1	3.3	11.3	67.5	31.1	16.5	33.6
Montenegro	48.8	4.3	24.1	3.0	62.3	20.4	13.8	24.9
Netherlands*	35.9	4.8	15.6	1.2	53.8	22.4	9.7	15.6
Norway	38.6	6.9	12.7	-2.1	48.6	27.2	12.4	12.9
Poland*	50.1	7.0	14.0	-0.1	59.5	30.1	11.7	19.6
Portugal*	39.5	7.5	4.9	0.7	46.0	21.6	12.5	19.6
Romania*	52.2	7.9	10.0	2.9	64.8	26.5	13.5	25.8
Russia	54.9	4.9	7.6	11.3	59.1	34.0	16.7	28.4
Serbia	49.0	7.0	15.1	0.2	62.3	30.4	13.8	26.1
Slovakia*	54.8	7.2	8.4	-0.8	61.7	34.0	14.5	21.2
Slovenia*	40.8	4.6	8.9	1.6	59.4	24.2	11.1	16.0
Spain*	35.6	6.4	7.8	1.4	44.0	21.9	11.9	16.2
Sweden*	44.0	7.5	11.3	0.5	50.6	27.7	11.6	14.5
Switzerland*	37.6	6.9	10.2	-1.5	43.7	26.5	12.3	14.1
Tajikistan	64.6	4.9	0.9	-0.5	58.1	31.2	11.9	24.5
Turkey	45.2	7.4	13.2	0.8	55.8	24.8	15.7	30.6
Turkmenistan	65.9	4.5	1.7	0.4	56.2	31.0	14.1	34.5
Ukraine	63.0	4.5	5.7	11.2	63.4	38.0	16.0	26.1
United Kingdom*	41.0	9.3	14.2	-1.4	47.0	25.9	12.6	18.6
Uzbekistan	61.7	5.5	5.3	-0.9	60.0	32.0	12.8	34.7
EU	**43.4**	**7.1**	**11.3**	**-0.3**	**53.9**	**26.0**	**12.5**	**18.2**
Europe	**51.5**	**6.0**	**8.9**	**5.1**	**57.4**	**30.5**	**14.5**	**24.2**

Source: Global Burden of Disease (2015) https://vizhub.healthdata.org/gbd-compare/

Notes The CVD burden attributable to each individual risk factor includes the individual contribution of each risk factor as well as its interaction with other risk factors. Hence, the sum of the CVD burden attributable to each risk factor exceeds 100%. Dietary risk factors include the combined effect of sodium, low whole grains, low fruit, vegetables, nuts and seeds, omega 3, poly-unsaturated fatty acids, fibre, high trans fat, processed meat. Negative values indicate a protective effect. Estimated attributable burden is calculated via multiple data sources including published literature, surveys and census data. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 4.2a Percentage of CVD DALYs attributable to selected risk factors, males, 2015, European regions

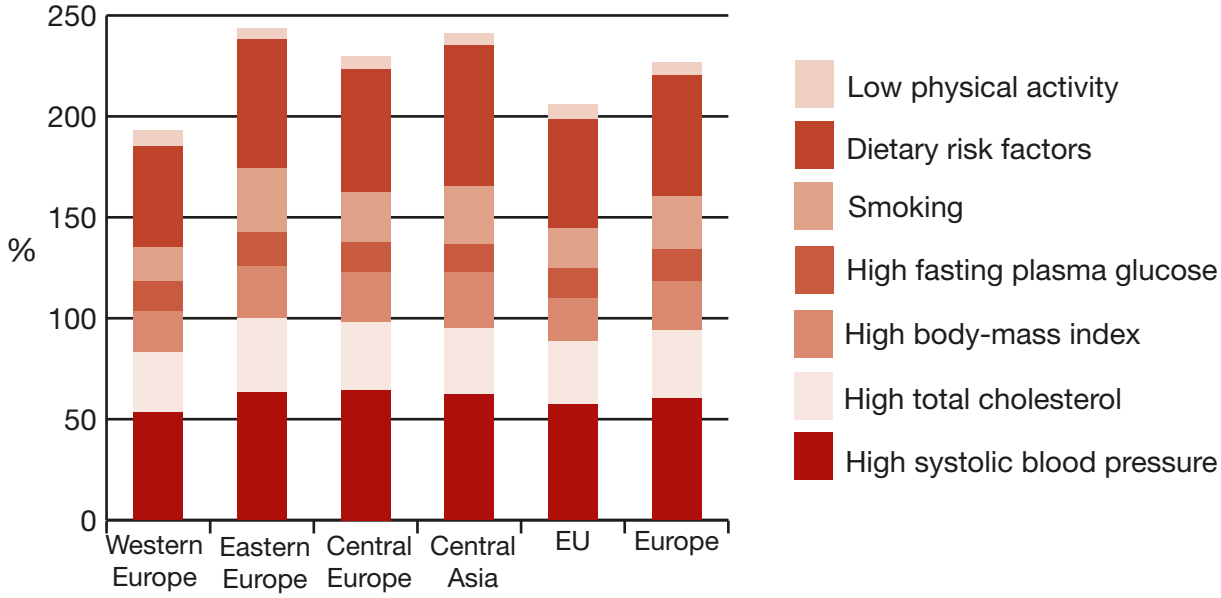
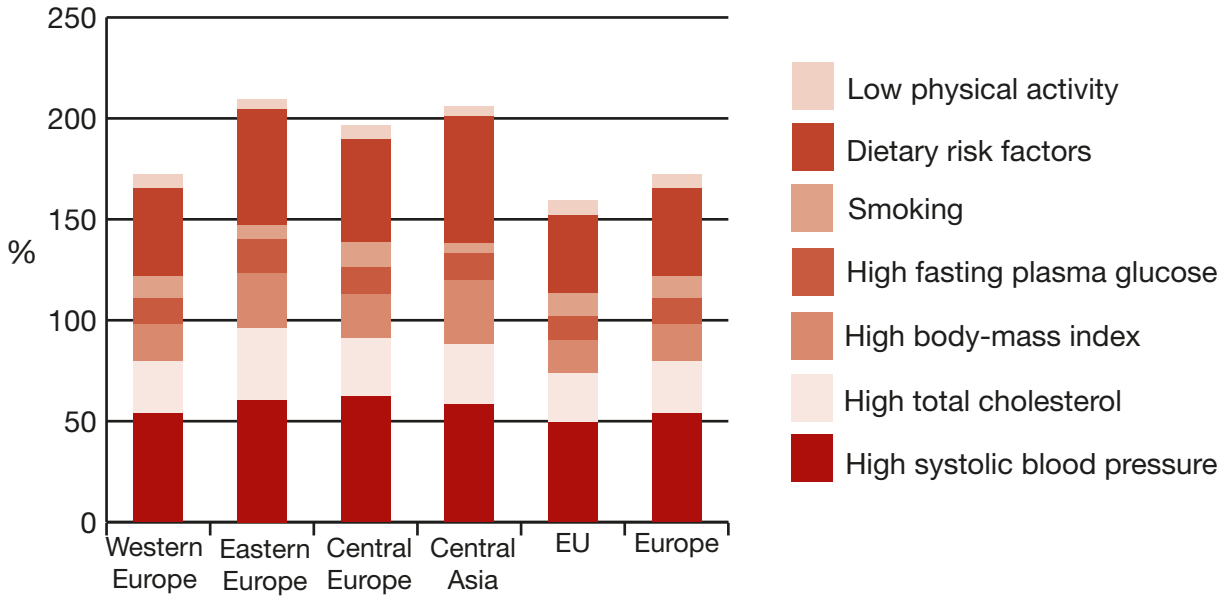


Figure 4.2b Percentage of CVD DALYs attributable to selected risk factors, females, 2015, European regions



5. Diet

Diet is one of the most important modifiable risk factors for cardiovascular disease. High consumption of dietary fat, especially trans and saturated fats, increases the risk of atherosclerosis, while diets high in sodium increase the risk of hypertension. Consumption of fruits, vegetables and dietary fibre meanwhile have a protective effect[1]. In line with this evidence, the World Health Organization recommends eating at least 400 grams (five portions) or fruit and vegetables a day, consuming no more than 5g of salt each day, limiting dietary sugar intake and dietary fat intake to 10% and 30% of total energy intake respectively, and balancing total energy intake with energy expenditure[2]. Despite the significance of diet as a risk factor for CVD, high-quality Europe-wide data on dietary variables remains limited, often relying on national food supply and individual recall of consumption, each of which have limitations.

National diets and food supply

The United Nations Food and Agriculture Organization (FAO) publishes data on national food supply in 'food balance sheets'. These data are calculated as the difference between the food produced in and imported into countries and the food exported, fed to animals, or otherwise not available for human consumption. Per capita figures are then calculated by dividing the national data by the total population size. Importantly, these FAO data indicate the average supply of commodities available rather than the actual food consumption of individuals. In wealthy countries where considerable amounts of food are wasted, the FAO data are likely to overestimate actual food consumption, while in countries where people grow crops or rear animals in their back gardens or smallholdings, the FAO data are likely to underestimate actual food consumption.

Comparing food balance sheet data at the national level reveals substantial differences between European countries in the availability of fruits, vegetables, dietary energy and fat (Tables 5.1-5.4, Figures 5.1-5.4). In 2011, the most recent year for which data are available, the average total vegetable supply within the EU (115.8 kg/person/year) was slightly lower than that in Europe as a whole (118.9 kg/person/year). Within the EU, the highest vegetable supply was in Greece (232.1 kg/person/year), which was more than three times larger than that in Bulgaria (73.2 kg/person/year) where supply was lowest. Outside of the EU, vegetable supply ranged more than four-fold, from 71.4 kg/person/year in Iceland to 335.2 kg/person/year in Armenia (Table 5.1, Figure 5.1a).

In contrast to vegetable supply, the average total fruit supply in 2011 in the EU (100.1kg per person per year) was 10% higher than that in Europe as a whole (91.0 kg per person per year). Within the EU, fruit supply ranged almost five-fold from 42.1 kg/person/year in Lithuania to 201.6 kg/person/year in Luxembourg. Outside of the EU, the highest fruit supply was in Montenegro (156.2 kg/person/year), which was more than five times greater than that in Tajikistan (28.4 kg/person/year), where levels were lowest (Table 5.2, Figure 5.2a).

In 2011, the availability of dietary energy in the EU on average (3,416 kcal per day) was slightly larger than that in Europe as a whole (3,372 kcal per day). Among EU countries, the availability of total dietary energy varied from 2,902 kcal/person/day in Slovakia to 3,793 kcal/person/day in Belgium. Outside of the EU, the availability of total dietary energy varied from 2,101 kcal/person/day in Tajikistan to 3,680 kcal/person/day in Turkey (Table 5.3, Figure 5.3a).

The availability of dietary fat in 2011 was also on average higher in the EU (142.7g/person/day) than in Europe as a whole (129.5g/person/day). In four countries, all in the EU, the supply of fat was equal to or exceeded 160g per person per day: Austria (171g), Belgium (166g), France (162g), and Spain (160g), while outside of the EU, Switzerland had the highest supply of fat (157g/person/day). The lowest levels of fat within the EU were found in Estonia (88g/person/day), while outside of the EU, the supply of fat was lowest in Azerbaijan (56g) and Tajikistan (59g) (Table 5.4).

The FAO recommends that fat should make up between 15% and 30-35% of total energy intake for adults[3]. No country in Europe with available data showed less than 15% of dietary energy from fat, while 22 out of 48 countries consumed between 15% and 30% of energy from fat. Fat comprised more than 40% of the total dietary energy supply in six countries: Austria, France, Hungary, Italy, Spain and Switzerland, five of which are EU member states (Table 5.5, Figure 5.5). Consistent with this, the percentage of dietary energy from fat in the EU (38%) was greater than that for Europe as a whole (35%) (Table 5.5).

Dietary patterns in adults

The European Health Interview Survey collects self-reported data on the frequency of fruit and vegetable consumption among adults in 29 European countries: all of the EU member states with the exception of Ireland, plus Norway and Turkey. Within the EU on average, a greater proportion of women (56%) than men (44%) reported consuming vegetables at least daily. Vegetable consumption was most common in Belgium, where 75% of men and 82% of women reported consuming vegetables at least daily, and least common in Germany among men (25%) and Romania among women (31%) (Table 5.6).

Consumption of fruit was generally more frequent than that of vegetables. On average in the EU, 49% of men and 61% of women reported consuming fruit at least daily. Fruit consumption was most common in Portugal, where 67% of men and 75% of women reported consuming fruit at least daily, and least common in Romania (26% of women and 32% of men) (Table 5.7).

Dietary patterns in children and adolescents

Data on daily fruit and vegetable consumption in 11-, 13- and 15-year olds in 35 European countries (28 of them in the EU) come from the Health Behaviour of School-aged Children survey. In general, fewer than half of boys and girls across all three age groups in the countries surveyed reported consuming vegetables at least once a day, and the same was true for fruit. Fruit and vegetable consumption was generally greater in girls than boys, and in general decreased slightly with increasing age (Tables 5.8, 5.9). Within the EU, the highest frequency of vegetable consumption was found among 15 year old girls in French-speaking Belgium (65% reported consuming vegetables daily), while the lowest was in 15 year old boys in Finland (15%). Of the seven non-EU countries with available data, the frequency of daily vegetable consumption ranged from 23% among 13 year old boys in Iceland to 61% in 11 year old girls in Ukraine (Table 5.8, Figure 5.8). The highest frequency of fruit consumption in the EU was found among 11 year old girls in French-speaking Belgium (61% reported consuming fruit at least daily), while the lowest was in 15 year old boys in Finland (12%) (Table 5.9, Figure 5.9). Among the seven non-EU countries with available data, the frequency of daily fruit consumption ranged from 29% among 13 year old boys in Iceland and 15 year old boys in Norway to 65% in 15 year old girls in Armenia (Table 5.9, Figure 5.9).

Trends in diets

According to food balance sheet data from the FAO, over the last 30 years vegetable availability increased slightly in Europe on average, from 109 kg/person/year in 1986 to 119 kg/person/year in 2011 (an increase of just under 10%). By contrast, in the EU, vegetable availability remained stable at around 115kg per person per year. From 1986 to 2011, of all four European regions, vegetable availability in Northern Europe has been the lowest, although it has increased gradually since the mid-1990s, and is now roughly equal to vegetable availability in Western Europe where rates have remained stable. Southern Europe has historically had the greatest availability of vegetables (as much as double that in other European regions). The availability of vegetables in Southern Europe remained relatively stable between 1986 and the early 2000s, although it has decreased slightly since then. By contrast, the availability of vegetables in Eastern Europe has increased substantially since the mid-1990s and is now greater than the Europe-wide average availability (Table 5.1, Figure 5.1b).

Consistent with global trends, the availability of fruit has increased in Europe as a whole over the last two decades, from 70 kg/person/year in 1995 to 91 kg/person/year in 2011 (an increase of nearly 30%). At the regional level, the availability of fruit increased most dramatically in Northern Europe from the mid-1990s to the mid-2000s, although since then it has decreased slightly. Similarly, in Southern Europe, and in the EU, the availability of fruit has decreased since the mid-2000s following a rise from the mid-1990s. In Eastern Europe, the supply of fruit has risen steadily since 1999, although in 2011 it was still the lowest among all four regions. Meanwhile, in Western Europe the availability of fruit has remained relatively stable over the last two decades (Table 5.2, Figure 5.2b).

Following a decrease in the first half of the 1990s, the supply of dietary energy has increased in Europe on average. This reflects the trend in Eastern Europe, where the availability of dietary energy fell sharply from 1990 to 1996 before rising dramatically to close to the European average. Northern and Western Europe have seen comparatively gradual increases in total dietary energy supply since the mid-1990s, whilst energy supply in Southern Europe, has decreased slightly since 2000 and is now the second lowest on average after Eastern Europe. Within the EU, the availability of dietary energy has remained stable since 2000 (Table 5.3, Figures Figure 5.3b).

The amount of fat in the food supply has increased gradually in Europe as a whole over the last decade. This has been driven principally by the trend in Eastern Europe, where fat availability rose by 22% from 2000 to 2011. The supply of

fat has remained relatively stable in Western Europe, Northern Europe, Southern Europe and the EU since the mid-1980s, although average fat availability in these regions is still greater than that in Eastern Europe (Table 5.4, Figure 5.4).

1 Mente, A. et al (2009) 'A systematic review of the evidence supporting a causal link between dietary factors and coronary heart disease'. *Archives of Internal Medicine*, 169(7): 659-669.

2 World Health Organization (WHO) *Healthy Diet Factsheet No. 394*, http://www.who.int/nutrition/publications/nutrientrequirements/healthydiet_factsheet394.pdf (Accessed December 2016).

3 Food and Agriculture Organization of the United Nations (2010) *Fats and fatty acids in human nutrition: Report of an expert consultation*. Rome: FAO.

Table 5.1 Vegetable consumption, 1986 to 2011, Europe

Quantity, kg per capita per year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Albania	75.0	68.9	51.0	65.5	79.8	88.2	130.0	147.8	156.3	143.5	160.7	148.9	162.7	154.6	156.7	162.8	172.5	184.9	184.4	185.9	189.9	185.4	205.9	202.2	237.5	251.1
Armenia							132.5	106.8	131.3	131.9	133.9	116.3	122.1	138.0	120.6	131.7	154.6	188.4	217.8	233.8	290.0	328.8	325.2	335.2	271.0	311.4
Austria*	70.0	71.9	66.8	68.0	69.5	68.7	66.2	66.6	69.9	80.0	82.0	81.2	73.7	92.7	81.9	94.6	91.5	91.3	102.2	93.1	94.8	95.9	101.8	101.2	105.6	109.3
Azerbaijan							55.6	59.9	57.1	57.3	76.9	71.5	68.3	92.0	99.4	119.6	137.2	154.1	155.5	168.3	171.0	174.6	162.5	159.5	165.3	172.3
Belarus							76.8	79.5	80.7	83.9	88.7	88.9	88.6	90.8	94.7	99.9	104.8	108.5	120.0	130.1	138.4	142.3	147.6	150.6	152.3	146.8
Belgium*															119.4	115.6	125.3	128.7	124.9	124.6	122.6	129.1	129.3	128.9	118.4	128.1
Bosnia and Herzegovina							127.4	134.4	141.8	157.6	156.3	178.2	187.9	177.5	126.0	136.6	156.2	173.8	194.5	196.9	197.4	190.5	200.5	196.0	190.1	188.1
Bulgaria*	127.3	155.1	141.6	120.8	127.8	110.6	117.5	111.7	116.3	129.7	120.5	125.2	164.3	151.1	141.9	115.1	103.9	133.7	107.7	63.4	92.2	75.1	77.6	74.9	78.0	73.2
Croatia*							53.5	64.3	77.4	86.4	92.3	95.4	105.2	117.0	99.0	112.0	121.1	101.8	71.8	67.7	80.6	87.7	89.5	97.2	80.9	81.6
Czech Republic*								70.5	69.3	74.0	77.8	75.3	77.9	82.0	76.0	75.2	72.8	71.1	70.0	79.0	77.6	75.5	77.6	72.0	70.6	74.1
Cyprus*	115.5	122.4	117.6	130.9	127.7	127.6	125.6	127.4	117.2	137.9	129.9	130.7	144.0	148.9	132.9	137.2	135.7	127.8	124.0	129.4	124.5	120.5	107.8	106.1	107.8	108.4
Denmark*	83.3	79.2	81.2	77.0	70.2	72.8	80.6	75.7	77.1	71.7	75.9	85.8	80.4	92.5	89.4	89.6	94.8	99.6	102.6	97.6	99.4	97.3	100.3	116.8	120.5	121.8
Estonia*							61.1	49.6	63.0	53.0	62.3	65.9	67.8	71.2	68.8	78.9	77.9	98.6	83.3	83.0	81.9	99.0	96.3	107.4	109.3	122.1
Finland*	50.2	47.2	57.8	57.4	57.0	60.1	59.0	59.7	70.8	65.0	70.6	73.9	64.2	73.4	71.3	70.4	72.1	72.7	75.2	78.7	74.8	79.2	78.0	84.8	80.3	88.1
France*	113.1	119.2	128.6	128.3	126.3	129.0	119.5	123.6	99.5	106.6	105.6	103.2	108.6	109.0	109.1	107.6	109.0	106.6	111.8	103.7	97.2	97.8	100.4	105.2	102.6	103.6
Georgia							54.4	77.5	81.1	87.8	92.0	105.9	94.0	80.6	76.1	81.4	83.3	84.3	86.2	92.7	59.4	63.5	64.1	58.4	56.5	59.0
Germany*	74.4	74.5	76.5	76.3	73.6	76.9	79.5	71.0	76.7	77.7	85.2	83.0	84.1	88.6	89.2	91.2	90.4	88.9	91.0	86.1	87.9	86.7	88.1	91.7	90.1	94.3
Greece*	237.5	236.4	263.3	269.1	259.2	300.5	255.1	262.1	270.8	274.5	278.3	262.5	268.3	277.1	288.2	281.9	263.2	288.3	302.4	262.8	237.9	241.5	230.5	246.4	219.5	232.1
Hungary*	90.3	97.0	97.0	91.6	92.9	94.6	90.4	88.1	87.1	98.4	94.1	104.7	103.6	96.4	113.4	106.7	106.6	109.1	120.9	108.1	129.0	113.9	115.0	105.1	70.5	93.9
Iceland	32.8	36.4	32.0	31.8	31.4	35.0	38.5	38.2	41.5	44.9	48.2	47.6	50.7	50.4	49.8	52.8	52.3	55.2	58.0	64.0	69.8	75.4	74.4	70.1	72.3	71.4
Ireland*	68.1	67.6	69.6	66.6	71.9	77.4	80.0	78.0	79.2	70.3	75.3	71.4	75.8	71.7	71.5	80.4	80.0	78.8	75.1	71.7	80.2	82.3	88.5	88.4	92.7	95.3
Israel	160.0	166.5	170.8	197.8	198.5	177.5	185.2	198.4	225.8	251.3	229.3	220.4	245.0	262.1	239.9	228.1	235.1	224.9	235.3	199.3	181.7	177.3	168.0	175.3	163.1	167.7
Italy*	172.1	173.5	175.6	176.9	172.2	181.1	188.2	161.2	174.0	177.9	178.5	178.1	174.4	184.8	196.8	160.4	144.7	174.3	197.4	183.4	160.2	157.7	153.4	174.8	144.5	144.5
Kazakhstan							63.5	51.5	54.4	53.5	50.9	55.6	70.3	76.4	86.4	118.1	134.3	147.6	153.3	160.5	153.2	153.6	166.6	173.1	189.6	225.0
Kyrgyzstan							75.5	50.4	52.4	49.4	63.5	65.6	90.8	119.0	129.6	142.3	108.9	132.8	132.5	132.5	149.9	149.0	148.0	153.5	148.9	147.5
Latvia*							82.7	80.2	82.0	69.5	98.9	78.4	71.6	80.2	71.7	96.8	95.0	112.8	109.0	112.7	119.3	115.4	110.4	121.2	111.0	123.0
Lithuania*							66.7	72.7	70.4	70.8	81.8	83.2	93.0	100.5	97.5	97.6	90.0	110.7	112.5	120.8	87.1	102.5	106.0	113.2	94.9	125.2
Luxembourg*															80.3	88.6	85.6	91.7	84.1	87.3	88.0	88.2	88.3	78.3	110.2	110.5
Malta*	111.4	118.5	119.9	124.0	125.3	118.4	119.8	128.9	114.8	118.7	190.5	159.6	198.0	192.1	186.3	188.3	187.8	184.5	215.5	200.0	213.4	210.0	209.0	201.0	200.0	204.2
Montenegro																					191.3	182.9	243.9	247.2	241.9	241.6
Netherlands*	84.7	72.4	79.8	76.3	75.2	64.5	80.5	79.8	74.0	69.4	85.1	75.9	67.1	95.7	98.0	101.1	86.3	80.5	95.3	86.1	94.6	106.2	103.6	88.3	78.4	83.8
Norway	56.0	56.7	63.3	61.4	56.8	57.3	56.7	58.2	63.5	60.1	62.2	62.8	59.2	63.8	60.6	68.7	68.3	75.0	75.0	74.2	75.8	77.5	81.6	78.8	71.8	76.7
Poland*	116.3	118.2	119.1	118.8	123.4	129.7	112.4	131.9	127.1	134.3	129.3	137.7	135.9	130.7	138.4	133.2	109.3	122.8	127.6	114.9	112.9	127.2	113.1	126.1	113.5	129.4
Portugal*	147.9	129.2	135.7	153.8	180.8	164.3	122.0	154.2	165.0	168.9	176.9	161.3	207.2	198.7	179.4	192.8	159.7	155.3	213.7	184.2	148.6	174.0	161.3	188.6	198.5	166.2
Republic of Moldova							109.4	106.1	89.9	95.9	72.9	76.1	108.5	104.9	78.2	102.9	90.7	98.3	85.4	103.5	137.8	66.2	114.9	107.9	112.5	113.2
Romania*	152.0	135.2	154.5	142.2	123.4	112.7	102.5	131.7	130.8	140.6	132.2	131.5	146.1	171.4	148.2	162.8	160.8	192.0	197.0	182.6	187.5	149.6	177.9	174.7	176.7	186.6
Russian Federation							80.1	72.5	69.0	76.9	76.1	80.8	79.4	85.0	88.3	90.2	92.1	96.4	101.7	106.3	109.6	103.7	103.8	105.5	104.5	109.7
Serbia																					123.4	103.3	119.3	119.1	120.7	116.5
Slovakia*								74.4	68.8	66.0	76.0	85.5	91.9	105.3	82.4	76.8	68.1	73.3	80.9	74.8	85.8	89.0	97.7	95.1	92.6	95.2
Slovenia*							52.9	63.0	61.2	68.3	70.4	67.4	65.4	87.5	75.4	69.9	74.9	76.9	84.2	87.5	87.6	76.7	84.7	87.6	74.5	80.0
Spain*	166.6	167.2	185.9	196.0	212.3	187.8	178.1	162.6	161.8	149.2	157.1	158.5	159.5	169.5	164.6	155.6	163.5	155.1	162.1	155.8	147.1	154.6	145.5	158.5	140.8	123.8
Sweden*	54.9	53.8	63.7	63.6	65.9	61.5	65.9	66.2	69.5	64.7	69.8	70.1	72.5	74.8	74.4	77.1	78.0	79.7	86.1	85.6	90.5	86.9	89.0	91.8	87.7	93.9
Switzerland	88.7	87.9	94.8	91.1	90.7	93.8	91.9	90.1	92.2	96.5	96.9	94.8	96.3	94.9	100.2	97.5	98.9	95.1	95.9	88.0	88.2	90.4	95.1	99.6	103.8	108.2
Tajikistan							99.0	118.2	94.7	96.7	71.0	55.6	60.4	75.8	61.3	71.4	80.3	91.6	98.3	103.4	113.6	102.8	119.5	141.3	143.4	157.5
TFYR Macedonia							174.6	150.1	158.0	175.4	182.3	150.1	183.3	179.5	186.2	194.2	157.2	155.2	145.7	137.8	142.3	153.1	137.2	191.8	199.3	188.2
Turkey	199.0	200.5	198.6	195.9	213.2	213.5	217.0	208.4	214.0	242.7	234.6	219.4	244.4	255.9	251.7	241.6	253.7	249.7	240.0	249.0	239.8	234.6	244.2	235.2	227.0	241.0
Turkmenistan							92.2	94.7	95.2	96.9	90.9	92.0	87.6	89.2	102.4	87.0	120.0	132.1	132.6	142.4	144.1	151.5	150.7	154.3	156.1	153.5
Ukraine							89.1	90.1	84.7	96.9	87.9	91.3	94.8	96.7	102.3	106.0	109.3	115.2	116.5	122.7	129.1	119.4	131.3	138.8	144.3	163.6
United Kingdom*	82.6	80.2	87.4	86.5	88.2	88.9	90.9	89.3	81.3	76.9	81.0	84.4	88.3	92.3	87.1	90.9	85.7	92.3	90.3	95.9	93.4	91.6	93.0	88.7	92.8	94.1
Uzbekistan							153.2	132.8	131.0	121.0	110.3	100.3	101.4	117.1	108.3	116.1	118.5	131.7	125.6	131.2	159.1	172.3	192.7	205.9	224.3	240.8
EU	**115.6**	**115.2**	**121.7**	**121.7**	**121.9**	**122.1**	**116.8**	**113.5**	**112.0**	**113.8**	**116.8**	**116.8**	**119.8**	**125.9**	**124.4**	**120.4**	**115.1**	**121.7**	**128.3**	**120.6**	**116.4**	**116.6**	**116.0**	**121.7**	**113.7**	**115.8**
Europe	**109.1**	**108.1**	**111.8**	**107.6**	**107.2**	**106.6**	**104.8**	**102.3**	**100.5**	**104.5**	**105.8**	**107.1**	**109.5**	**114.5**	**114.2**	**112.6**	**110.0**	**115.8**	**121.9**	**118.1**	**116.7**	**114.4**	**115.6**	**120.4**	**115.3**	**118.9**

Source: Food and Agriculture Organization of the United Nations (FAO) http://faostat.fao.org/beta/en/#home. **Notes:** These data come from FAO food balance sheets which collect-country level data on food production and trade. The actual food consumption may be lower than the quantity shown as food availability depends on the magnitude of wastage and losses of food in the household, e.g. during storage, in preparation and cooking, as plate-waste or quantities fed to domestic animals and pets, thrown or given away. Blank cells indicate that data were not available. Data were not available for Andorra, Monaco or San Marino.

*Asterisk denotes EU member states.

Table 5.2 Fruit consumption, 1986 to 2011, Europe

Quantity, kg per person per year	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Albania	38.6	36.3	35.7	41.1	31.9	26.3	19.7	34.8	38.4	40.5	46.4	41.1	48.1	57.6	70.8	83.4	87.0	92.3	93.9	102.3	110.7	118.5	119.1	125.7	138.4	143.0
Armenia							61.2	36.8	54.7	69.8	68.1	51.6	52.7	41.1	48.1	48.7	43.3	40.2	46.6	93.9	96.9	91.3	112.5	120.3	65.5	79.6
Austria*	133.2	122.4	140.5	148.5	138.9	140.2	146.3	165.3	152.8	120.0	99.4	119.5	91.7	113.0	127.1	130.0	120.2	140.5	141.1	143.8	144.1	149.6	156.8	130.4	123.7	146.0
Azerbaijan							88.2	74.7	79.0	82.1	72.6	45.1	59.4	61.8	58.1	59.6	55.4	52.6	41.2	56.8	61.7	54.3	55.5	63.2	64.9	69.8
Belarus							38.3	45.1	40.0	41.6	40.2	38.7	19.9	25.0	26.3	34.5	54.4	51.4	52.7	53.4	67.1	67.0	67.2	66.6	70.9	63.0
Belgium*															72.5	69.8	70.4	74.4	86.7	70.2	87.3	84.2	90.5	83.3	72.6	59.8
Bosnia and Herzegovina							22.9	24.5	24.1	28.4	31.6	38.7	33.2	24.5	29.5	30.9	30.0	57.0	104.7	100.0	87.0	86.3	87.0	96.8	89.4	90.7
Bulgaria*	86.2	77.6	75.6	79.6	81.5	68.6	71.5	54.7	54.1	67.4	61.2	54.8	46.2	49.5	51.5	50.9	44.1	37.8	41.3	32.9	33.3	49.6	34.5	36.4	35.7	46.5
Croatia*							58.5	68.7	77.2	91.7	96.2	83.2	84.5	86.7	82.7	84.1	82.2	91.1	81.8	74.5	98.4	106.4	106.7	109.4	105.1	113.1
Czech Republic*								66.5	74.2	78.3	83.9	74.3	74.6	73.7	70.8	63.3	57.4	66.6	73.9	69.7	69.1	70.2	76.7	75.9	72.1	68.7
Cyprus*	93.1	126.9	96.1	115.5	139.9	105.2	129.7	123.1	85.7	107.8	93.9	105.9	132.0	130.9	113.2	97.5	94.1	82.7	94.9	98.2	106.4	109.7	92.0	94.9	90.3	96.6
Denmark*	71.8	75.5	76.1	76.4	76.7	76.3	75.4	66.5	61.6	67.3	73.5	92.9	77.0	94.6	103.0	93.6	164.7	138.0	135.0	136.2	127.7	111.6	111.4	122.6	100.7	98.8
Estonia*							26.9	46.3	28.1	57.2	51.7	68.7	71.4	72.7	82.7	80.3	72.7	71.7	75.8	69.4	64.4	80.0	83.3	82.1	73.1	71.1
Finland*	63.0	77.4	74.1	81.3	78.6	79.1	79.4	75.1	77.1	52.7	69.3	69.8	71.4	84.0	82.1	90.6	83.5	91.7	95.6	94.4	89.6	93.5	87.6	89.5	89.1	94.5
France*	79.3	72.5	78.7	78.4	80.4	78.2	90.8	84.3	90.9	94.1	88.4	83.5	85.1	89.1	97.4	96.6	100.8	95.8	107.5	112.1	110.8	116.2	115.2	115.8	111.2	110.1
Georgia							88.5	55.0	56.3	62.8	67.5	61.0	58.6	44.6	49.5	45.1	37.7	53.0	40.1	59.2	41.8	42.7	40.6	37.7	35.8	34.5
Germany*	113.1	109.2	117.1	112.6	116.1	102.9	116.1	88.6	89.4	80.2	96.9	86.1	85.3	83.5	113.7	88.6	96.3	90.2	84.3	84.7	81.9	81.0	78.4	79.1	76.0	80.4
Greece*	128.2	131.0	177.3	167.8	165.7	142.2	169.9	171.1	179.3	143.7	141.9	141.5	138.9	179.3	164.8	170.9	166.1	150.7	188.3	171.0	154.7	158.2	142.8	147.8	123.8	120.7
Hungary*	65.7	65.0	65.9	66.2	66.4	64.7	69.1	71.9	67.3	53.8	63.1	58.6	64.2	69.1	67.5	58.6	63.7	74.6	84.6	80.8	93.7	73.6	78.6	75.3	62.4	65.7
Iceland	57.4	68.8	104.0	95.2	86.3	85.6	84.6	87.8	83.0	82.4	77.8	84.3	79.7	82.7	92.5	102.1	111.5	103.5	105.8	114.5	132.9	147.5	139.2	121.0	119.5	121.1
Ireland*	62.5	70.4	70.2	69.7	75.6	61.9	64.8	68.7	68.6	57.3	84.1	64.9	62.3	54.4	66.5	80.2	111.3	134.9	120.7	111.6	111.9	139.6	149.8	142.4	132.5	131.3
Israel	153.8	159.9	134.7	136.9	177.4	129.7	163.7	157.6	126.8	127.7	144.9	156.5	132.9	136.7	140.8	156.4	159.0	140.8	169.3	188.4	146.8	141.6	126.9	139.5	121.0	108.6
Italy*	119.4	120.2	123.0	128.2	128.8	125.1	146.6	137.6	128.8	119.8	129.2	118.7	120.7	137.9	147.1	134.2	143.9	134.2	155.1	152.8	152.9	151.5	144.5	163.6	141.4	140.8
Kazakhstan							14.5	10.7	10.6	11.3	9.7	9.2	6.7	8.7	15.9	15.2	17.2	16.4	22.8	24.7	25.4	34.1	33.4	40.7	35.0	71.2
Kyrgyzstan							26.6	9.1	13.0	9.2	6.2	11.6	11.8	8.8	27.0	31.3	30.6	28.8	36.7	34.5	47.8	42.7	31.4	32.1	31.7	30.9
Latvia*							26.0	54.5	36.4	39.8	37.8	48.9	42.7	53.9	59.5	54.6	60.0	53.3	53.6	59.3	57.4	61.4	54.3	49.2	46.4	49.2
Lithuania*							29.6	58.6	18.4	31.4	42.4	76.8	55.9	62.9	65.8	73.1	57.6	66.0	55.8	73.3	108.7	99.1	62.0	57.7	42.7	42.1
Luxembourg*															217.9	218.2	238.7	241.6	205.8	190.0	197.4	187.0	205.3	174.7	175.2	201.6
Malta*	72.4	71.6	79.0	72.8	85.3	86.8	85.9	97.9	91.8	111.1	85.2	87.3	99.0	93.6	98.0	90.5	90.2	97.1	104.1	113.3	100.7	95.5	92.6	96.9	72.9	86.9
Montenegro																					134.5	181.2	222.9	200.3	166.1	156.2
Netherlands*	109.0	112.7	122.6	116.8	137.2	141.6	175.9	131.2	137.9	144.4	120.7	106.7	110.5	121.6	121.1	122.0	143.6	133.1	129.1	131.6	129.7	136.5	127.5	120.3	120.2	161.9
Norway	102.1	107.2	101.7	102.8	98.8	93.2	95.2	103.3	100.1	97.5	99.9	102.4	103.4	107.0	108.4	108.1	121.7	124.6	130.8	131.9	134.5	142.8	148.2	128.8	128.0	137.9
Poland*	35.6	18.7	32.1	31.5	28.9	38.8	41.5	46.0	34.5	41.7	49.4	44.7	49.2	50.5	47.1	54.0	48.9	48.8	49.7	51.2	51.7	45.3	54.1	54.7	53.4	54.3
Portugal*	67.7	88.4	76.5	91.0	100.4	94.8	102.6	104.5	100.9	118.8	106.1	107.8	111.2	124.0	117.1	114.4	115.5	107.5	127.0	113.5	118.5	115.4	115.0	117.6	106.6	113.7
Republic of Moldova							55.7	82.1	67.9	59.9	64.1	76.1	55.0	55.2	53.8	55.9	55.2	50.3	42.8	42.2	45.5	44.1	52.0	35.8	32.5	31.9
Romania*	52.1	46.2	46.9	48.2	58.0	50.2	45.8	64.8	51.6	48.4	57.2	47.2	46.0	43.8	51.6	52.2	49.7	68.5	70.1	74.4	68.7	58.6	57.6	64.7	70.0	75.2
Russian Federation							39.9	35.4	35.2	33.4	35.4	36.1	33.7	28.9	36.3	39.1	45.3	47.2	53.4	59.9	64.8	69.9	66.6	62.1	66.1	68.4
Serbia																					100.3	108.6	116.0	122.0	65.3	92.1
Slovakia*								43.1	46.4	52.6	74.5	66.7	78.4	63.9	65.9	53.5	56.6	59.2	51.0	61.0	57.6	62.7	65.9	67.7	63.7	61.8
Slovenia*							48.9	62.5	82.7	85.8	130.2	108.6	122.7	131.2	158.3	116.6	147.7	141.6	162.9	156.0	132.4	125.7	125.0	134.5	127.1	127.6
Spain*	94.8	108.6	108.7	122.7	116.0	113.1	130.0	118.4	108.6	90.9	102.7	116.2	100.7	112.8	109.9	110.2	118.9	110.3	94.1	105.5	110.1	84.5	102.5	71.8	85.3	79.7
Sweden*	78.5	83.1	88.2	94.6	97.0	88.3	88.7	87.2	91.6	82.0	82.7	92.5	92.2	98.6	98.6	101.3	109.1	115.1	113.9	109.8	111.7	117.5	134.0	117.8	119.2	117.1
Switzerland	130.8	125.7	134.8	129.3	127.8	117.2	124.5	119.3	116.1	116.2	121.5	112.3	116.5	94.7	89.7	88.0	87.5	80.1	76.2	72.1	74.2	79.2	86.4	96.0	102.9	128.6
Tajikistan							27.5	28.3	25.1	28.4	31.7	31.3	13.0	13.5	20.1	17.3	12.5	5.1	17.1	15.7	19.0	18.0	22.5	22.4	22.8	28.4
TFYR Macedonia							73.3	63.2	82.3	79.3	82.0	87.9	90.9	98.8	117.0	80.9	72.8	92.7	100.2	109.6	79.3	111.6	118.6	117.6	103.2	92.2
Turkey	124.2	118.6	123.7	121.5	118.2	122.8	124.3	125.2	116.4	112.3	114.1	113.7	116.0	113.8	116.7	107.0	108.4	117.0	104.9	120.5	113.4	116.8	123.6	127.3	120.9	122.9
Turkmenistan							32.2	33.3	23.9	24.1	23.2	25.6	31.6	31.5	41.6	42.8	50.2	55.9	61.1	65.5	66.4	73.3	53.1	55.2	56.3	54.8
Ukraine							38.2	40.2	27.1	33.6	35.3	40.9	29.3	22.9	30.8	28.7	29.6	36.2	37.9	40.4	39.0	42.6	47.7	45.8	41.4	55.7
United Kingdom*	68.1	71.5	73.4	78.0	76.2	75.0	77.7	79.1	81.2	78.9	81.8	79.6	89.7	86.4	84.7	92.0	98.0	115.6	116.2	127.0	139.1	126.9	134.2	125.1	123.3	125.7
Uzbekistan							24.8	21.0	19.6	28.4	26.6	23.1	16.3	15.4	22.9	23.0	24.7	20.8	27.5	29.3	39.0	42.5	44.9	50.2	56.1	55.0
EU	**87.6**	**86.8**	**92.7**	**94.7**	**96.2**	**92.4**	**101.9**	**92.4**	**90.8**	**86.2**	**92.2**	**87.7**	**87.9**	**93.2**	**99.3**	**94.5**	**100.0**	**99.6**	**102.9**	**104.8**	**106.4**	**102.6**	**104.1**	**102.2**	**97.7**	**100.1**
Europe	**72.8**	**70.4**	**73.7**	**73.7**	**73.1**	**69.7**	**81.4**	**75.8**	**73.5**	**70.3**	**75.8**	**73.2**	**71.8**	**73.5**	**79.7**	**77.4**	**82.7**	**84.1**	**88.1**	**90.2**	**92.8**	**91.8**	**92.9**	**90.7**	**87.5**	**91.0**

Source: Food and Agriculture Organization of the United Nations (FAO) http://faostat.fao.org/beta/en/#home. **Notes:** These data come from FAO food balance sheets which collect country-level data on food production and trade. The actual food consumption may be lower than the quantity shown as food availability depends on the magnitude of wastage and losses of food in the household, e.g. during storage, in preparation and cooking, as plate-waste or quantities fed to domestic animals and pets, thrown or given away. Blank cells indicate that data were not available. Data were not available for Andorra, Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 5.1a Vegetable consumption kg/person/year, 2011, Europe

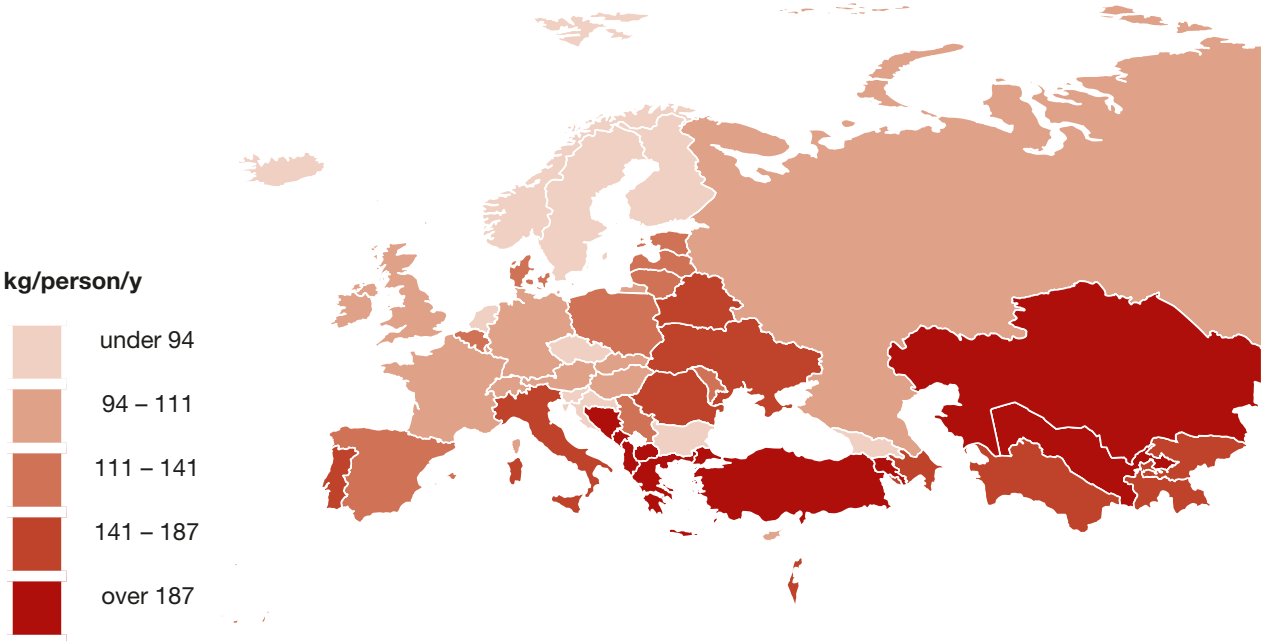


Figure 5.2a Fruit consumption kg/person/year, 2011, Europe

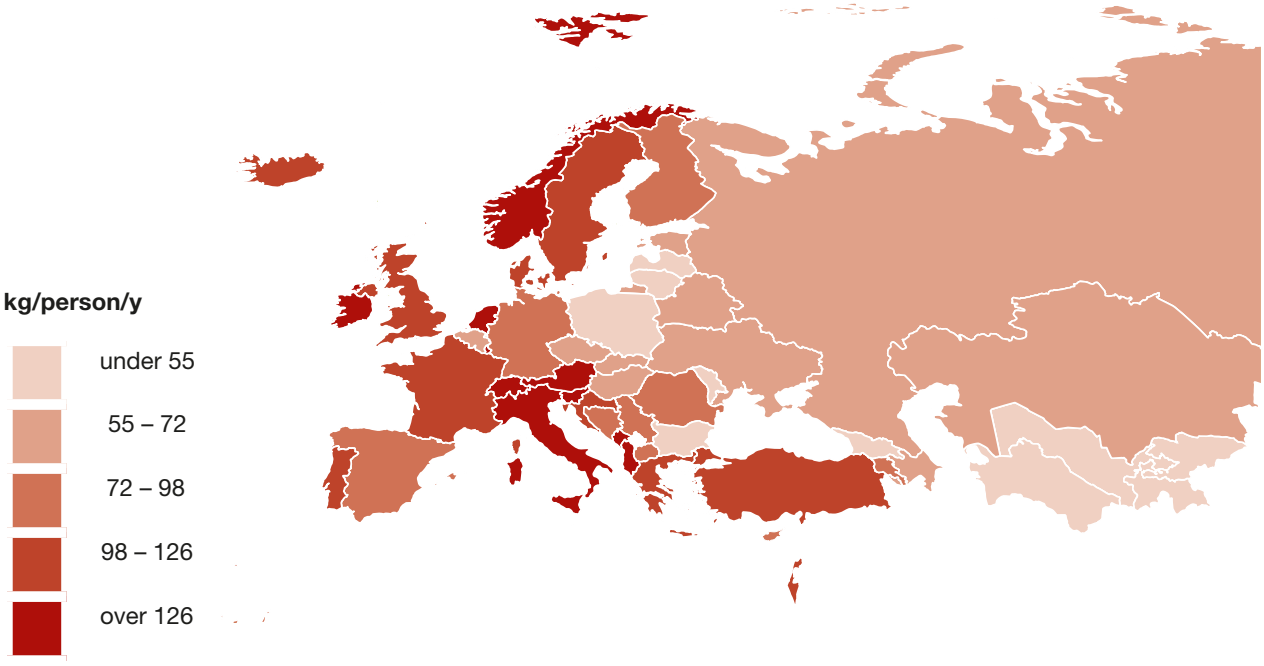


Figure 5.1b Vegetable consumption, 1986 to 2011, Europe and European regions

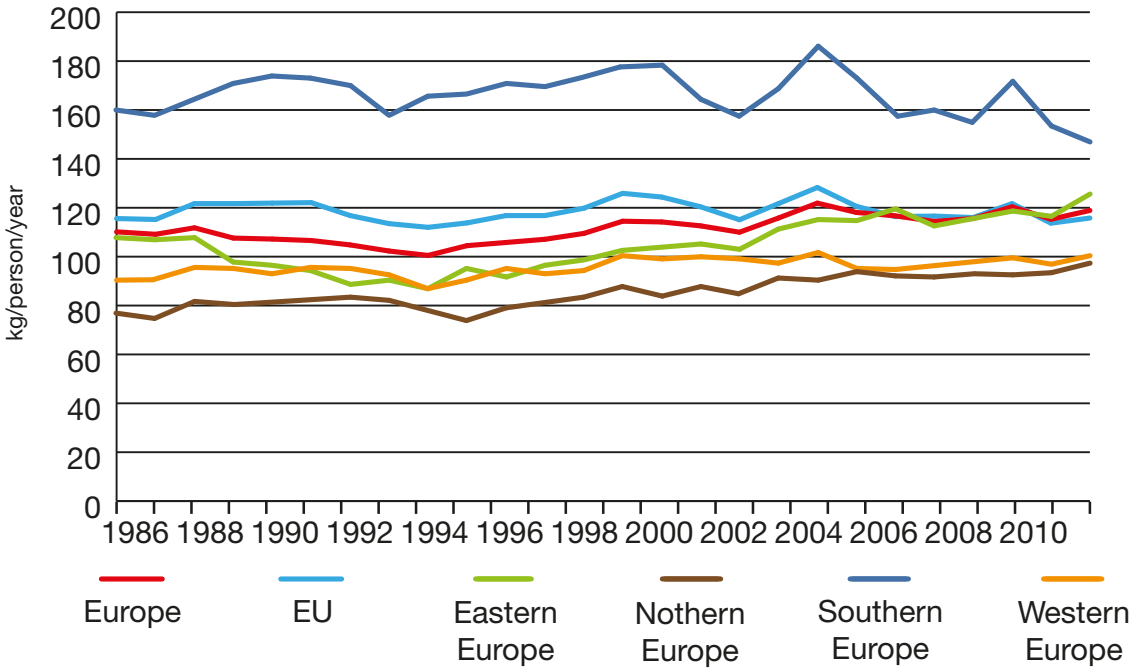


Figure 5.2b Fruit consumption, 1986 to 2011, Europe and European regions

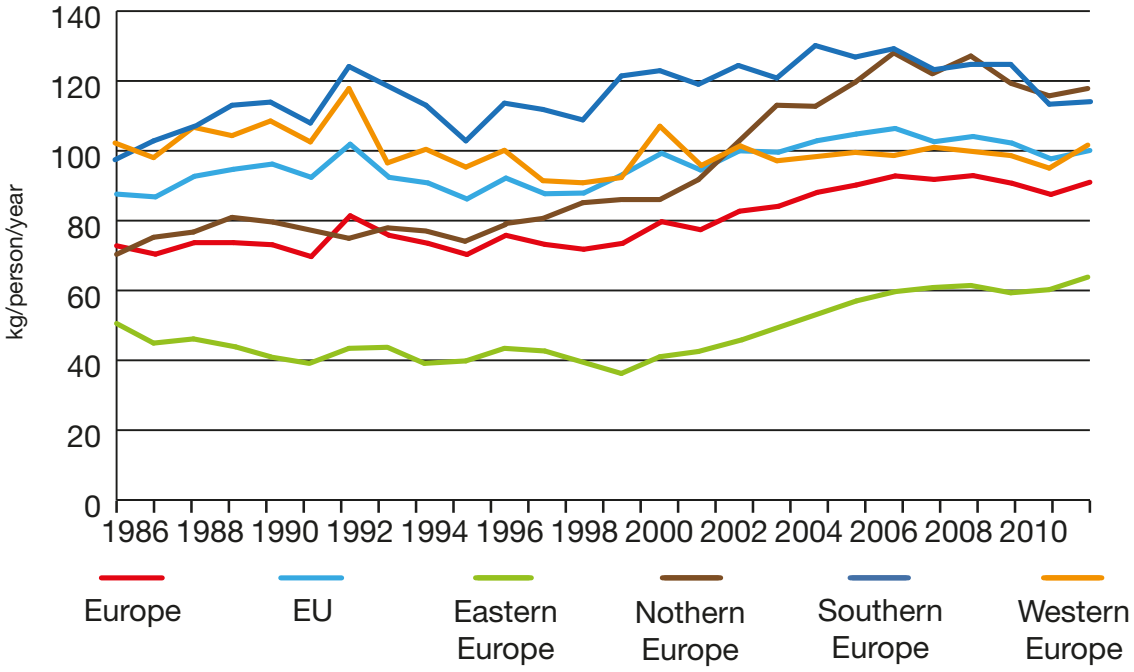


Table 5.3 Total energy consumption, 1986 to 2011, Europe

Quantity, kcal per person per day	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Albania	2,690	2,497	2,593	2,566	2,561	2,574	2,657	2,797	2,880	2,717	2,837	2,725	2,725	2,797	2,734	2,800	2,861	2,769	2,787	2,870	2,855	2,866	2,896	2,935	2,987	3,023
Armenia							2,184	2,103	2,251	2,276	2,420	2,330	2,312	2,281	2,235	2,242	2,291	2,458	2,554	2,657	2,755	2,791	2,833	2,784	2,786	2,809
Austria*	3,429	3,420	3,422	3,478	3,509	3,556	3,546	3,508	3,556	3,582	3,630	3,578	3,712	3,776	3,803	3,815	3,753	3,711	3,696	3,734	3,784	3,798	3,784	3,793	3,777	3,784
Azerbaijan							2,318	2,235	2,112	2,115	2,262	2,076	2,119	2,279	2,395	2,463	2,585	2,706	2,842	2,918	2,912	2,890	2,868	2,909	2,948	2,952
Belarus							3,099	3,194	3,125	3,195	3,284	3,282	3,219	3,117	2,993	3,046	2,981	2,821	2,901	2,987	3,084	3,186	3,202	3,129	3,168	3,253
Belgium*															3,767	3,786	3,775	3,745	3,747	3,733	3,764	3,772	3,767	3,756	3,763	3,793
Bosnia and Herzegovina							2,352	2,457	2,648	2,638	2,879	3,093	3,026	2,939	2,805	2,904	2,903	2,836	3,092	3,041	3,019	3,066	3,098	3,087	3,101	3,130
Bulgaria*	3,657	3,678	3,700	3,623	3,129	3,041	3,022	2,958	2,873	2,896	2,741	2,676	2,819	2,879	2,813	2,816	2,779	2,757	2,764	2,723	2,759	2,733	2,699	2,822	2,782	2,877
Croatia*							2,312	2,240	2,368	2,546	2,552	2,529	2,517	2,543	2,556	2,738	2,820	2,868	2,943	2,979	3,086	3,094	3,136	3,143	3,041	3,052
Czech Republic*								3,038	2,978	3,209	3,319	3,235	3,269	3,118	3,079	3,169	3,243	3,319	3,322	3,318	3,279	3,261	3,271	3,278	3,281	3,292
Cyprus*	2,737	2,719	2,633	2,685	2,689	2,745	2,787	2,799	2,812	2,823	2,724	2,721	2,727	2,709	2,676	2,648	2,638	2,611	2,601	2,565	2,559	2,639	2,657	2,630	2,671	2,683
Denmark*	3,139	3,216	3,249	3,183	3,161	3,227	3,338	3,339	3,315	3,395	3,294	3,365	3,395	3,332	3,313	3,335	3,368	3,343	3,382	3,408	3,410	3,435	3,329	3,346	3,396	3,363
Estonia*							2,538	2,594	2,773	2,944	3,082	3,027	2,975	3,124	3,067	3,060	3,055	3,086	3,075	3,171	3,183	3,189	3,227	3,263	3,210	3,214
Finland*	2,966	2,944	3,100	3,230	3,148	3,111	3,190	3,038	2,989	3,031	3,017	3,150	3,177	3,173	3,151	3,171	3,153	3,152	3,189	3,199	3,232	3,278	3,233	3,229	3,276	3,285
France*	3,462	3,531	3,560	3,556	3,506	3,541	3,549	3,543	3,512	3,534	3,519	3,547	3,593	3,604	3,605	3,640	3,656	3,588	3,555	3,538	3,513	3,466	3,550	3,534	3,548	3,524
Georgia							1,928	1,665	1,963	2,388	2,541	2,649	2,601	2,604	2,475	2,639	2,838	2,937	3,026	3,044	2,866	2,903	2,978	2,812	2,638	2,731
Germany*	3,406	3,382	3,404	3,403	3,262	3,325	3,393	3,203	3,214	3,249	3,297	3,176	3,285	3,279	3,336	3,363	3,427	3,391	3,411	3,449	3,463	3,525	3,512	3,513	3,500	3,539
Greece*	3,337	3,461	3,544	3,628	3,540	3,537	3,604	3,545	3,580	3,515	3,510	3,515	3,534	3,625	3,601	3,614	3,639	3,651	3,725	3,597	3,490	3,508	3,592	3,542	3,482	3,433
Hungary*	3,440	3,600	3,531	3,496	3,380	3,205	3,282	3,105	3,026	2,949	2,928	3,008	3,008	2,999	3,172	3,092	3,071	3,059	3,195	3,274	3,279	3,187	3,191	3,148	3,041	2,968
Iceland	3,294	3,208	3,113	3,148	3,057	3,117	3,106	3,086	3,124	3,111	3,032	3,108	3,117	3,160	3,152	3,148	3,214	3,236	3,290	3,323	3,401	3,457	3,428	3,391	3,340	3,339
Ireland*	3,615	3,588	3,587	3,587	3,625	3,578	3,621	3,532	3,578	3,514	3,611	3,686	3,684	3,709	3,730	3,726	3,589	3,595	3,572	3,423	3,532	3,522	3,573	3,561	3,582	3,591
Israel	3,359	3,445	3,362	3,343	3,403	3,425	3,449	3,396	3,351	3,465	3,505	3,510	3,502	3,484	3,555	3,606	3,699	3,579	3,624	3,636	3,625	3,522	3,527	3,516	3,534	3,619
Italy*	3,495	3,514	3,532	3,549	3,584	3,640	3,540	3,472	3,484	3,501	3,558	3,578	3,675	3,694	3,670	3,674	3,662	3,625	3,627	3,578	3,610	3,585	3,573	3,583	3,556	3,539
Kazakhstan							2,830	2,906	2,885	2,841	2,862	2,855	2,727	2,744	2,808	2,889	2,932	2,956	2,976	3,012	3,058	3,217	3,147	3,149	3,168	3,107
Kyrgyzstan							2,667	2,405	2,414	2,382	2,508	2,638	2,488	2,516	2,392	2,451	2,486	2,618	2,728	2,753	2,708	2,724	2,710	2,785	2,799	2,828
Latvia*							3,263	3,266	3,174	3,073	2,999	2,919	2,847	2,849	2,787	2,888	2,979	3,036	3,080	3,149	3,230	3,213	3,270	3,277	3,251	3,293
Lithuania*							2,984	2,816	2,777	2,822	3,000	3,178	3,191	3,125	3,155	3,264	3,273	3,187	3,364	3,464	3,463	3,567	3,495	3,454	3,396	3,463
Luxembourg*															3,543	3,563	3,539	3,556	3,550	3,558	3,561	3,554	3,565	3,555	3,568	3,568
Malta*	2,945	3,038	3,142	3,168	3,022	3,162	3,131	3,127	3,163	3,276	3,293	3,302	3,349	3,372	3,330	3,338	3,341	3,367	3,372	3,345	3,368	3,370	3,345	3,382	3,375	3,389
Montenegro																					3,593	3,599	3,671	3,604	3,574	3,568
Netherlands*	3,133	3,154	3,215	3,152	3,279	3,344	3,315	3,322	3,236	3,364	3,374	3,271	3,359	3,283	3,265	3,256	3,251	3,141	3,197	3,238	3,215	3,272	3,278	3,243	3,189	3,147
Norway	3,235	3,307	3,124	3,188	3,156	3,222	3,219	3,222	3,277	3,224	3,311	3,329	3,402	3,418	3,378	3,418	3,459	3,437	3,477	3,520	3,446	3,464	3,478	3,470	3,489	3,484
Poland*	3,426	3,454	3,474	3,489	3,347	3,288	3,362	3,427	3,301	3,320	3,340	3,316	3,378	3,384	3,419	3,421	3,429	3,421	3,382	3,371	3,353	3,361	3,338	3,412	3,416	3,485
Portugal*	3,155	3,320	3,329	3,357	3,403	3,429	3,405	3,460	3,489	3,456	3,507	3,388	3,508	3,561	3,543	3,537	3,533	3,522	3,608	3,600	3,565	3,557	3,582	3,574	3,518	3,456
Republic of Moldova							2,475	2,480	2,440	2,489	2,448	2,454	2,460	2,479	2,500	2,525	2,569	2,555	2,582	2,629	2,699	2,740	2,778	2,785	2,804	2,837
Romania*	2,938	2,901	2,919	2,919	3,127	2,922	2,835	3,000	2,931	3,027	3,056	3,046	3,068	3,081	3,141	3,239	3,319	3,365	3,354	3,424	3,464	3,384	3,425	3,421	3,326	3,363
Russian Federation							2,926	2,973	2,918	2,893	2,787	2,856	2,862	2,889	2,878	2,955	3,024	3,061	3,110	3,200	3,241	3,302	3,307	3,278	3,331	3,358
Serbia																					2,699	2,723	2,697	2,737	2,715	2,724
Slovakia*								2,790	2,979	2,835	2,906	2,904	2,939	2,883	2,778	2,785	2,800	2,790	2,817	2,841	2,833	2,794	2,864	2,899	2,961	2,902
Slovenia*							2,591	2,781	2,840	2,907	3,048	2,927	2,845	3,062	3,057	3,057	3,081	3,113	3,157	3,090	3,234	3,159	3,203	3,208	3,184	3,173
Spain*	3,070	3,167	3,239	3,240	3,285	3,383	3,364	3,315	3,285	3,271	3,360	3,332	3,364	3,389	3,384	3,366	3,368	3,334	3,350	3,303	3,278	3,254	3,191	3,220	3,186	3,183
Sweden*	2,975	2,899	2,951	2,979	2,973	2,942	3,053	3,137	3,087	3,088	3,039	3,087	3,064	3,115	3,100	3,126	3,135	3,125	3,154	3,129	3,097	3,096	3,131	3,131	3,153	3,160
Switzerland	3,427	3,440	3,440	3,423	3,442	3,351	3,421	3,359	3,333	3,312	3,341	3,318	3,327	3,324	3,441	3,381	3,437	3,433	3,413	3,386	3,433	3,428	3,445	3,466	3,462	3,487
Tajikistan							2,046	2,068	2,030	1,974	1,935	1,915	1,936	1,937	1,959	1,962	1,942	1,956	1,979	2,057	2,063	2,064	2,060	2,089	2,076	2,101
TFYR Macedonia							2,365	2,317	2,688	2,582	2,585	2,768	2,870	2,794	2,751	2,631	2,722	2,741	2,874	2,785	2,841	3,025	2,968	3,015	2,983	2,923
Turkey	3,617	3,685	3,721	3,723	3,775	3,724	3,710	3,729	3,729	3,715	3,686	3,604	3,658	3,618	3,662	3,621	3,608	3,588	3,610	3,611	3,648	3,631	3,597	3,622	3,646	3,680
Turkmenistan							2,561	2,578	2,546	2,539	2,509	2,540	2,560	2,603	2,613	2,627	2,686	2,745	2,808	2,831	2,835	2,896	2,868	2,869	2,892	2,883
Ukraine							3,366	3,242	2,979	2,884	2,799	2,854	2,830	2,781	2,896	3,013	3,030	3,050	3,193	3,208	3,244	3,244	3,253	3,161	3,121	3,142
United Kingdom*	3,212	3,227	3,249	3,218	3,242	3,210	3,272	3,219	3,236	3,186	3,270	3,329	3,354	3,402	3,363	3,402	3,418	3,402	3,446	3,440	3,440	3,419	3,424	3,414	3,405	3,414
Uzbekistan							2,713	2,707	2,693	2,655	2,593	2,541	2,492	2,427	2,351	2,272	2,275	2,344	2,381	2,465	2,545	2,569	2,582	2,588	2,635	2,675
EU	3,323	3,350	3,380	3,378	3,347	3,357	3,354	3,294	3,277	3,295	3,332	3,317	3,375	3,387	3,396	3,418	3,437	3,411	3,426	3,422	3,423	3,418	3,423	3,428	3,410	3,416
Europe	3,350	3,379	3,394	3,375	3,369	3,236	3,237	3,204	3,162	3,164	3,168	3,176	3,213	3,222	3,230	3,269	3,299	3,289	3,322	3,340	3,354	3,365	3,370	3,363	3,359	3,372

Source: Food and Agriculture Organization of the United Nations (FAO). http://faostat.fao.org/beta/en/#home. **Notes:** Dietary energy consumption per person refers to the amount of food, expressed in kilocalories (kcal) per day, available for each individual in the total population during the reference period. Caloric content is derived by applying the appropriate food composition factors to the quantities of the commodities. Per person supplies are derived from the total amount of food available for human consumption by dividing total calories by total population actually partaking of the food supplies during the reference period. However, per person figures represent only the average supply available and do not necessarily indicate what is actually consumed by individuals. The actual food consumption may be lower than the quantity shown as food availability depends on the magnitude of wastage and losses of food in the household, e.g. during storage, in preparation and cooking, as plate-waste or quantities fed to domestic animals and pets, thrown or given away. Blank cells indicate data were not available. Data were not available for Andorra, Monaco or San Marino. *Asterisk denotes EU member states.

Figure 5.3a Total energy consumption, 2011, Europe kcal/capita/day

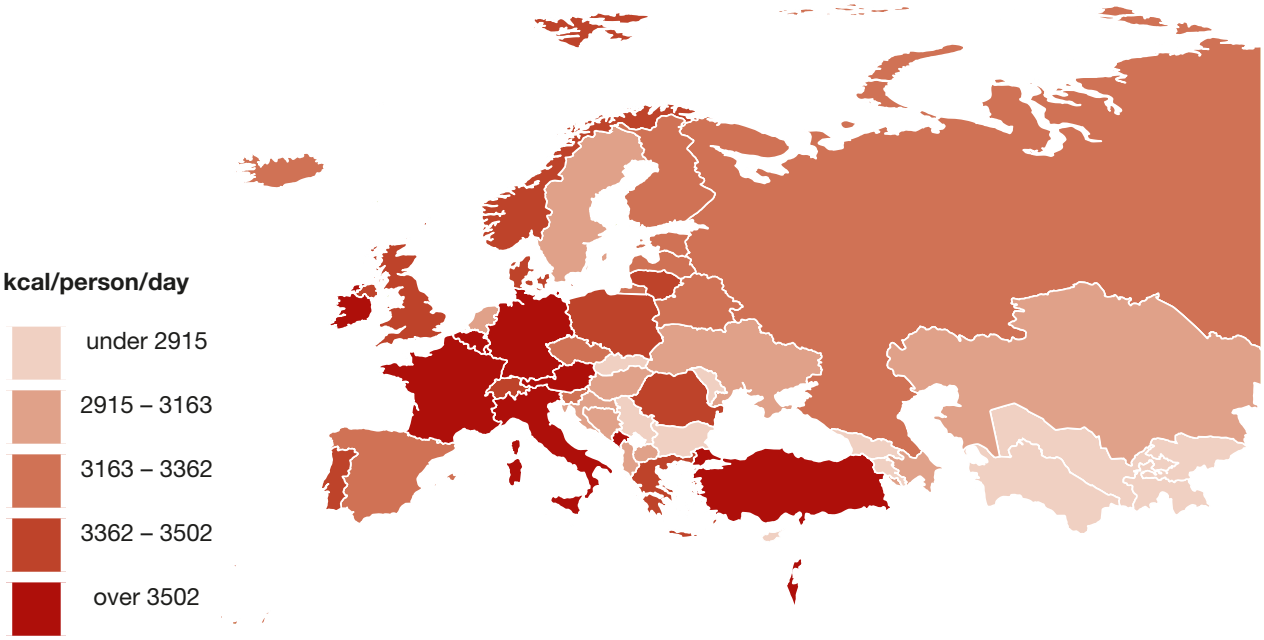


Figure 5.3b Total energy consumption, 1986 to 2011, European regions

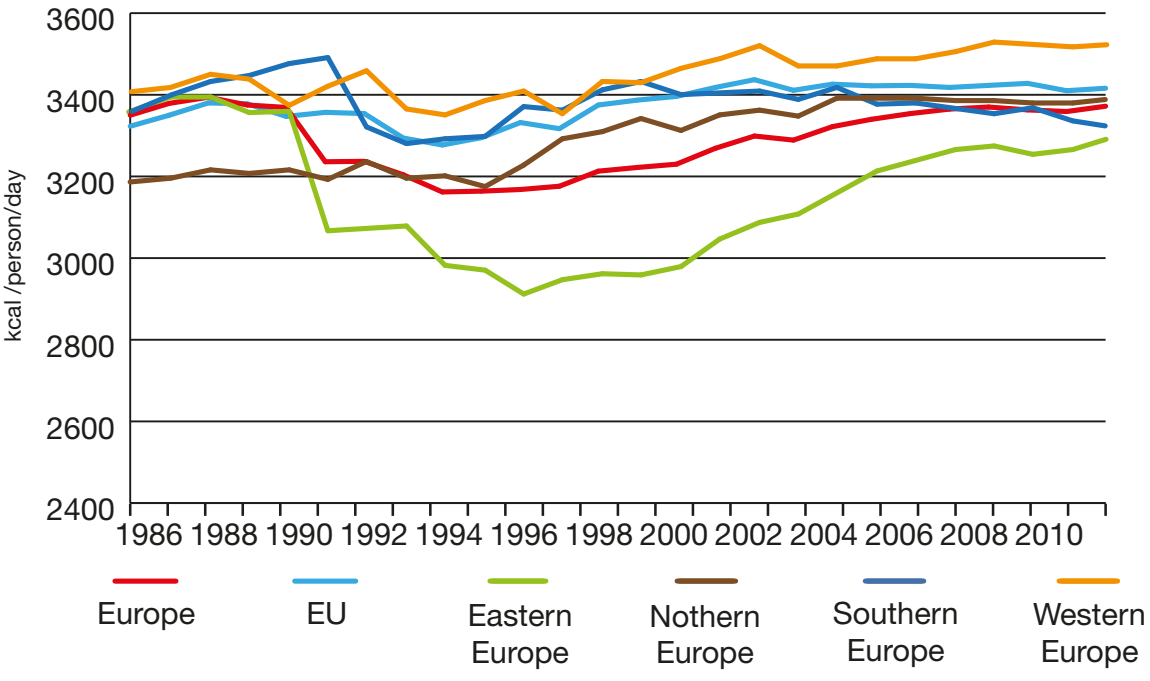


Table 5.4 Fat consumption, 1986 to 2011, Europe

Quantity, g per capita per day	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Albania	57	57	59	61	61	69	70	74	75	78	83	73	75	77	76	80	81	82	88	88	92	92	92	98	93	92
Armenia							31	28	39	44	44	44	37	38	41	43	49	58	56	63	66	77	80	77	82	83
Austria*	155	154	151	156	156	159	161	159	159	159	162	164	165	166	165	168	163	160	163	160	167	168	167	173	175	171
Azerbaijan							39	36	38	37	42	33	34	38	38	39	42	46	51	50	49	48	47	51	56	56
Belarus							92	96	97	96	100	100	101	102	97	104	102	94	95	103	112	118	119	111	121	126
Belgium*															162	165	166	163	161	164	168	166	169	162	148	166
Bosnia and Herzegovina							35	39	40	42	58	58	56	61	60	66	63	58	64	68	68	70	72	71	74	75
Bulgaria*	121	121	122	122	101	96	102	99	91	92	88	86	96	92	92	92	92	94	95	96	93	94	83	100	91	92
Croatia*							68	61	65	73	72	71	68	78	81	82	88	89	101	107	115	120	123	119	110	110
Czech Republic*								115	102	107	111	110	116	114	112	114	116	120	117	128	138	134	138	137	140	139
Cyprus*	115	107	109	110	101	114	106	111	114	109	110	111	108	105	110	111	107	106	106	111	117	112	115	118	116	122
Denmark*	126	129	136	133	130	129	141	137	134	140	134	129	134	132	134	136	130	130	133	137	131	130	127	132	130	132
Estonia*							79	82	92	93	94	93	96	104	88	91	100	103	98	93	94	92	93	94	90	88
Finland*	127	123	125	132	124	124	130	125	122	128	124	130	134	128	123	127	128	126	126	128	129	132	132	131	134	137
France*	154	161	162	164	161	163	165	164	164	164	162	166	168	168	170	171	171	168	162	163	163	160	167	165	164	162
Georgia							31	30	33	43	42	42	48	44	44	60	64	64	74	73	65	67	62	69	64	57
Germany*	136	135	135	138	141	141	146	138	138	138	144	143	144	141	143	137	139	139	139	139	141	146	144	143	144	146
Greece*	130	134	138	142	139	141	146	140	146	146	145	147	148	148	142	142	147	147	149	149	148	149	155	155	155	150
Hungary*	135	144	140	142	136	125	134	133	128	125	124	123	126	124	135	129	136	129	134	139	140	143	142	138	138	135
Iceland	139	128	124	125	124	119	121	117	118	117	115	120	123	128	130	128	138	139	145	145	149	151	150	147	145	146
Ireland*	139	140	139	140	136	132	132	122	128	126	130	141	140	139	140	136	134	134	135	134	125	129	133	130	131	130
Israel	117	118	122	111	112	121	122	117	111	123	126	125	125	123	129	138	141	140	148	148	151	146	147	146	144	149
Italy*	143	147	148	148	151	152	145	144	147	147	149	150	157	159	154	155	155	152	150	148	156	156	156	153	157	156
Kazakhstan							75	78	76	72	70	64	63	65	73	79	85	89	91	104	108	117	122	119	117	118
Kyrgyzstan							68	61	60	48	56	53	57	51	50	50	52	54	57	57	59	65	64	64	70	73
Latvia*							94	89	90	101	95	90	89	89	92	101	109	112	119	118	128	125	123	129	125	127
Lithuania*							84	77	69	62	69	76	75	79	75	84	90	88	95	101	101	103	100	97	100	103
Luxembourg*															146	157	152	155	157	158	153	149	151	143	141	139
Malta*	103	110	108	112	104	111	109	104	96	108	108	107	108	108	106	109	104	105	109	106	111	109	115	111	116	115
Montenegro																					128	132	136	137	137	137
Netherlands*	133	135	135	131	141	139	136	149	137	146	149	147	156	148	146	144	144	130	133	141	133	135	135	129	122	117
Norway	137	139	129	130	128	133	132	133	135	133	136	135	142	141	139	142	146	146	151	157	149	148	147	147	149	150
Poland*	116	117	118	119	111	111	115	113	109	111	112	110	114	114	113	114	116	115	113	113	112	112	112	116	117	121
Portugal*	96	105	113	114	123	121	120	123	124	123	128	124	126	133	134	133	135	134	133	136	137	142	145	145	143	143
Republic of Moldova							59	56	54	51	52	46	49	47	43	42	45	52	56	61	68	76	83	88	84	88
Romania*	89	88	87	83	103	95	84	83	81	86	88	83	87	86	91	95	98	102	95	105	109	107	108	107	108	105
Russian Federation							81	83	81	80	75	78	77	75	77	80	82	84	86	88	91	93	95	96	99	101
Serbia																					80	82	84	82	82	77
Slovakia*								100	103	103	98	99	105	106	97	105	105	106	105	101	105	101	97	108	112	107
Slovenia*							92	101	103	100	106	105	98	106	108	115	116	120	121	118	119	120	125	123	123	119
Spain*	125	129	137	136	139	149	147	146	143	145	147	147	154	153	154	152	151	150	152	149	150	151	148	154	155	160
Sweden*	126	123	123	123	122	122	124	129	126	133	124	129	124	125	123	125	125	124	126	125	123	123	126	128	130	132
Switzerland	157	157	157	156	156	153	152	150	151	149	148	146	149	148	150	151	154	154	153	154	158	156	159	157	156	157
Tajikistan							54	58	55	51	49	45	45	41	42	48	48	50	52	59	54	58	58	58	58	59
TFYR Macedonia							59	61	70	65	72	71	84	87	83	85	89	92	101	98	109	121	105	108	106	104
Turkey	87	88	96	98	94	93	92	97	97	96	99	98	95	94	100	95	97	99	105	105	108	114	110	113	113	121
Turkmenistan							68	74	71	70	67	65	68	70	68	64	68	68	72	72	69	79	81	83	82	82
Ukraine							92	84	77	75	71	74	72	72	72	75	79	82	87	89	91	94	95	94	92	89
United Kingdom*	138	138	137	135	137	136	145	141	139	137	140	141	142	143	141	142	135	133	138	139	147	141	140	140	142	138
Uzbekistan							71	74	76	76	72	72	73	65	65	64	62	63	64	67	68	68	67	66	68	71
EU	**133.1**	**135.1**	**136.3**	**136.8**	**137.7**	**138.6**	**138.1**	**135.1**	**133.7**	**134.9**	**136.7**	**136.8**	**139.8**	**139.6**	**139.5**	**139.4**	**139.6**	**138.1**	**137.7**	**138.9**	**141.5**	**141.4**	**141.9**	**142.1**	**142.4**	**142.7**
Europe	**121.0**	**122.8**	**124.4**	**125.2**	**125.0**	**118.7**	**120.3**	**118.4**	**117.0**	**117.4**	**117.7**	**118.5**	**120.4**	**120.0**	**120.1**	**121.1**	**122.2**	**121.9**	**122.4**	**124.2**	**126.3**	**127.2**	**128.0**	**128.2**	**129.1**	**129.5**

Source: Food and Agriculture Organization of the United Nations (FAO). http://faostat.fao.org/beta/en/#home. **Notes:** These data come from FAO food balance sheets which collect country-level data on food production and trade. The actual food consumption may be lower than the quantity shown as food availability depends on the magnitude of wastage and losses of food in the household, e.g. during storage, in preparation and cooking, as plate-waste or quantities fed to domestic animals and pets, thrown or given away. Blank cells indicate that data were not available. Data were not available for Andorra, Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 5.4 Fat consumption, 1986 to 2011, Europe

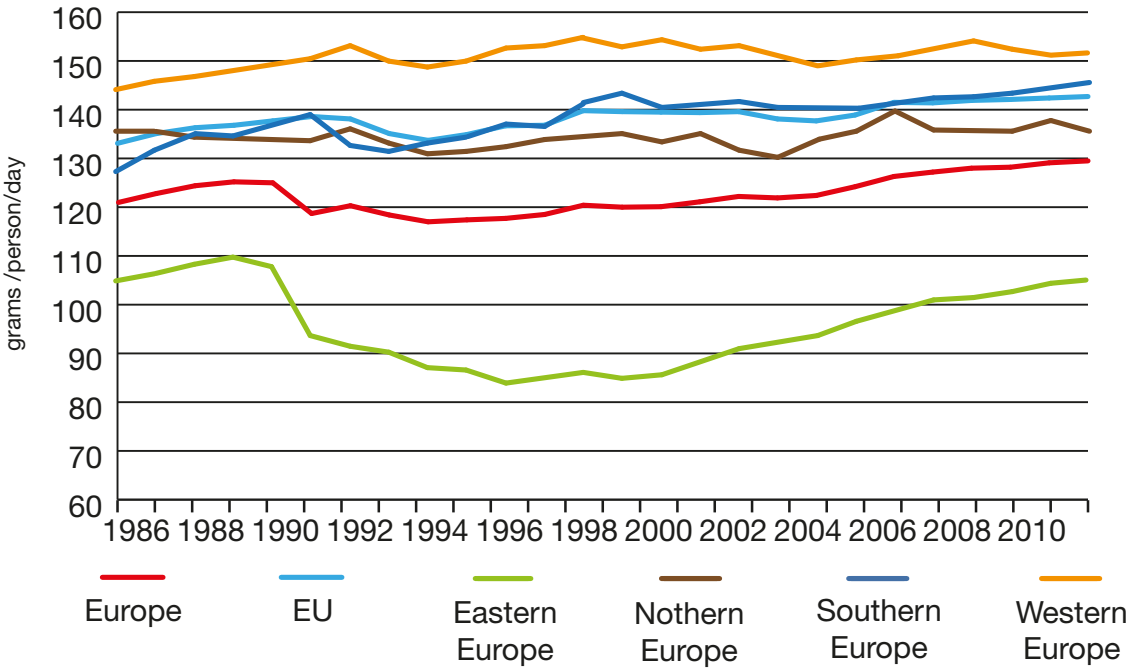


Table 5.5 Percentage of total energy available from fat, 1986 to 2011, Europe

%	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Albania	19	21	21	21	21	24	24	24	23	26	26	24	25	25	25	26	25	27	29	28	29	29	28	30	28	27
Armenia							13	12	16	17	17	17	15	15	17	17	19	21	20	21	22	25	25	25	26	27
Austria*	41	41	40	40	40	40	41	41	40	40	40	41	40	39	39	40	39	39	40	39	40	40	40	41	42	41
Azerbaijan							15	15	16	16	17	14	15	15	14	14	14	15	16	15	15	15	15	16	17	17
Belarus							27	27	28	27	27	27	28	30	29	31	31	30	30	31	33	33	33	32	34	35
Belgium*															39	39	40	39	39	40	40	40	40	39	35	39
Bosnia and Herzegovina							13	14	13	14	18	17	17	19	19	20	19	18	19	20	20	21	21	21	22	22
Bulgaria*	30	30	30	30	29	29	31	30	28	28	29	29	31	29	30	29	30	31	31	32	30	31	28	32	30	29
Croatia*							27	24	25	26	25	25	24	27	28	27	28	28	31	32	33	35	35	34	33	33
Czech Republic*								34	31	30	30	31	32	33	33	32	32	33	32	35	38	37	38	37	38	38
Denmark*	36	36	38	38	37	36	38	37	36	37	37	34	36	36	36	37	35	35	35	36	35	34	34	35	35	35
Estonia*							28	29	30	28	27	28	29	30	26	27	30	30	29	26	26	26	26	26	25	25
Finland*	39	38	36	37	35	36	37	37	37	38	37	37	38	36	35	36	36	36	36	36	36	36	37	37	37	37
France*	40	41	41	41	41	42	42	42	42	42	42	42	42	42	42	42	42	42	41	41	42	42	42	42	42	41
Georgia							15	16	15	16	15	14	17	15	16	20	20	20	22	22	20	21	19	22	22	19
Germany*	36	36	36	36	39	38	39	39	39	38	39	41	39	39	39	37	37	37	37	36	37	37	37	37	37	37
Greece*	35	35	35	35	35	36	37	36	37	37	37	38	38	37	35	35	36	36	36	37	38	38	39	39	40	39
Hungary*	35	36	36	37	36	35	37	39	38	38	38	37	38	37	38	38	40	38	38	38	38	40	40	40	41	41
Iceland	38	36	36	36	36	34	35	34	34	34	34	35	35	37	37	37	39	39	40	39	39	39	39	39	39	39
Ireland*	35	35	35	35	34	33	33	31	32	32	32	34	34	34	34	33	34	33	34	35	32	33	34	33	33	33
Israel	31	31	33	30	30	32	32	31	30	32	32	32	32	32	33	34	34	35	37	37	37	37	38	37	37	37
Italy*	37	38	38	38	38	38	37	37	38	38	38	38	38	39	38	38	38	38	37	37	39	39	39	39	40	40
Kazakhstan							24	24	24	23	22	20	21	21	23	25	26	27	28	31	32	33	35	34	33	34
Kyrgyzstan							23	23	22	18	20	18	21	18	19	19	19	18	19	19	19	21	21	21	22	23
Latvia*							26	25	25	29	29	28	28	28	30	31	33	33	35	34	36	35	34	36	35	35
Lithuania*							25	24	22	20	21	21	21	23	21	23	25	25	25	26	26	26	26	25	26	27
Luxembourg*															37	40	39	39	40	40	39	38	38	36	36	35
Malta*	31	33	31	32	31	32	31	30	27	30	29	29	29	29	29	30	28	28	29	28	30	29	31	30	31	30
Montenegro																					32	33	33	34	35	35
Netherlands*	38	38	38	37	39	37	37	40	38	39	40	40	42	41	40	40	40	37	38	39	37	37	37	36	34	33
Norway	38	38	37	37	36	37	37	37	37	37	37	37	37	37	37	37	38	38	39	40	39	39	38	38	39	39
Poland*	31	30	30	31	30	30	31	30	30	30	30	30	30	30	30	30	31	30	30	30	30	30	30	31	31	31
Portugal*	27	28	30	31	33	32	32	32	32	32	33	33	32	34	34	34	34	34	33	34	34	36	37	37	36	37
Republic of Moldova							22	20	20	19	19	17	18	17	15	15	16	18	19	21	23	25	27	28	27	28
Romania*	27	27	27	26	30	29	27	25	25	26	26	25	26	25	26	26	27	27	26	28	28	28	28	28	29	28
Russian Federation							25	25	25	25	24	25	24	23	24	24	24	25	25	25	25	25	26	26	27	27
Serbia																					27	27	28	27	27	26
Slovakia*								32	31	33	30	31	32	33	31	34	34	34	33	32	33	33	31	34	34	33
Slovenia*							32	33	33	31	31	32	31	31	32	34	34	35	34	34	33	34	35	35	35	34
Spain*	37	37	38	38	38	40	39	40	39	40	39	40	41	41	41	41	40	40	41	41	41	42	42	43	44	45
Sweden*	38	38	38	37	37	37	36	37	37	39	37	38	36	36	36	36	36	36	36	36	36	36	36	37	37	38
Switzerland	41	41	41	41	41	41	40	40	41	40	40	40	40	40	39	40	40	40	40	41	41	41	41	41	41	41
Tajikistan							24	25	24	23	23	21	21	19	19	22	22	23	24	26	24	25	25	25	25	25
TFYR Macedonia							22	24	23	23	25	23	26	28	27	29	29	30	32	32	34	36	32	32	32	32
Turkey	22	22	23	24	22	23	22	23	24	23	24	25	23	23	25	24	24	25	26	26	27	28	28	28	28	30
Turkmenistan							24	26	25	25	24	23	24	24	23	22	23	22	23	23	22	24	25	26	26	26
Ukraine							24	23	23	23	23	23	23	23	23	22	23	24	25	25	25	26	26	27	26	26
United Kingdom*	39	39	38	38	38	38	40	40	39	39	39	38	38	38	38	38	36	35	36	36	39	37	37	37	38	36
Uzbekistan							23	25	25	26	25	26	26	24	25	26	25	24	24	24	24	24	23	23	23	24
EU	36	36	36	36	37	37	37	37	37	37	37	37	37	37	37	37	37	36	36	37	37	37	37	37	38	38
Europe	32	33	33	33	33	33	33	33	33	33	33	34	34	34	33	33	33	33	33	33	34	34	34	34	35	35

Source: Food and Agriculture Organization of the United Nations (FAO). http://faostat.fao.org/beta/en/#home. **Notes:** These data come from FAO food balance sheets which collect country-level data on food production and trade. The actual food consumption may be lower than the quantity shown as food availability depends on the magnitude of wastage and losses of food in the household, e.g. during storage, in preparation and cooking, as plate-waste or quantities fed to domestic animals and pets, thrown or given away. Blank cells indicate that data were not available. Data were not available for Andorra, Cyprus, Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 5.5 Percentage of total energy available from fat, 2011, Europe

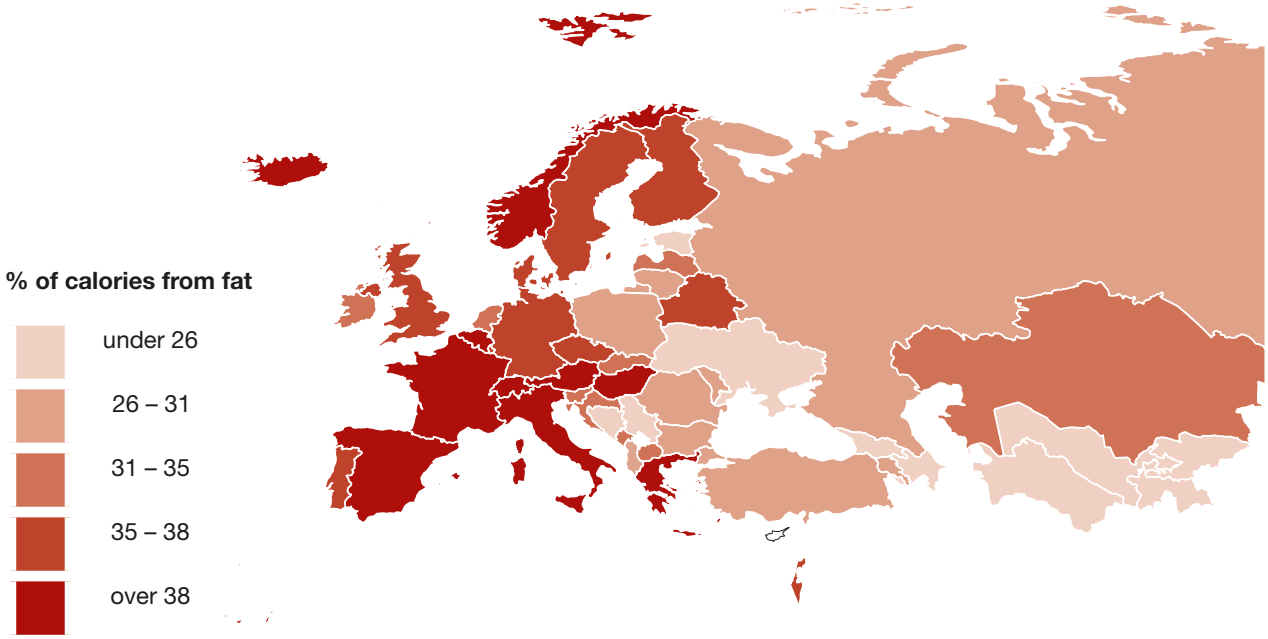


Table 5.6 Frequency of vegetable consumption, adults aged 15+ years, by sex, 2014, Europe

Males

	%			
	At least once a day	4 to 6 times a week	1 to 3 times a week	Never or occasionally
Austria*	39.5	31.8	26.7	2.0
Belgium*	75.1	14.6	8.4	1.9
Bulgaria*	36.2	28.6	26.0	9.2
Croatia*	59.4	22.7	16.3	1.6
Cyprus*	49.0	27.9	19.0	4.1
Czech Republic*	34.2	28.6	30.5	6.8
Denmark*	34.3	34.5	23.6	7.6
Estonia*	49.1	25.5	21.5	3.9
Finland*	36.7	30.8	25.0	7.5
France*	51.4	25.2	18.4	5.0
Germany*	25.3	36.2	31.6	6.9
Greece*	56.7	19.7	20.4	3.2
Hungary*	41.9	17.2	28.3	12.6
Italy*	57.6	17.2	19.9	5.3
Latvia*	37.4	36.0	22.9	3.7
Lithuania*	49.9	34.1	14.1	1.9
Luxembourg*	43.4	30.9	21.1	4.6
Malta*	33.8	30.1	25.7	10.3
Netherlands*	27.6	57.8	13.7	0.9
Norway	47.6	28.3	21.8	2.2
Poland*	51.0	24.9	20.1	4.1
Portugal*	48.9	23.8	21.4	5.9
Romania*	27.7	32.2	31.6	8.4
Slovakia*	37.8	28.7	25.8	7.7
Slovenia*	55.2	26.2	15.1	3.5
Spain*	39.0	25.9	30.8	4.4
Sweden*	42.3	26.4	22.8	8.5
Turkey	57.7	20.4	17.9	4.0
United Kingdom*	60.3	22.1	14.6	2.9
EU	**44.0**	**27.6**	**23.2**	**5.2**

Females

	%			
	At least once a day	4 to 6 times a week	1 to 3 times a week	Never or occasionally
Austria*	55.3	26.3	17.1	1.3
Belgium*	81.6	11.2	5.6	1.7
Bulgaria*	40.4	26.9	23.3	9.5
Croatia*	65.2	21.4	12.2	1.3
Cyprus*	56.0	25.6	15.5	2.9
Czech Republic*	48.1	29.7	18.6	3.6
Denmark*	53.6	28.1	14.9	3.4
Estonia*	59.5	23.1	15.0	2.3
Finland*	53.1	27.8	15.8	3.2
France*	63.3	21.0	12.7	3.0
Germany*	42.5	33.7	20.5	3.3
Greece*	67.1	16.9	13.0	3.0
Hungary*	50.2	17.5	24.9	7.4
Italy*	66.2	16.3	14.0	3.4
Latvia*	46.8	34.6	15.9	2.8
Lithuania*	58.3	31.0	10.0	0.7
Luxembourg*	60.8	24.9	12.0	2.3
Malta*	46.1	25.6	23.0	5.3
Netherlands*	35.0	54.9	9.7	0.4
Norway	63.8	24.2	11.0	1.0
Poland*	59.6	23.1	14.8	2.5
Portugal*	60.7	19.6	15.2	4.6
Romania*	31.4	35.7	27.2	5.8
Slovakia*	49.8	28.6	18.2	3.3
Slovenia*	66.4	21.1	10.4	2.1
Spain*	50.0	25.7	21.9	2.4
Sweden*	61.7	20.2	14.3	3.8
Turkey	62.9	18.8	15.2	3.1
United Kingdom*	70.0	17.9	10.3	1.8
EU	**55.7**	**25.1**	**16.2**	**3.1**

Source: European Commission, Eurostat database, European Health Interview Survey (EHIS) http://ec.europa.eu/eurostat/data/database. **Notes:** Data were collected using national questionnaires conducted through face-to-face interviews, telephone interviews, self-administered questionnaires, or a combination of these means between the years 2013 and 2015.

*Asterisk denotes EU member states.

Table 5.7 Frequency of fruit consumption, adults, aged 15+ years, by sex, 2014, Europe

Male

	%			
	At least once a day	4 to 6 times a week	1 to 3 times a week	Never or occasionally
Austria*	45.2	18.5	29.8	6.5
Belgium*	48.2	12.8	23.7	15.3
Bulgaria*	32.0	23.3	29.9	14.8
Croatia*	53.6	17.3	22.6	6.5
Cyprus*	53.6	22.5	17.1	6.8
Czech Republic*	36.9	22.6	31.6	8.9
Denmark*	43.6	24.2	20.9	11.4
Estonia*	44.2	24.3	24.9	6.7
Finland*	33.2	26.5	27.6	12.7
France*	48.5	16.8	19.0	15.7
Germany*	38.7	22.4	26.1	12.8
Greece*	50.6	18.7	22.5	8.1
Hungary*	52.9	13.5	23.0	10.6
Italy*	67.3	13.4	13.0	6.3
Latvia*	32.4	27.7	31.2	8.7
Lithuania*	42.1	30.7	22.5	4.7
Luxembourg*	42.6	18.3	25.0	14.0
Malta*	53.2	21.2	15.8	9.8
Netherlands*	34.5	27.8	24.8	12.9
Norway	46.4	19.9	28.1	5.6
Poland*	52.3	22.0	19.2	6.4
Portugal*	66.8	12.7	13.4	7.2
Romania*	25.7	27.2	33.0	14.1
Slovakia*	40.4	26.8	24.9	7.8
Slovenia*	52.4	19.6	21.3	6.7
Spain*	62.4	14.0	18.6	5.0
Sweden*	38.0	19.8	27.6	14.6
Turkey	45.8	18.4	26.1	9.7
United Kingdom*	56.9	14.5	19.0	9.6
EU	**49.3**	**18.8**	**21.7**	**10.3**

Females

	%			
	At least once a day	4 to 6 times a week	1 to 3 times a week	Never or occasionally
Austria*	66.2	13.4	16.1	4.3
Belgium*	59.4	12.0	17.9	10.7
Bulgaria*	38.4	25.2	24.3	12.1
Croatia*	62.1	16.0	18.4	3.5
Cyprus*	62.2	19.5	13.0	5.3
Czech Republic*	56.0	23.6	16.6	3.7
Denmark*	62.2	20.2	13.2	4.4
Estonia*	58.9	22.1	15.2	3.7
Finland*	53.7	23.9	16.8	5.6
France*	61.2	14.4	14.2	10.3
Germany*	55.6	20.7	17.3	6.4
Greece*	59.0	17.0	17.4	6.6
Hungary*	64.7	11.9	16.1	7.3
Italy*	74.0	12.2	9.4	4.4
Latvia*	45.5	26.4	22.3	5.8
Lithuania*	52.8	29.6	15.7	2.0
Luxembourg*	56.9	17.9	18.4	6.8
Malta*	61.9	17.6	12.7	7.8
Netherlands*	47.3	27.5	17.1	8.1
Norway	61.8	18.0	17.3	2.9
Poland*	63.9	18.9	13.5	3.7
Portugal*	74.5	10.4	10.3	4.8
Romania*	31.8	31.7	28.5	8.1
Slovakia*	54.0	26.9	15.7	3.4
Slovenia*	68.7	14.7	12.3	4.3
Spain*	70.8	11.3	14.1	3.8
Sweden*	55.5	19.2	16.7	8.6
Turkey	49.0	17.1	23.6	10.2
United Kingdom*	67.9	12.1	13.4	6.6
EU	**61.4**	**17.0**	**15.2**	**6.3**

Source: European Commission, Eurostat database, European Health Interview Survey (EHIS) http://ec.europa.eu/eurostat/data/database.
Notes: Data were collected using national questionnaires conducted through face-to-face interviews, telephone interviews, self-administered questionnaires, or a combination of these means between the years 2013 and 2015.
*Asterisk denotes EU member states.

Table 5.8 Frequency of daily vegetable consumption, children aged 11, 13 and 15 years, by sex, 2013/14, Europe

%	11 year olds		13 year olds		15 year olds	
	Boys	Girls	Boys	Girls	Boys	Girls
Armenia	29	36	29	37	29	38
Austria*	31	37	24	32	22	30
Belgium (Flemish)*	50	62	46	59	50	57
Belgium (French)*	49	61	50	60	53	65
Croatia*	34	34	26	30	22	28
Czech Republic*	27	33	24	30	20	29
Denmark*	43	53	37	48	34	48
England*	42	46	40	45	36	44
Estonia*	26	30	21	22	20	25
Finland*	29	33	18	32	15	36
France*	44	49	36	41	37	39
Germany*	23	32	19	29	16	31
Greece*	32	42	33	36	26	35
Hungary*	33	37	31	31	22	29
Iceland	31	33	23	29	29	39
Ireland*	44	50	37	47	41	45
Italy*	23	28	20	31	21	37
Latvia*	25	31	19	27	20	30
Lithuania*	30	37	24	34	26	32
Luxembourg*	38	44	28	33	29	32
TFYR Macedonia	36	50	28	33	29	32
Netherlands*	46	55	45	50	38	49
Norway	40	43	33	34	29	35
Poland*	29	39	25	30	26	28
Portugal*	26	38	26	32	21	25
Romania*	38	42	33	38	25	30
Russian Federation	35	36	33	39	33	34
Scotland*	37	44	35	42	32	38
Slovakia*	27	30	25	30	19	29
Slovenia*	32	34	20	27	19	29
Spain*	24	28	20	24	17	22
Sweden*	40	50	32	42	33	44
Switzerland	45	50	40	47	37	52
Ukraine	52	61	49	59	44	54
Wales*	30	34	33	35	28	28

Source: Inchley J et al. (2016) Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. WHO Regional Office for Europe: Copenhagen, Denmark.
Notes: Daily vegetable consumption is defined as consumption of vegetables at least once a day. Data were collected by means of self-reported anonymous questionnaires completed by nationally representative samples of school-age children.
*Asterisk denotes EU member states.

Table 5.9 Frequency of daily fruit consumption, children aged 11, 13 and 15 years, by sex, 2013/14, Europe

%	11 year olds		13 year olds		15 year olds	
	Boys	Girls	Boys	Girls	Boys	Girls
Armenia	51	61	53	61	52	65
Austria*	52	58	42	56	28	41
Belgium (Flemish)*	31	43	22	34	20	28
Belgium (French)*	53	61	46	49	40	46
Croatia*	45	46	36	38	25	29
Czech Republic*	40	49	33	40	26	34
Denmark*	43	51	36	45	34	51
England*	42	42	34	37	33	39
Estonia*	36	38	26	35	25	32
Finland*	24	31	16	30	12	30
France*	39	42	33	35	30	36
Germany*	39	50	31	42	26	38
Greece*	36	43	33	35	23	26
Hungary*	40	49	34	35	22	29
Iceland	38	47	29	37	35	46
Ireland*	44	51	36	41	34	40
Italy*	37	43	32	39	32	41
Latvia*	29	33	20	27	19	27
Lithuania*	34	41	28	36	25	30
Luxembourg*	42	47	36	38	33	36
Netherlands*	41	48	30	36	23	31
Norway	41	48	34	38	29	43
Poland*	38	46	29	36	26	29
Portugal*	43	50	39	43	34	36
Romania*	43	49	35	43	25	32
Russian Federation	37	41	35	39	28	34
Scotland*	41	51	35	39	29	36
Slovakia*	40	47	32	36	24	33
Slovenia*	44	53	32	45	24	38
Spain*	39	45	34	34	28	32
Sweden*	33	39	23	26	19	24
Switzerland	49	56	44	50	34	51
TFYR Macedonia	38	51	35	43	33	41
Ukraine	47	56	44	57	34	45
Wales*	34	38	31	31	25	27

Source: Inchley J et al. (2016) Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. WHO Regional Office for Europe: Copenhagen, Denmark.
Notes: Daily fruit consumption is defined as consumption of fruit at least once a day. Data were collected by means of self-reported anonymous questionnaires completed by nationally representative samples of school-age children.
*Asterisk denotes EU member states.

Figure 5.8 Percentage of children consuming vegetables daily, 15 year olds, by sex, 2013/14, Europe

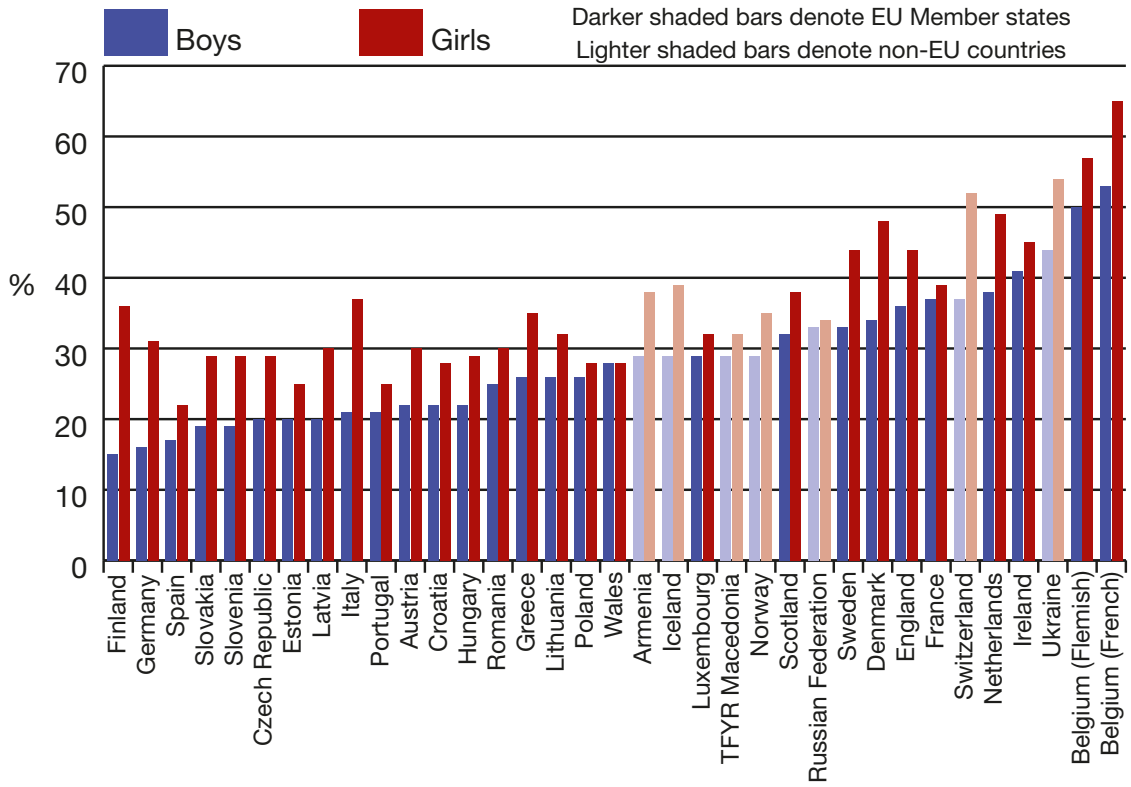
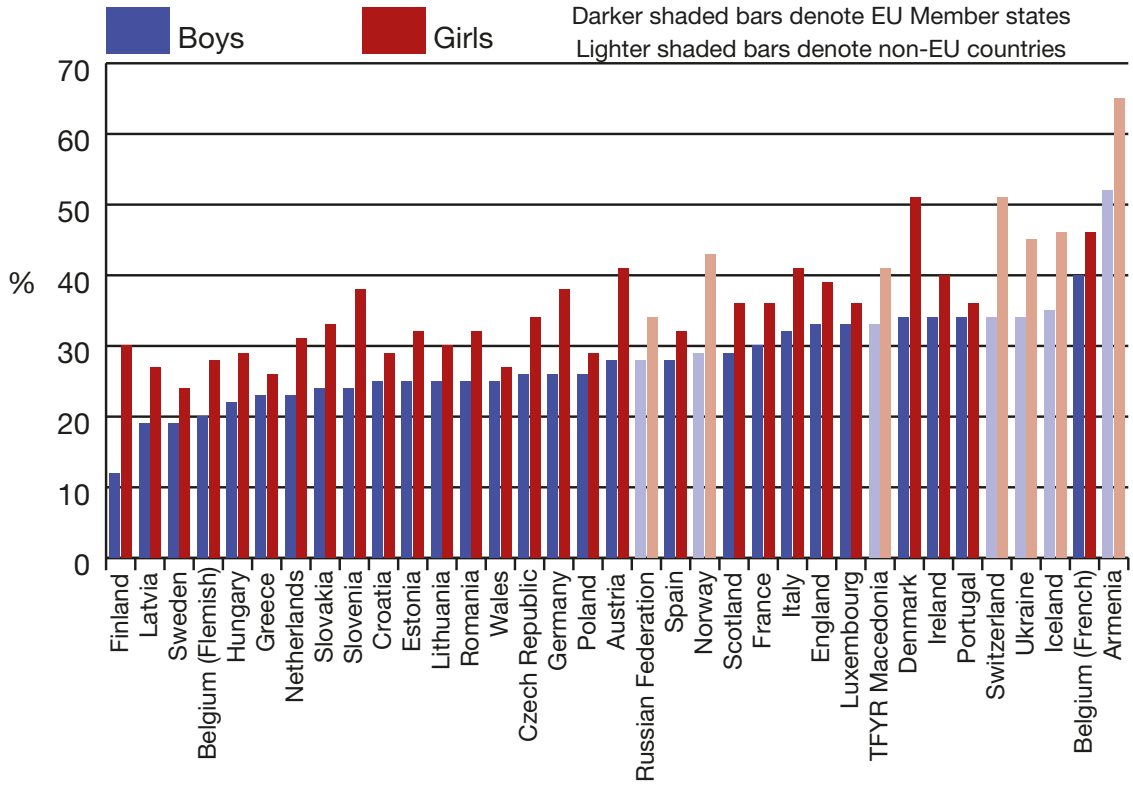


Figure 5.9 Percentage of children consuming fruit daily, 15 year olds, by sex, 2013/14, Europe



6. Smoking

Tobacco smoking is an important modifiable risk factor for a number of diseases and the most common cause of premature death in Europe[1]. Among its numerous health effects, smoking raises the risk of IHD by elevating blood pressure and the tendency of blood to clot, promotes atherosclerosis through inflammation of the arteries, reduces plasma levels of HDL ('good cholesterol'), and decreases exercise tolerance. Smoking cessation can substantially reduce the risk of cardiovascular death over time.

Prevalence of smoking

Data from the World Health Organization's *Health for All* database show that in nearly all European countries (with the exception of Denmark, Iceland and Sweden), the prevalence of smoking in the most recent available year was greater among adult men than among adult women. This sex difference was more pronounced in countries in Eastern Europe and the former Soviet Union than those in Western Europe. For instance, in Armenia, more than 45% of men smoked compared to only 1.2% of women, and in Albania, around 42% of men smoked compared to 6.2% of women. By contrast, in the UK the prevalence of smoking among men and women was 20% and 17% respectively (Table 6.1).

Among men, the prevalence of smoking was generally highest in Eastern European and former Soviet states. Indeed, all four European countries where more than 50% of men smoked were former Soviet Union states: Georgia (51%), Moldova (51%), Latvia (52%), and Russia (55%). Conversely, in Western and Northern Europe, the smoking rate among males was generally less than 30%, with the exception of France (33%) (Table 6.1, Figures 6.1a-6.1d). The opposite pattern was true for women, among whom smoking prevalence rates were very low in former Soviet countries (less than 0.1% in Azerbaijan, 0.5% in Turkmenistan, 0.9 % in Uzbekistan, 1.3% in Armenia and 1.7% in Kyrgyzstan), low in Eastern and Central European countries (5.7% in Ukraine, 6.2% in Albania), and higher in Northern, Western and Southern European countries (17% in the UK, 25% in France, 26% in Greece) (Table 6.1, Figures 6.1a, 6.1b, 6.1e, 6.1f). These regional differences in the prevalence of smoking were seen across both EU and non-EU member states. Overall, the prevalence of smoking in the EU on average was lower than that in Europe as a whole among men (27% versus 38%) but higher than that in Europe among women (19% versus 17%) (Table 6.1, Figures 6.1a, 6.1b).

Traditional sex differences in smoking behaviour were less marked among adolescents according to data from the Health Behaviour in School-aged Children (HBSC) survey. This survey collects information on the prevalence of weekly smoking among 15 year olds in 39 countries, 31 of which are EU member states. In 2013/14, more 15-year old boys than girls smoked in 21 of the 39 countries included; in 13 countries more 15-year old girls than boys smoked; while the prevalence of smoking was equal among boys and girls in five countries (Table 6.2). The largest excess of male compared to female smokers in 15-year olds was found in Israel (17% of males versus 6% of females), while the largest excess of female compared to male smokers in 15-year olds was in the Czech Republic (16% of females versus 11% of males) (Table 6.2; Figures 6.2a, 6.2b). Within the EU among boys, the prevalence of weekly smoking in 2013/14 ranged 10-fold, from 3% in Iceland to 30% in Bulgaria, while among girls in the EU, the prevalence ranged from 3% in Northern Ireland to 22% in Italy. Of those eight non-EU countries with available data, the prevalence of weekly smoking among boys in 2013/14 was lowest in Iceland (3%) and highest in Israel (17%) and Russia (17%); among girls, the prevalence of weekly smoking ranged from 1% in Armenia to 10% in Russia (Table 6.2, Figure 6.2).

Trends in smoking prevalence

Over the past 35 years, the prevalence of smoking in men has decreased in almost all European countries for which data are available. The only exceptions are Latvia, where the rate increased from 49% in 1990-94 to 52% in 2014 and Russia where the rate rose from 47% in 1990-94 to 55% in 2009. The prevalence of smoking among women has also fallen in all but eight European countries, principally in Eastern Europe: Armenia, Azerbaijan, Belarus, Bulgaria, France, Latvia, Lithuania and Serbia. In countries where the prevalence of smoking has fallen in women, this decline has tended to be less pronounced than for men. For example, between 1980 and 2014, the smoking prevalence in Sweden fell by 65% among men, but by 56% among women, with the result that the gap in smoking prevalence between men and women has narrowed in recent years (Table 6.1, Figure 6.1e, 6.1f). Focusing on the EU specifically, the average prevalence of smoking also decreased between 1990-94 and 2014, by 25% among men and by 12% among women (Table 6.1).

Among adolescents, there has been a divergence in smoking trends around Europe over the past 25 years. In a number of countries, particularly those in Northern and Western Europe, the prevalence of smoking decreased considerably between 1993-94 and 2013-14. Meanwhile, Italy experienced an increase in the smoking prevalence among boys (from 9% in 1993-94 to 20% in 2013-14), and the Czech Republic, Estonia, Hungary, Italy, Lithuania, Poland, Romania and Slovakia saw increases among girls (Table 6.2).

Passive smoking

In addition to direct smoking, passive smoking of tobacco represents a risk factor for CVD, as well as other diseases such as cancer[5]. 'Smoke-free' policies designed to protect populations from the effects of passive smoking are now widespread in Europe. For example, Bulgaria, Greece, Hungary, Ireland, Malta, Spain, the UK, Turkey, Macedonia and Serbia all have an official total ban on smoking in the workplace[2].

Self-reported data from the European Commission's Eurobarometer survey for 27 EU countries show particularly high frequencies of exposure to tobacco smoke indoors at their place of work in Cyprus and Greece, where 9% and 18% of respondents reported exposure for more than 5 hours a day (Table 6.3). By contrast low rates were observed in Denmark, the UK and Sweden, where 87%, 91% and 93% of respondents respectively reported never or almost never being exposed to tobacco smoke indoors at their place of work (Table 6.3). Importantly, these data refer to the specific environment of indoor workplace passive smoking and cannot be taken to represent the prevalence of passive smoking in general.

1 Institute for Health Metrics and Evaluation (IHME). GBDCompareDataVisualization. Seattle, WA: IHME, University of Washington, 2016. Available from http://vizhub.healthdata.org/gbd-compare.

2 European Commission (2013) *Smoke-free environments* http://ec.europa.eu/health/tobacco/smoke-free_environments_en (Accessed December 2016).

Table 6.1 Prevalence of smoking, adults aged 15+ years, by sex, 1980 to 2015, Europe

Males (%)	1980-84	1985-89	1990-94	1995-99	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania			49.8		60.1		46.3					58.8		44.7					51.7	41.7
Andorra				43.7			42.0									35.3				
Armenia				63.7		67.5				59.6	57.1	54.7	54.7	52.0	52.0	52.0	48.7	48.7	48.7	
Austria*		33.5	38.8	38.9							27.3									26.5
Azerbaijan						40.4	41.7	39.9	41.2	37.9	38.6	38.0	38.0	36.3	36.0	35.3	35.3	36.6	35.9	35.5
Belarus				54.3	54.0	53.3	53.0	53.2	54.3	54.4	53.2	52.8	52.3	51.1	50.5	50.4	48.6	48.0	45.8	
Belgium*	49.0	42.8	33.2	31.8	36.0	34.0	33.0	30.0	28.0	23.0	29.0	25.0	24.0					22.0		
Bosnia and Herzegovina							49.2								17.6	17.6	17.6	17.6	17.6	
Bulgaria*		49.0		49.3		43.8						46.6								
Croatia*				34.1	34.1			33.8											31.8	
Cyprus*								38.1					39.2							
Czech Republic*			32.2	31.5			30.9	32.2	31.1	29.6	27.7	29.6	24.9	29.7	29.3	24.7	26.3	27.2	26.4	
Denmark*			39.0	35.4	32.0	33.5	30.5	31.0	29.0	28.0	26.0	28.0	24.0	22.0	20.0	17.0	17.0	17.0	17.0	16.0
Estonia*			46.3	44.3	45.0		43.9		47.7		40.5		38.6		36.8		36.2		31.4	
Finland*	33.8	32.8	31.0	28.6	27.0	29.0	27.5	25.7	27.1	26.0	24.4	25.8	24.0	21.9	23.2	21.9	20.9	19.0	17.2	
France*	46.0		38.0	35.0	33.0		30.6	30.0		31.4					32.4				32.9	
Georgia				53.2		53.3		50.4							51.1					
Germany*			32.4	31.1				29.8		27.9				26.4				25.1		
Greece*			53.0	49.0	46.8		51.0							38.0						
Hungary*			44.0	45.0	38.2			36.9						31.9					31.5	
Iceland		33.1	28.9	26.5	23.3	24.5	22.2	25.4	21.5	19.5	21.3	20.7	20.3	15.9	14.5	14.4	14.9	10.7	13.6	10.2
Ireland*	39.0	33.8	30.0	32.5			27.0		24.2	24.2	24.7	31.0	28.0							24.0
Israel	45.5	39.3	36.7	31.8	30.0		32.0	31.9	32.7	32.1	29.0	32.3	31.3	29.2	27.3			24.5	26.0	
Italy*			35.1	33.8	31.9	31.6	31.3	31.4		28.7	29.2	28.6	28.9	29.9	29.6	28.7	28.0	26.6	24.9	24.8
Kazakhstan				60.0		46.5			40.7											
Kyrgyzstan				60.0		51.0			41.4	41.4										
Latvia*			49.4	51.1	51.3		51.1		47.3		46.6		45.0		47.4		52.0		51.8	
Lithuania*			43.3	47.9	51.5		43.7		39.4	42.1	43.4		38.5		34.2		32.7		33.9	
Luxembourg*		41.0	32.0	33.5	34.0		35.0	39.0	36.0	32.0	29.0	28.0	29.0	28.0	27.0	24.0	26.0	24.0	24.0	23.0
Malta*			40.0	33.7			29.9						25.6	25.6						
Monaco																				
Montenegro													36.7				35			
Netherlands*	45.7	39.5	42.5	38.9	35.9	32.3	30.9	29.2	28.58	28.4	28.77	25.37	25.89	25.47	23.1	23.5	20.6	20.9	21.7	
Norway	41.3	39.7	36.7	33.4	31.3	29.5	28.8	27.2	27.2	26.0	24.0	21.0	21.0	20.0	19.0	17.0	16.0	15.0	14.0	13.0
Poland*			51.0	43.0			40.0		38.0	42.0	37.0			33.5						
Portugal*	41.7	38.7	38.0	32.8							27.2								23.5	
Republic of Moldova					40.0	38.8	36.4	33.6	32.2	37.6	51.1									
Romania*		43.9	36.7		32.3			33.2					32.1			37.4				
Russian Federation			47.0	62.0	62.2	60.4			61.3					55.00						
San Marino			28.0														16.1			
Serbia					40.6						30.7							32.6		
Slovakia*			32.5	41.1				32.8						26.9						
Slovenia*			34.7	31.6		28.0				24.0	21.4	22.4					22.2		21.8	
Spain*			44.0	42.8		39.2		34.2			31.6			31.17		27.87			27.6	
Sweden*	33.8	28.2	24.3	19.2	16.8	17.9	16.3	16.7	15	13.9	12.3	12.9	13.1	13.5	12.5	12.4	12.6	9.8	11.7	
Switzerland			33.9	39.0		27.0	31.0		24.0			23.0		22.0			23.0			
Tajikistan																				
TFYR Macedonia				40.0																
Turkey		62.8						51.1			50.6		43.8		39.0		37.3			
Turkmenistan																		11.5		
Ukraine					58.0				51.1	50.1	52.4	49.7	42.0	47.6	44.7					
United Kingdom*	38.7	34.0	29.3	28.7	29.0	28.0	27.0	28.0	26.0	25.0	23.0	22.0	22.0	22.0	21.0	21.0	22.0	22.0	20.0	
Uzbekistan							24.1													
EU			**36.3**	**35.4**	**33.9**		**32.4**	**31.9**		**30.6**	**29.8**		**28.84**	**28.83**					**27.1**	
Europe							**40.3**				**37.8**									

Source: WHO Europe, Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/. **Notes:** Data are derived from health surveys and are self-reported. Specific definitions of smoking and frequency of smoking differ for individual countries. Refer to the original source for details. Where years are given in five year ranges, the figures are averages over the period. Blank cells indicate no data were available or insufficient data to calculate Europe and EU averages. *Asterisk denotes EU member states.

Table 6.1 Prevalence of smoking, adults aged 15+ years, by sex, 1980 to 2015, Europe

Females (%)	1980-84	1985-89	1990-94	1995-99	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania			7.9		18.3		3.0					11.5		4.2					8.0	6.2
Andorra				28.0			30.0									25.5				
Armenia				1.2		3.1				2.1	2.0	1.6	1.6	1.5	2.0	2.0	1.3	1.3	1.3	
Austria*		17.4	23.7	22.6							19.4									22.1
Azerbaijan						0.3	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0	0	0	0	0	0	0
Belarus				4.5	6.7	6.3	6.3	7.1	7.2	8.3	9.0	8.7	9.2	9.8	9.6	10.2	9.7	8.9	9.3	
Belgium*	27.0	25.8	21.8	24.0	26.0	22.0	25.0	25.0	20.0	16.0	16.0	19.0	18.0					16.0		
Bosnia and Herzegovina							29.7								11.3	11.3	11.3	11.3	11.3	
Bulgaria*		17.0		20.3		23.0						32.7								
Croatia*				31.6	26.6			21.7											23.4	
Cyprus*								10.5					14.3							
Czech Republic*			21.3	18.8			18.1	22.6	20.1	19.4	19.5	18.8	18.6	18	16.5	18.8	19.6	17.4	18.5	
Denmark*			35.0	30.6	29.0	25.5	26.0	25.0	23.0	24.0	23.0	21.0	22.0	17.0	20.0	18.0	16.0	17.0	17.0	17.0
Estonia*			17.9	20.1	20.0		17.5		21.1		19.5		17.1		18.7		18.3		15.8	
Finland*	17.6	18.4	20.0	19.6	20.0	20.0	19.9	19.3	19.5	18.2	18.9	16.6	17.6	16.0	15.7	14.8	14.0	13.0	14.0	
France*	17.0		20.0	21.0	21.0		21.5	21.2		23.0					26.6				24.6	
Georgia				11.9		6.3		4.1							4.0					
Germany*			17.8	18.4				19.1		18.8				17.6				17.1		
Greece*			30.0	29.0	29.0		39.0							26.1						
Hungary*			27.0	24.5	23.0			24.6						21.7					20.8	
Iceland		31.9	28.4	26.4	22.5	22.8	21.1	19.6	18.9	19.5	17.4	18.2	15.3	15.7	13.9	14.2	12.8	12.1	13.7	10.7
Ireland*	32.0	29.8	28.2	30.0			27		23.6	23.6	24.7	27.0	26.0							21.0
Israel	29.5	29.0	25.7	25.0	24.0		18.4	17.8	18.0	19.3	17.7	16.0	14.8	14.6	14.5			13.2	13.6	
Italy*			16.8	17.5	17.4	17.1	17.2	17.6		16.4	17.2	16.6	16.4	17.1	17.1	16.7	16.6	15.9	14.9	15.1
Kazakhstan				7.0		7.6			8.8											
Kyrgyzstan				12.0		4.5			1.7	1.7										
Latvia*			11.1	15.7	18.2		19.2		17.8		18.2		15.6		20.7		17.6		21.0	
Lithuania*			6.3	11.0	15.8		12.8		14.2	9.8	14.5		13.9		14.4		12.3		9.2	
Luxembourg*		25.0	26.0	27.5	26.0		25.0	26.0	26.0	22.0	21.0	22.0	21.0	21.0	20.0	20.0	21.0	19.0	18.0	18.0
Malta*			18.0	14.9			17.6						15.8	15.8						
Monaco																				
Montenegro													29.0				27.0			
Netherlands*	33.3	31.5	31.3	31.4	29.2	25.4	24.5	24.3	22.3	22.1	21.7	21.0	20.8	19.8	18.8	18.3	16.3	16.3	16.7	
Norway	32.2	32.9	33.3	32.3	31.1	29.7	29.4	25.3	24.8	24.0	24.0	23.0	21.0	20.0	19.0	18.0	16.0	14.0	13.0	13.0
Poland*			29.0	23.5			25.0		25.6	25.0	23.0			21.0						
Portugal*	6.7	8.7	15.0	8.6							11.0								10.9	
Republic of Moldova					2.0	2.0	2.0	1.8	1.8	3.7	7.1									
Romania*		11.3	8.7		10.1			10.3					9.0			16.7				
Russian Federation			12.0	10.9	12.6	15.5			15.0					16.3						
San Marino			17.0														14.3			
Serbia					26.1						22.6							26.0		
Slovakia*			16.3	14.7				14.3						12.4						
Slovenia*			22.7	20.4		20.1				22	16	15.5					15.9		16.0	
Spain*			20.8	24.7		24.6		22.4			21.5			21.3		20.2			18.6	
Sweden*	27.5	26.5	24.8	21.9	21.0	19.9	19.3	18.3	17.5	18	16.7	15.2	16.8	15.0	14.7	13.9	13.1	11.7	12.1	
Switzerland			22.8	28.0		21.0	23.0		20			18		17.0			17.8			
Tajikistan																				
TFYR Macedonia				32.0																
Turkey		24.3						17.8			16.6		11.6		12.3		10.7			
Turkmenistan																		0.5		
Ukraine					14.0					6.0	6.3	6.3	5.9	6.1	5.7					
United Kingdom*	34.0	30.5	27.7	26.7	25.0	26.0	25.0	24.0	23.0	23.0	21.0	20.0	21.0	20.0	20.0	19.0	19.0	17.0	17.0	
Uzbekistan							0.9													
EU			21.1	21.3	21.2		21.3	21.1		20.4	20.0		19.8	19.7					18.5	
Europe							17.8				16.8									

Source: WHO Europe, Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/. **Notes:** Data are derived from health surveys and are self-reported. Specific definitions of smoking and frequency of smoking differ for individual countries. Refer to the original source for details. Where years are given in five year ranges, the figures are averages over the period. Blank cells indicate no data were available or insufficient data to calculate Europe and EU averages. *Asterisk denotes EU member states.

Figure 6.1a Prevalence of smoking, males aged 15+ years, latest available year, Europe

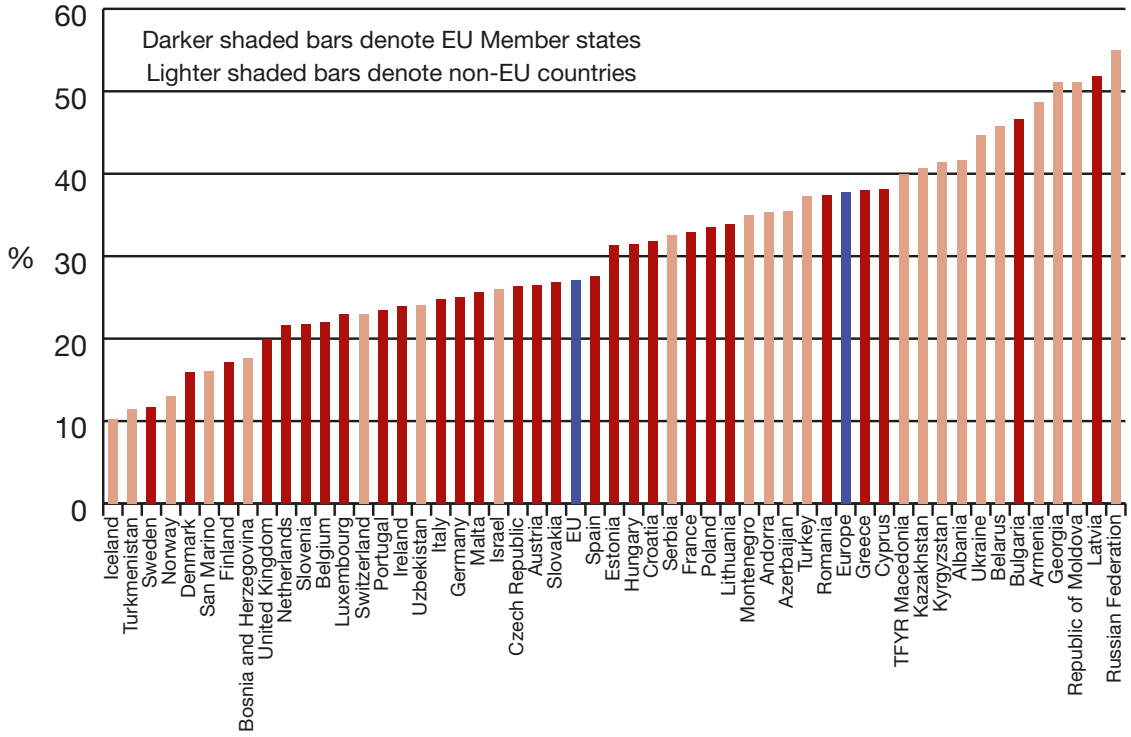


Figure 6.1b Prevalence of smoking, females aged 15+ years, latest available year, Europe

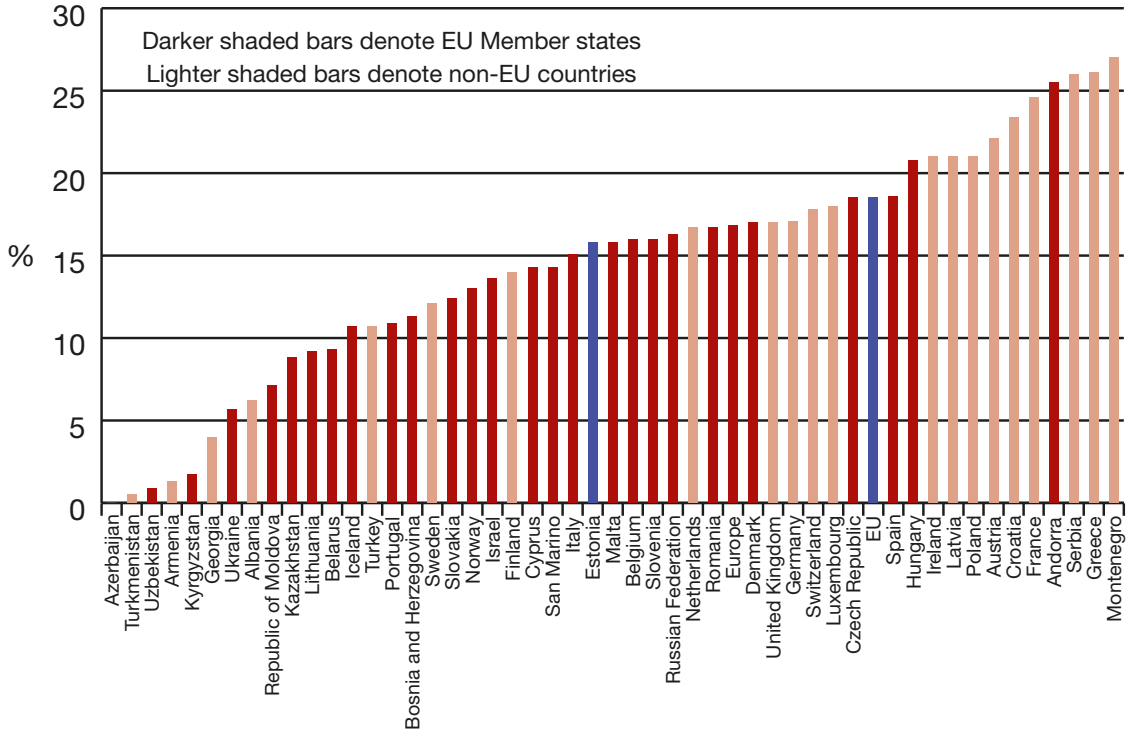


Figure 6.1c Prevalence of smoking, males aged 15+ years, latest available year, Europe

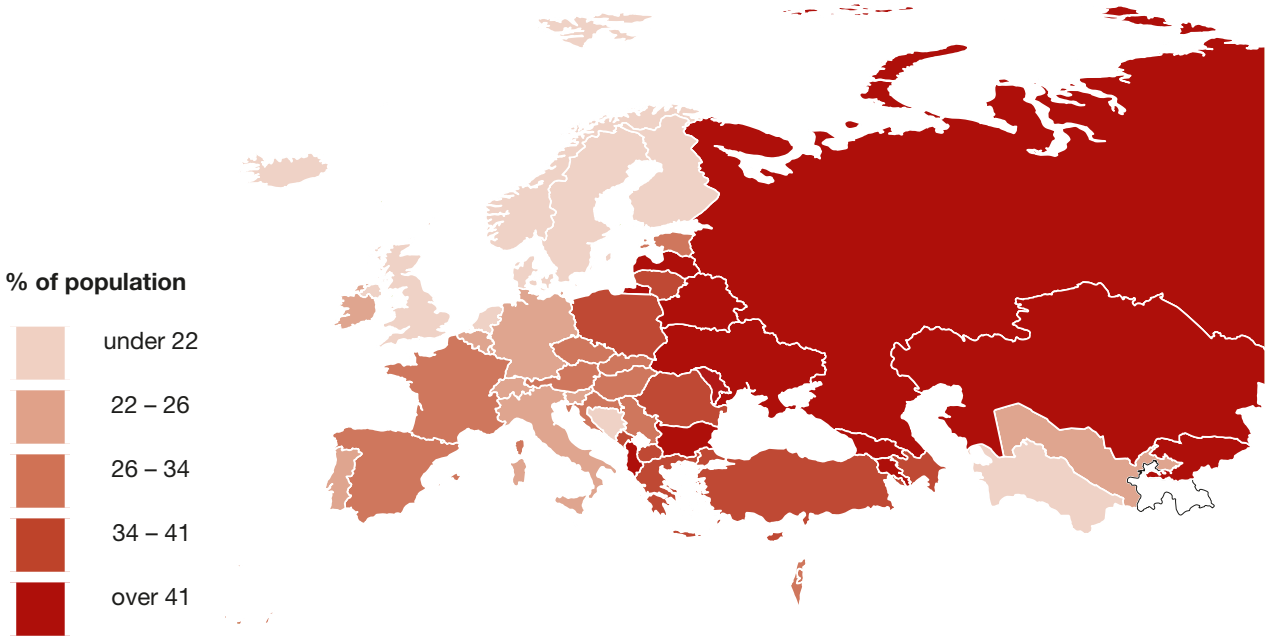


Figure 6.1d Prevalence of smoking, females aged 15+ years, latest available year, Europe

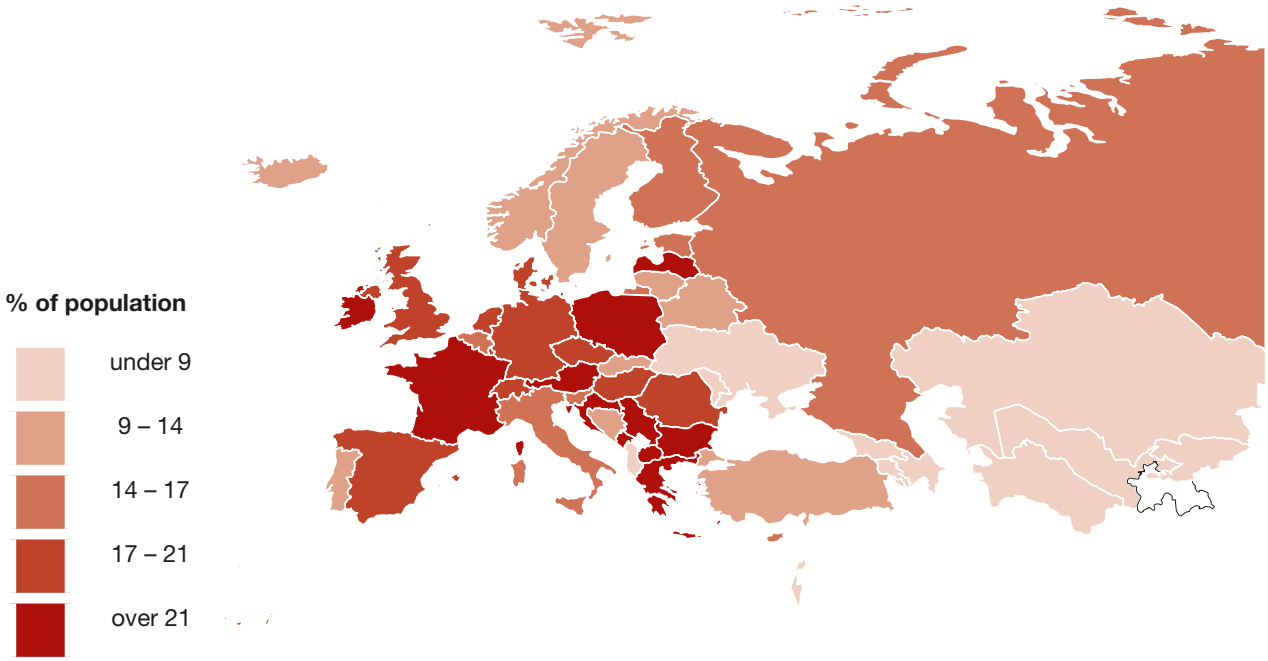


Figure 6.1e Prevalence of smoking, males, 1980 to 2015, selected countries

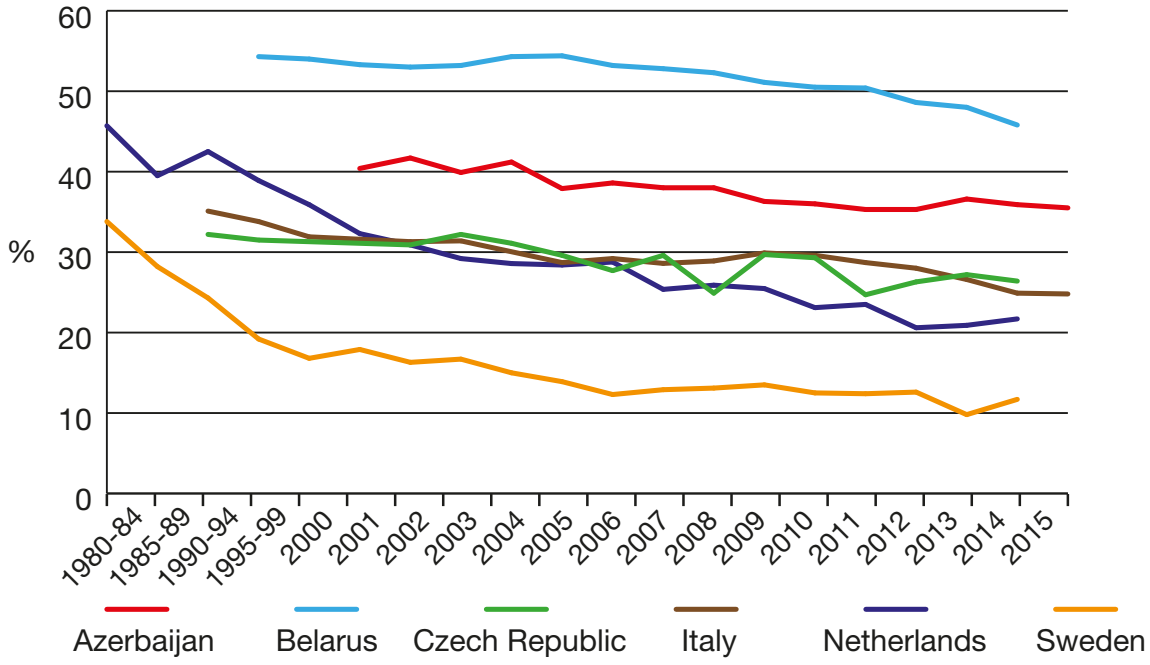


Figure 6.1f Prevalence of smoking, females, 1980 to 2015, selected countries

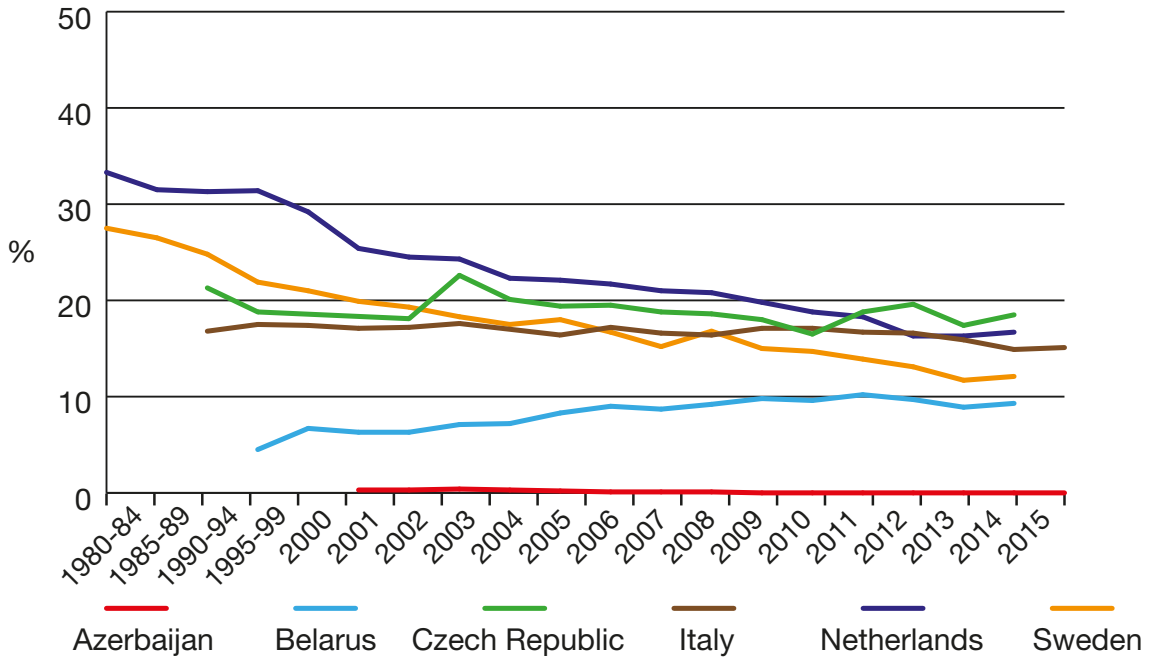


Table 6.2 Prevalence of weekly smoking, 15 year olds, by sex, 1989/90, to 2013/14, Europe

%	Boys							Girls						
	1989-90	1993-94	1997-98	2001-02	2005-06	2009-10	2013-14	1989-90	1993-94	1997-98	2001-02	2005-06	2009-10	2013-14
Armenia						11.0	5.0						1.0	1.0
Austria*	23.0	29.0	30.0	26.1	24.0	25.0	15.0	20.0	31.0	36.0	37.1	30.0	29.0	14.0
Belgium (Flemish)*	15.0	32.0	28.0	23.1	18.0	15.0	10.0	17.0	18.0	28.0	23.3	17.0	16.0	10.0
Belgium (French)*		23.0		21.5	14.0	16.0	12.0		21.0		23.8	17.0	17.0	11.0
Bulgaria*					28.0		30.0					36.0		21.0
Croatia*				23.2	24.0	27.0	25.0				24.9	28.0	25.0	21.0
Czech Republic*		16.0	22.0	28.7	20.0	22.0	11.0		12.0	18.0	30.6	23.0	28.0	16.0
Denmark*		14.0	20.0	16.7	15.0	14.0	7.0		24.0	28.0	21.0	15.0	13.0	8.0
Estonia*		22.0	24.0	30.4	27.0	22.0	13.0		6.0	12.0	18.2	19.0	16.0	11.0
Finland*	33.0	30.0	25.0	28.3	23.0	20.0	15.0	32.0	26.0	29.0	32.2	21.0	19.0	11.0
France*		23.0	28.0	26.0	17.0	20.0	18.0		25.0	31.0	26.7	21.0	20.0	20.0
Germany*		21.0	28.0	32.2	17.0	15.0	13.0		29.0	33.0	33.7	22.0	15.0	15.0
Greece*			18.0	13.5	17.0	18.0	16.0			19.0	14.1	16.0	13.0	13.0
Hungary*	31.0	25.0	36.0	28.2	22.0	26.0	20.0	20.0	19.0	28.0	25.8	21.0	26.0	21.0
Iceland					14.0	9.0	3.0					13.0	7.0	3.0
Ireland*			25.0	19.5	19.0	12.0	8.0			26.0	20.5	20.0	14.0	8.0
Israel			24.0	16.9	12.0		17.0			13.0	11.6	7.0		6.0
Italy*		9.0		21.8	20.0	22.0	20.0		9.0		24.9	20.0	23.0	22.0
Latvia*		33.0	37.0	28.9	30.0	32.0	15.0		14.0	19.0	21.1	23.0	22.0	13.0
Lithuania*		15.0	24.0	34.9	26.0	34.0	20.0		4.0	10.0	17.9	18.0	21.0	12.0
Luxembourg*					17.0	22.0	13.0					21.0	19.0	18.0
Malta*				16.9	19.0		11.0				17.4	24.0		12.0
Netherlands*				22.5	16.0	15.0	11.0				24.3	21.0	17.0	11.0
Norway	21.0	20.0	23.0	20.1	9.0	9.0	5.0	23.0	21.0	28.0	26.6	12.0	8.0	3.0
Poland*	20.0	23.0	27.0	26.3	19.0	16.0	15.0	10.0	13.0	20.0	17.0	14.0	12.0	15.0
Portugal*			19.0	17.6	9.0	11.0	12.0			14.0	26.2	12.0	10.0	10.0
Romania*					20.0	25.0	20.0					12.0	15.0	17.0
Russian Federation		19.0	24.0	27.4	27.0	19.0	17.0		10.0	22.0	18.5	21.0	15.0	10.0
Slovakia*		19.0	28.0		18.0	21.0	16.0		5.0	18.0		15.0	17.0	18.0
Slovenia*				29.5	20.0	20.0	15.0				29.7	16.0	19.0	12.0
Spain*	18.0	20.0		23.6	14.0	15.0	8.0	27.0	27.0		32.3	20.0	23.0	10.0
Sweden*	15.0	15.0	18.0	11.1	8.0	13.0	6.0	20.0	19.0	24.0	19.0	9.0	15.0	7.0
Switzerland		17.0	25.0	25.4	15.0	19.0	11.0		18.0	25.0	24.1	15.0	15.0	9.0
TFYR Macedonia				14.6	14.0	14.0	11.0				12.7	14.0	9.0	9.0
Ukraine				44.6	34.0	31.0	15.0				22.8	17.0	13.0	9.0
United Kingdom - England*			25.0	21.1	13.0	9.0	6.0			33.0	27.9	18.0	14.0	8.0
United Kingdom - Northern Ireland*		23.0	20.0				5.0		25.0	28.0				3.0
United Kingdom - Scotland*	16.0	21.0	22.0	15.9	14.0	14.0	11.0	18.0	26.0	28.0	23.2	23.0	15.0	10.0
United Kingdom - Wales*	14.0	18.0	22.0	15.5	12.0	11.0	7.0	22.0	27.0	29.0	26.8	23.0	16.0	9.0

Source: Inchley J et al. (2016) Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. WHO Regional Office for Europe: Copenhagen, Denmark. Currie C et al. (2012) Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey. WHO Regional Office for Europe: Copenhagen, Denmark. Currie C et al. (2008) Inequalities in young people's health: HBSC international report from the 2005/06 Survey. Health Policy for Children and Adolescents. WHO Regional Office for Europe: Copenhagen, Denmark. Currie C et al. (2004) Young People's Health in Context: international report from the HBSC 2001/02 survey. WHO Regional Office for Europe: Copenhagen, Denmark. Currie C et al. (2000) Health and health behaviour among young people (Health Policy for Children and Adolescents, No.1). WHO Regional Office for Europe: Copenhagen, Denmark. King A et al. (1996) The Health of Youth: A cross-national survey. WHO Regional Publications, European Series No. 69. WHO Regional Office for Europe: Copenhagen, Denmark.
Notes: Weekly smoking is defined as smoking at least once a week. Data collected using representative national samples of schoolchildren, with the exception of France, Germany and the Russian Federation, where the samples were drawn from regions. In 1993/94 and 1997/98 these regions were Nancy and Toulouse, North Rhine-Westphalia, and St Petersburg respectively. In 2001/02 national samples were collected for France and the Russian Federation, and the regional sample for Germany was collected in Berlin, Hessen, North Rhine-Westphalia and Saxony. Blank cells indicate data were not available.
*Asterisk denotes EU member states.

Figure 6.2a Prevalence of smoking, boys aged 15 years, 2013/14, Europe

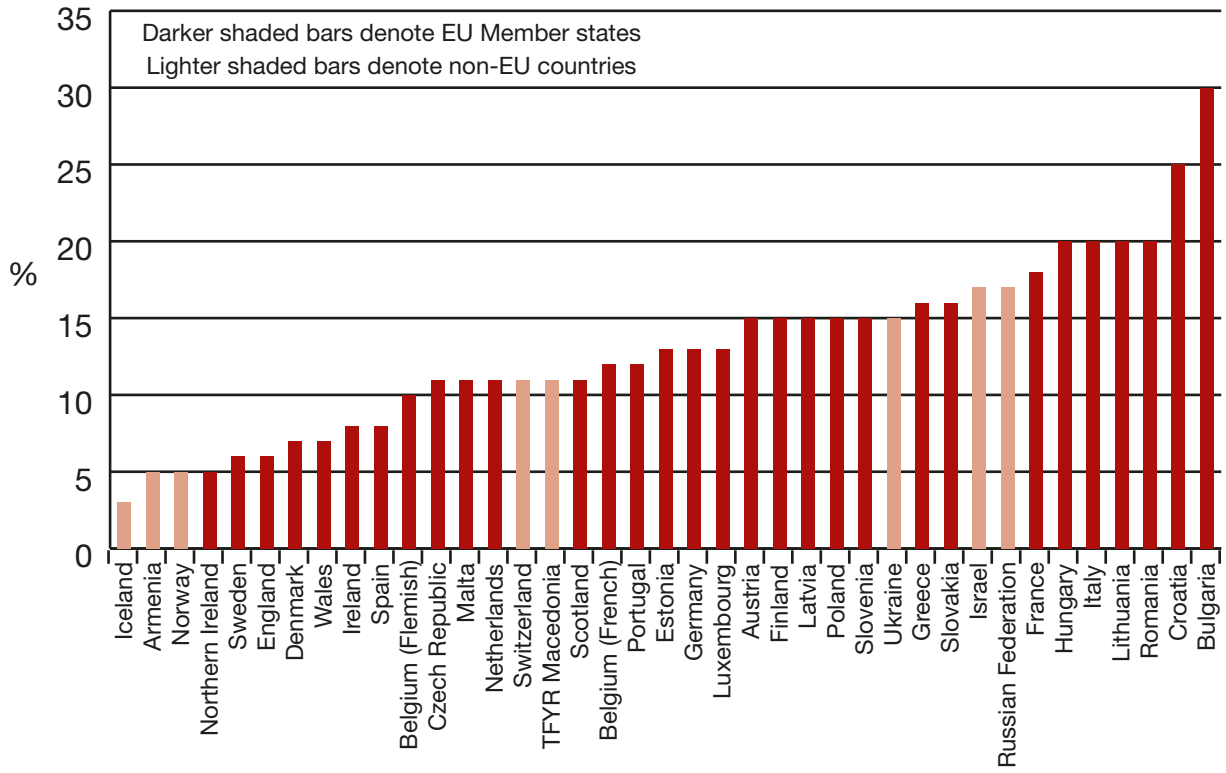


Figure 6.2b Prevalence of smoking, girls aged 15 years, 2013/14, Europe

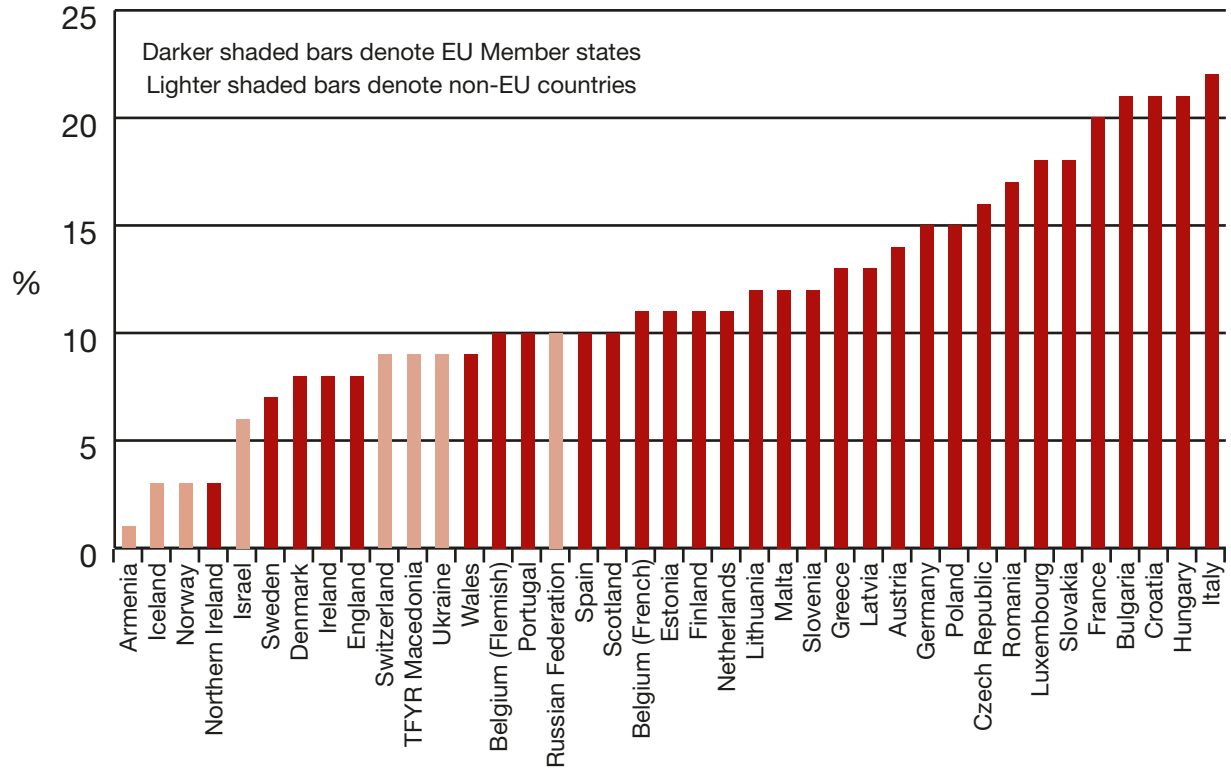


Table 6.3 Frequency of exposure to tobacco smoke indoors at place of work, 2012, EU

	%				
	Never or almost never	Occasionally	Less than 1 hour a day	1-5 hours a day	More than 5 hours a day
Austria	51	29	8	7	5
Belgium	71	15	7	4	3
Bulgaria	55	28	7	7	3
Cyprus	59	19	4	9	9
Czech Republic	69	24	3	1	3
Denmark	87	5	5	2	1
Estonia	73	15	6	3	3
Finland	85	11	1	2	1
France	79	12	5	2	2
Germany	77	12	5	3	3
Greece	42	23	6	11	18
Hungary	56	29	5	7	3
Italy	59	30	5	6	0
Latvia	75	13	3	4	5
Lithuania	68	19	7	4	2
Luxembourg	81	9	3	2	5
Malta	73	17	2	2	6
Netherlands	78	14	3	3	2
Poland	59	28	4	5	4
Portugal	82	11	2	3	2
Romania	38	40	8	6	8
Slovakia	58	33	5	2	2
Slovenia	87	9	1	1	2
Spain	77	14	3	2	4
Sweden	93	3	2	0	2
United Kingdom	91	5	1	2	1
EU-27	72	17	4	4	3

Source: European Commission. Special Eurobarometer 385 “Attitudes of Europeans towards Tobacco”. http://ec.europa.eu/health/tobacco/docs/eurobaro_attitudes_towards_tobacco_2012_en.pdf.

Notes: Data were collected using face-to-face interviews at respondents’ homes. Some percentages do not add to 100% due to a small proportion of ‘don’t know’ responses in some countries.

7. Physical activity

Participation in regular physical activity and/or aerobic exercise training is associated with a reduction in cardiovascular disease prevalence and mortality, while a sedentary lifestyle increases the risk of CVD by increasing the risk of hypertension, high triglycerides, low HDL ('good') cholesterol, diabetes and obesity[1]. The World Health Organization recommends that adults undertake at least 150 minutes of moderate intensity aerobic physical activity per week, at least 75 minutes of vigorous intensity aerobic activity, or a combination of moderate and vigorous activities. In older adults aged 65 years and above, the WHO additionally recommends participation in muscle-strengthening activities on at least two days a week, while for children and adolescents, they recommend at least 60 minutes of moderate to vigorous intensity physical activity per day[2].

Physical activity and inactivity in adults

The Eurobarometer survey on physical activity collects more specific data for EU countries on the frequency of participation in exercise or sport and in non-sport physical activities such as active transport, dancing or gardening. Overall, participation in exercise or sport was relatively low across the EU, with 42% of respondents on average reporting that they never participated in these activities and only 8% reporting participation five times a week or more. In eight countries, mainly in Southern Europe (Bulgaria, Malta, Portugal, Romania, Italy, Greece and Cyprus), more than half of respondents reported never exercising, with as many as 78% reporting never exercising in Bulgaria. In Bulgaria and Italy, only 3% of adults reported engaging in sport/exercise at least five times per week. Participation in sport/exercise was highest in Sweden and Denmark where 15% and 14% of adults respectively reported participating in sport/exercise at least five times a week and only 10% and 14% of adults respectively reported never participating in sport/exercise (Table 7.1; Figures 7.1, 7.2).

Participation in less formal physical activity was also quite low across EU countries. Overall, when asked 'How often do you engage in a physical activity outside of sport such as cycling or walking from a place to another, dancing, gardening?', 30% of adults responded 'never'. Countries in Southern Europe also tended to be least likely to engage in informal physical activity, with more than 50% of respondents in Portugal, Cyprus, Malta and also Bulgaria reporting doing no informal physical activity in a typical week, and less than 10% reporting engaging in physical activity at least five times a week in Italy (7%), Greece (7%), Portugal (7%), Cyprus (7%) as well as in Austria (8%) and Poland (8%). The highest levels of physical activity were found in the Netherlands (43% at least five times a week, 6% never), Denmark (32% at least five times a week, 6% never), and Sweden (30% at least five times a week, 4% never) (Table 7.2, Figures 7.1, 7.2).

Sedentary behaviour refers to those in which energy expenditure is very low. Sedentary behaviour is associated with poor health at all ages, independent of the level of overall physical activity. Even those who reach recommended levels of physical activity may suffer increased risk of some adverse health outcomes if they spend large amounts of time sedentary. According to the Eurobarometer survey, in the EU on average more than 40% of respondents spent between 2h31min and 5h30min sitting and just over 10% spent at least 8h31min sitting on a typical day. Particularly high levels of sedentary behaviour were found in Denmark and the Netherlands, where 25% of respondents reported sitting for at least 8h31min on a usual day, while relatively low levels of sedentary behaviour were found in Portugal (33% of the population spent no more than 2h30min sitting on a typical day; only 6% spent at least 8h31min sitting) and Malta (30% of the population spent no more than 2h30min sitting on a typical day; 9% spent at least 8h31min sitting) (Table 7.3).

The WHO Global Health Observatory publishes information for 37 European countries (28 in the EU) on the prevalence of males and females aged 18 years and over who do not meet its physical activity recommendations. In 2010, insufficient physical activity was most prevalent in Northern, Western and Southern European countries, and least common in Eastern European countries. For example, in Malta and the UK, 45% and 40% of the adult population respectively did not meet physical activity recommendations, while in Ukraine, only 14% of the population failed to reach the recommendations, and in Russia only 11%. In all countries, a greater proportion of women than men were insufficiently physically active, with the prevalence among women exceeding that of men by 30% on average across countries (Table 7.4; Figures 7.4a, 7.4b).

Physical activity and inactivity in children

Levels of physical activity in children and adolescents in Europe vary widely according to age, gender and country. In general, participation in physical activity tends to be higher among boys than girls and to decrease between 11 and 15 years of age (Table 7.5; Figures 7.5a-7.5c). In 2013/14, within the EU the proportion of children participating in at least one hour of moderate to vigorous physical activity per day was highest among 11 year old boys in Finland (47%) and lowest among 15 year old girls in Italy (5%). Of the 11 non-EU countries for which data were available, the proportion of children participating in at least one hour of moderate to vigorous physical activity per day ranged from 5% among 15-year old girls in Italy to 38% among both 11- and 13-year old boys in Albania (Table 7.5; Figures 7.5a-7.5c).

The proportion of children and adolescents watching two or more hours of television per day on weekdays, an indicator of a sedentary lifestyle, shows much less variation by gender and age, although there is some variation between countries, particularly for 11 year olds. Within the EU, the lowest reported rates of high television watching were found among 11-year old girls in Spain (30%), while the highest rates were found among 13-year old girls in Romania (79%). Of the 11 non-EU countries with available data, rates of high television watching ranged from 29% among 11 year old girls in Switzerland to 77% among 15-year old girls in Moldova (Table 7.6; Figures 7.6a-7.6c).

1 World Health Organization (WHO) (2010) *Global recommendations on physical activity for health*, http://apps.who.int/iris/bitstream/10665/44399/1/9789241599979_eng.pdf (accessed December 2016).

2 World Health Organization (WHO) (2010) *Global recommendations on physical activity for health*, http://apps.who.int/iris/bitstream/10665/44399/1/9789241599979_eng.pdf (accessed December 2016).

Table 7.1 Frequency of exercising or playing sport, aged 15+ years, 2013, EU

	%					
	5 times per week or more	3 to 4 times per week	1 to 2 times per week	1 to 3 times per month	Less often	Never
Austria	5	13	27	11	17	27
Belgium	10	13	25	5	16	31
Bulgaria	3	3	6	3	5	78
Croatia	9	11	15	7	29	29
Cyprus	11	11	13	4	7	54
Czech Republic	5	7	24	8	21	35
Denmark	14	22	32	8	10	14
Estonia	7	11	21	8	16	36
Finland	13	24	29	6	13	15
France	8	11	24	7	8	42
Germany	7	14	27	7	16	29
Greece	7	11	13	3	7	59
Hungary	16	11	12	4	13	44
Ireland	16	16	20	5	9	34
Italy	3	9	18	2	8	60
Latvia	6	10	15	9	21	39
Lithuania	15	9	13	4	13	46
Luxembourg	12	16	26	8	9	29
Malta	5	7	7	3	3	75
Netherlands	8	20	30	4	9	29
Poland	5	8	14	7	11	53
Portugal	8	7	13	2	6	64
Romania	7	5	10	5	12	60
Slovakia	6	7	20	7	19	41
Slovenia	15	14	22	6	21	22
Spain	15	16	15	3	7	44
Sweden	15	23	31	7	14	10
United Kingdom	10	16	20	7	12	35
EU	8	13	20	6	11	42

Source: European Commission (2014) Special Eurobarometer 412: Sport and Physical Activity http://ec.europa.eu/health/nutrition_physical_activity/docs/ebs_412_en.pdf.

Notes: Question: 'How often do you exercise or play sport?' Some percentages do not add to 100% due to a small proportion of 'don't know' responses in some countries.

Figure 7.1 Prevalence of adults aged 15+ years who participate in sport/exercise or informal physical activity at least 5 times per week, 2013, EU

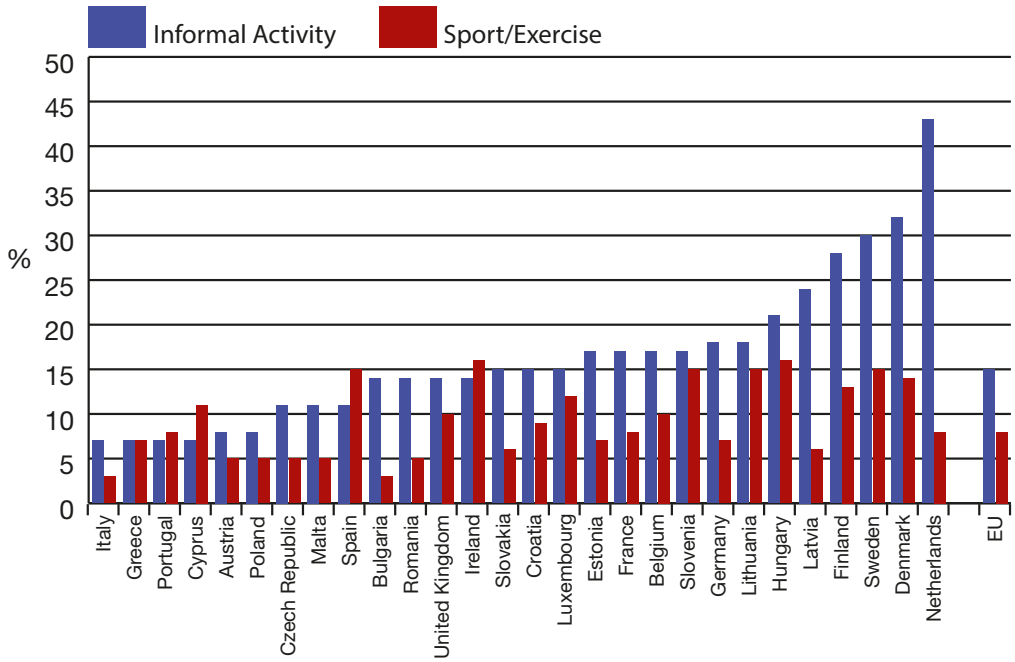


Table 7.2 Frequency of participating in informal physical activity, aged 15+ years, 2013, EU

	%					
	5 times per week or more	3 to 4 times per week	1 to 2 times per week	1 to 3 times per month	Less often	Never
Austria	8	14	27	17	19	15
Belgium	17	13	24	9	17	20
Bulgaria	14	7	11	7	8	51
Croatia	15	12	20	8	28	17
Cyprus	7	8	13	8	7	57
Czech Republic	11	10	23	13	23	20
Denmark	32	17	26	12	7	6
Estonia	17	12	25	12	15	18
Finland	28	18	28	6	13	7
France	17	13	20	11	10	29
Germany	18	19	26	9	14	14
Greece	7	9	16	6	13	49
Hungary	21	14	16	7	14	28
Ireland	14	13	21	7	16	29
Italy	7	7	16	6	14	50
Latvia	24	14	20	12	16	13
Lithuania	18	10	18	10	16	28
Luxembourg	15	14	28	10	16	16
Malta	11	8	12	4	7	57
Netherlands	43	21	19	6	5	6
Poland	8	10	16	12	16	35
Portugal	7	6	11	4	12	60
Romania	14	11	14	10	14	36
Slovakia	15	13	24	11	18	19
Slovenia	17	17	24	7	22	13
Spain	11	11	16	4	9	49
Sweden	30	20	25	11	10	4
United Kingdom	14	14	24	12	12	24
EU	15	13	20	9	13	30

Source: European Commission (2014) Special Eurobarometer 412: Sport and Physical Activity http://ec.europa.eu/health/nutrition_physical_activity/docs/ebs_412_en.pdf.

Notes: Question: 'How often do you engage in a physical activity outside sport such as cycling or walking from a place to another, dancing, gardening…?' Some percentages do not add to 100% due to a small proportion of 'don't know' responses in some countries.

Figure 7.2 Prevalence of adults aged 15+ years who do no sport/ exercise or informal physical activity in a typical week, 2013, EU

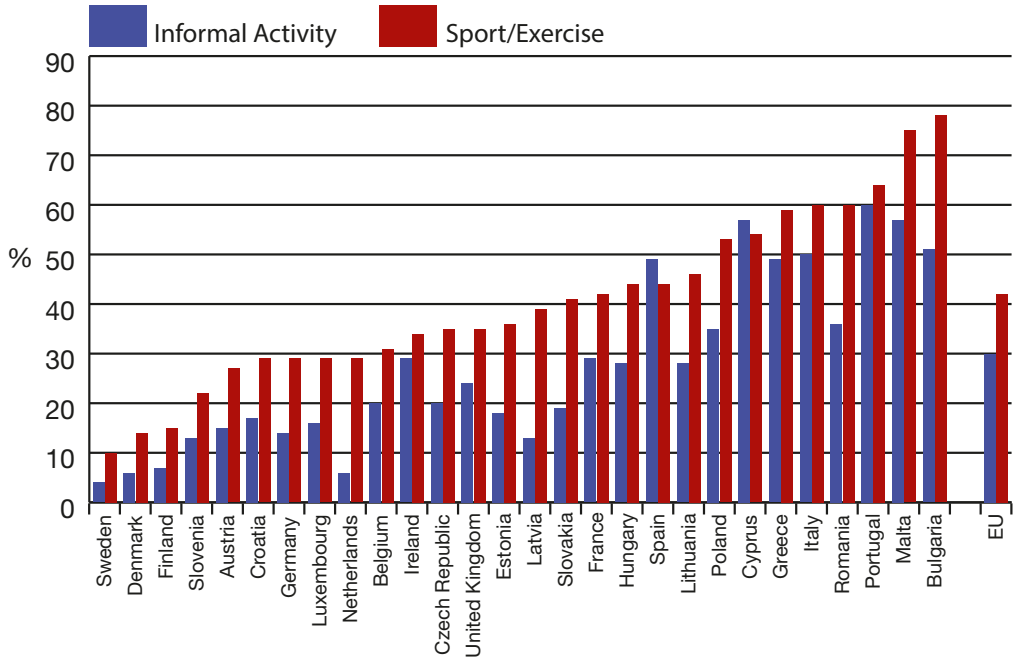


Table 7.3 Frequency of sedentary activity, adults aged 15+ years, 2013, EU

	%			
	2h30min or less per day	2h31min to 5hr30min per day	5h31min to 8hr30min per day	8hr31min or more
Austria	6	42	34	12
Belgium	17	41	30	12
Bulgaria	10	41	33	10
Croatia	17	39	28	15
Cyprus	17	43	29	11
Czech Republic	12	40	27	20
Denmark	7	33	35	25
Estonia	15	41	27	16
Finland	9	38	35	16
France	17	44	26	12
Germany	18	42	28	10
Greece	15	43	30	12
Hungary	25	47	19	7
Ireland	20	48	23	7
Italy	21	42	25	6
Latvia	19	44	25	11
Lithuania	16	43	29	11
Luxembourg	14	38	27	20
Malta	30	37	22	9
Netherlands	5	32	37	25
Poland	21	37	22	10
Portugal	33	37	18	6
Romania	27	40	18	9
Slovakia	15	37	32	13
Slovenia	28	46	17	9
Spain	18	55	20	6
Sweden	7	36	34	21
United Kingdom	16	45	24	13
EU	**17**	**43**	**26**	**11**

Source: European Commission (2014) Special Eurobarometer 412: Sport and Physical Activity. http://ec.europa.eu/health/nutrition_physical_activity/docs/ebs_412_en.pdf.

Notes: Question: 'How much time do you spend sitting on a usual day? This may include time spent at a desk, visiting friends, studying or watching television.' Some percentages do not add to 100% due to a small proportion of 'don't know' responses in some countries.

Table 7.4 Prevalence of insufficiently active adults, aged 18+ years, by sex, 2010, Europe

	%		
	Males	Females	Both sexes
Andorra	27	35	31
Austria*	21	31	26
Belgium*	32	43	37
Bosnia and Herzegovina	17	24	21
Bulgaria*	19	27	23
Croatia*	17	23	20
Cyprus*	29	42	35
Czech Republic*	24	28	26
Denmark*	24	29	27
Estonia*	12	18	15
Finland*	24	28	26
France*	21	31	26
Georgia	21	24	23
Germany*	20	27	23
Greece*	12	18	15
Hungary*	19	23	21
Ireland*	31	41	36
Italy*	30	41	36
Kazakhstan	19	21	20
Latvia*	19	27	24
Lithuania*	17	23	20
Luxembourg*	28	32	30
Malta*	40	50	45
Netherlands*	16	20	18
Norway	25	33	29
Poland*	14	26	21
Portugal*	34	41	37
Romania*	19	33	27
Russian Federation	10	12	11
Serbia	35	47	41
Slovakia*	17	21	19
Slovenia*	19	29	24
Spain*	29	37	33
Sweden*	26	36	31
Turkey	27	37	32
Ukraine	12	16	14
United Kingdom*	35	44	40

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.
Notes: Percent of defined population attaining less than 150 minutes of moderate-intensity physical activity per week, or less than 75 minutes of vigorous-intensity physical activity per week, or equivalent. Based on self-reported physical activity captured using the GPAQ (Global Physical Activity Questionnaire), the IPAQ (International Physical Activity Questionnaire) or a similar questionnaire (age standardized estimates).
*Asterisk denotes EU member states.

Figure 7.4a Prevalence of adults meeting the WHO physical activity guidelines, aged 18+ years, males, 2010, Europe

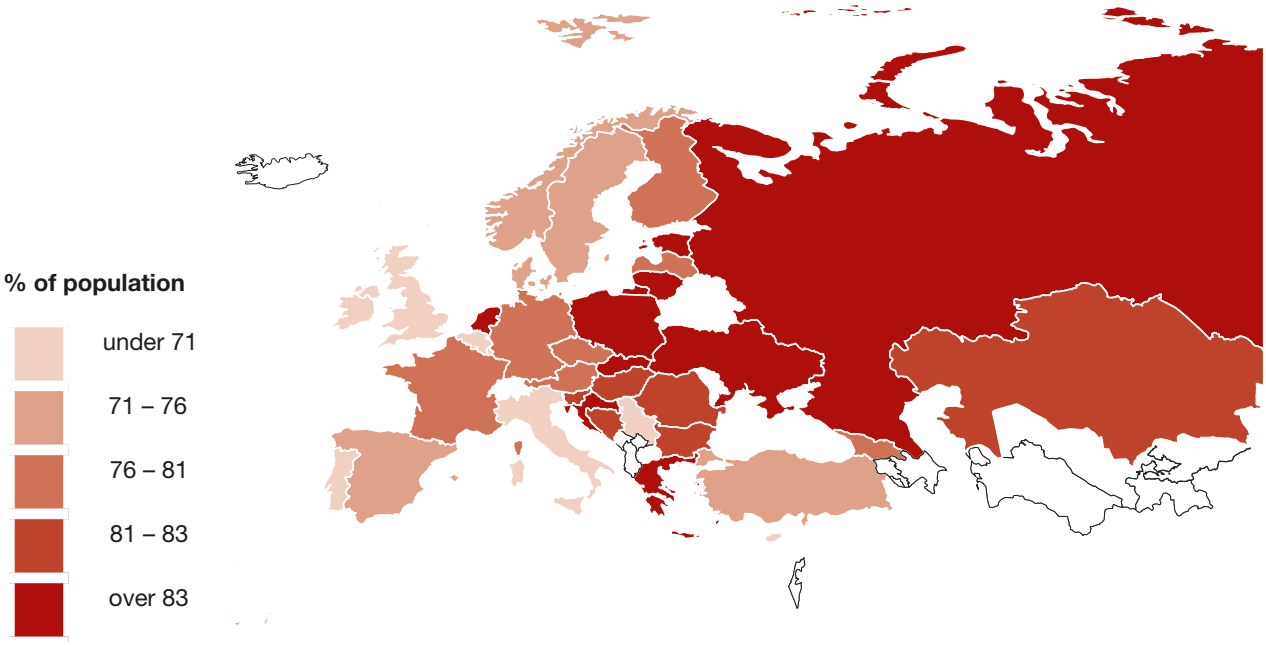


Figure 7.4b Prevalence of adults meeting the WHO physical activity guidelines, aged 18+ years, females, 2010, Europe

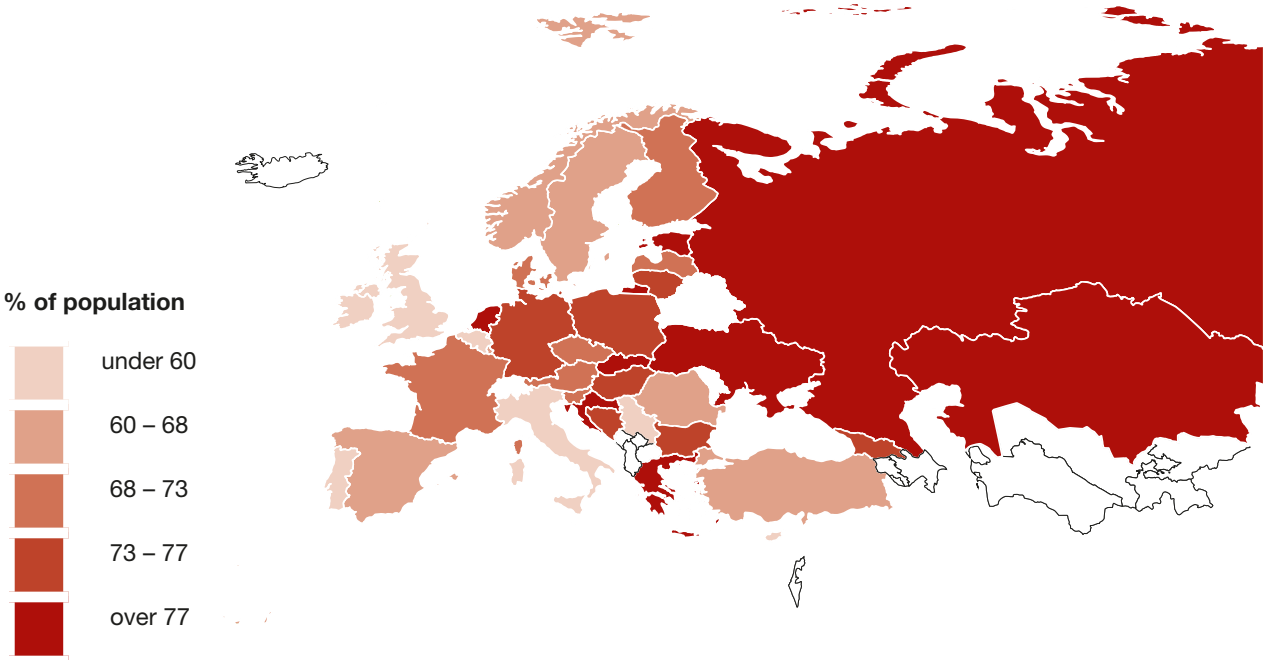


Table 7.5 Proportion of children who participate in at least one hour of moderate to vigorous physical activity per day, 11, 13 or 15 years olds, by sex, 2005/06, 2009/10, 2013/14, Europe

	Boys %									Girls %								
	2005/06			2009/10			2013/14			2005/06			2009/10			2013/14		
	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds
Albania							38	38	29							31	20	14
Armenia				34	27	29	29	30	25				21	17	14	20	20	14
Austria*	29	27	13	40	34	20	33	29	18	23	14	10	30	17	9	26	15	5
Belgium (Flemish)*	20	21	17	25	18	17	29	19	17	15	10	11	15	11	10	16	13	11
Belgium (French)*	31	27	24	30	20	15	21	21	17	23	20	21	18	12	9	14	13	7
Bulgaria*	39	32	24				42	35	25	26	19	16				30	20	18
Croatia*	36	31	20	31	31	22	39	33	25	26	15	10	19	15	8	26	19	12
Czech Republic*	25	28	27	28	30	25	29	27	20	19	17	16	23	19	14	23	20	13
Denmark*	31	23	20	16	12	14	19	17	16	26	18	16	10	10	8	11	11	7
England*	27	23	18	33	27	25	25	23	18	18	14	9	20	15	12	20	14	9
Estonia*	24	22	18	19	17	13	21	22	18	21	13	9	16	11	9	15	12	9
Finland*	48	24	15	38	32	17	47	29	22	37	15	9	25	17	10	34	23	13
France*	24	20	14	21	17	14	25	16	14	12	5	5	9	6	5	11	9	6
Germany*	25	19	16	25	21	13	25	17	16	20	13	10	20	14	9	16	12	9
Greece*	25	21	16	21	21	18	20	19	15	16	12	7	12	8	5	11	8	7
Hungary*	28	29	19	30	25	21	34	25	24	19	13	11	22	11	9	24	15	11
Iceland	29	24	16	25	20	15	31	26	25	23	14	9	17	11	9	22	17	14
Ireland*	51	39	27	43	36	28	45	36	25	38	23	13	31	20	12	31	16	9
Israel	30	24	13				23	15	10	15	12	6				13	9	5
Italy*	23	23	16	10	10	12	17	14	11	13	9	7	7	5	5	8	6	5
Latvia*	30	27	26	26	25	22	25	20	21	23	17	16	18	18	13	18	14	14
Lithuania*	27	22	19	23	18	18	27	28	23	20	13	13	17	12	11	20	13	12
Luxembourg*	18	19	19	32	32	24	34	35	26	13	11	11	18	16	13	21	17	9
Malta*	27	20	19				28	20	16	18	14	13				21	11	9
Moldova							35	20	25							29	25	22
Netherlands*	30	24	18	24	24	19	24	21	22	20	20	15	19	15	13	15	17	12
Norway	27	15	13	27	18	12	32	18	23	17	14	7	17	6	9	19	12	8
Poland*	24	21	21	31	22	23	34	29	25	19	12	10	23	14	10	27	19	11
Portugal*	30	21	15	23	19	14	26	25	18	12	8	5	14	7	6	16	6	5
Romania*	29	24	16	32	28	16	39	28	21	16	11	6	20	13	7	23	16	11
Russian Federation	20	18	12	17	18	13	26	21	21	12	10	7	11	9	7	18	15	11
Scotland*	40	28	21	24	19	13	29	19	14	25	15	9	16	10	8	21	13	11
Slovakia*	51	51	46	30	30	27	37	31	25	43	35	29	22	15	12	36	19	13
Slovenia*	25	22	19	31	25	20	27	25	21	21	10	9	20	15	10	18	13	7
Spain*	32	21	19	41	27	25	39	36	28	24	14	12	26	15	8	28	18	12
Sweden*	23	21	11	19	14	13	21	14	15	20	14	10	17	11	9	13	10	10
Switzerland	19	16	13	20	16	12	26	18	12	11	10	10	11	8	6	17	10	7
TFYR Macedonia	29	30	21	32	28	22	36	32	27	26	18	11	28	15	13	30	25	12
Turkey	29	22	16	27	23	18				21	17	12	19	12	9			
Ukraine	33	32	21	34	29	24	33	33	26	22	16	11	25	17	9	28	25	16
Wales*	35	27	21	29	23	21	26	20	16	21	12	9	19	13	9	15	12	8

Source: Inchley J et al. (2016) Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. WHO Regional Office for Europe: Copenhagen, Denmark.

Notes: Moderate to vigorous physical activity is defined as any activity that increases the heart rate and makes the person get out of breath some of the time, with examples provided.

*Asterisk denotes EU member states.

Figure 7.5a Proportion of 11 year olds participating in 1 hour or more of moderate to vigorous physical activity per day, by sex, 2013/14

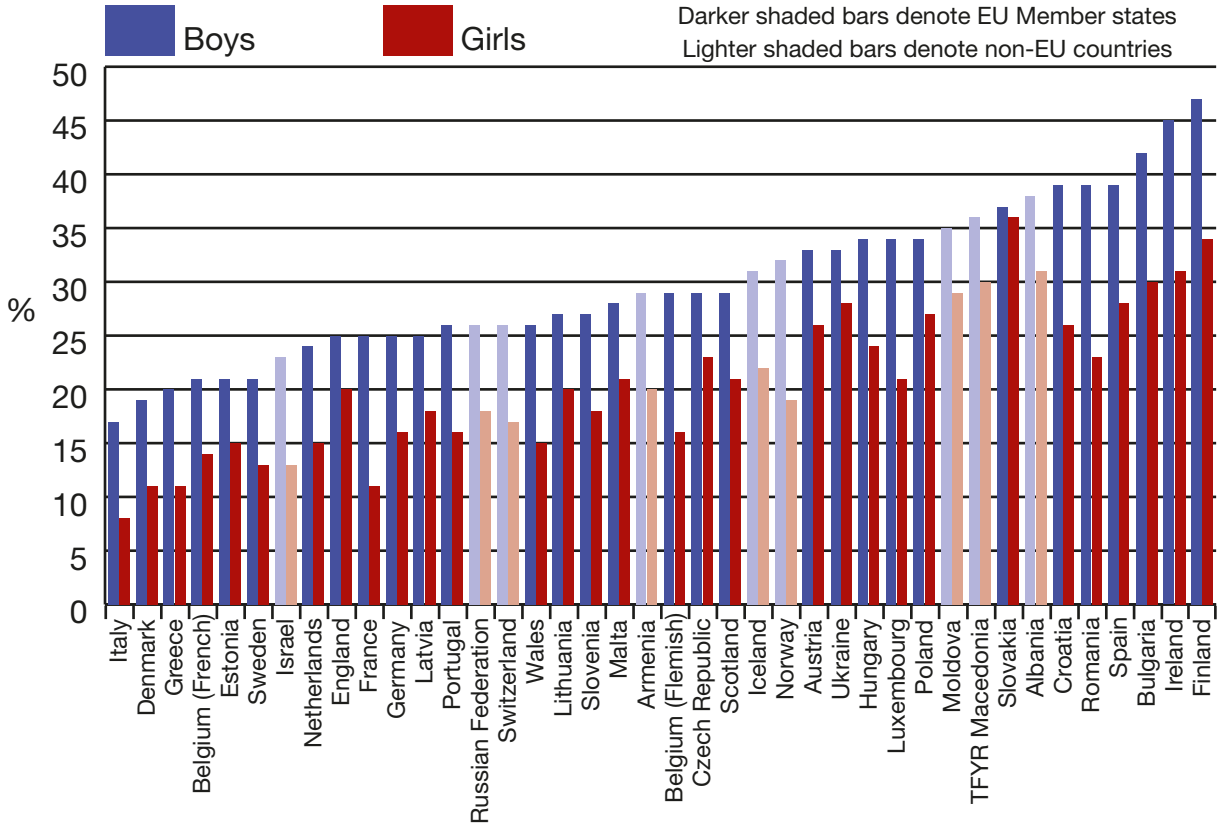


Figure 7.5b Proportion of 13 year olds participating in 1 hour or more of moderate to vigorous physical activity per day, by sex, 2013/14

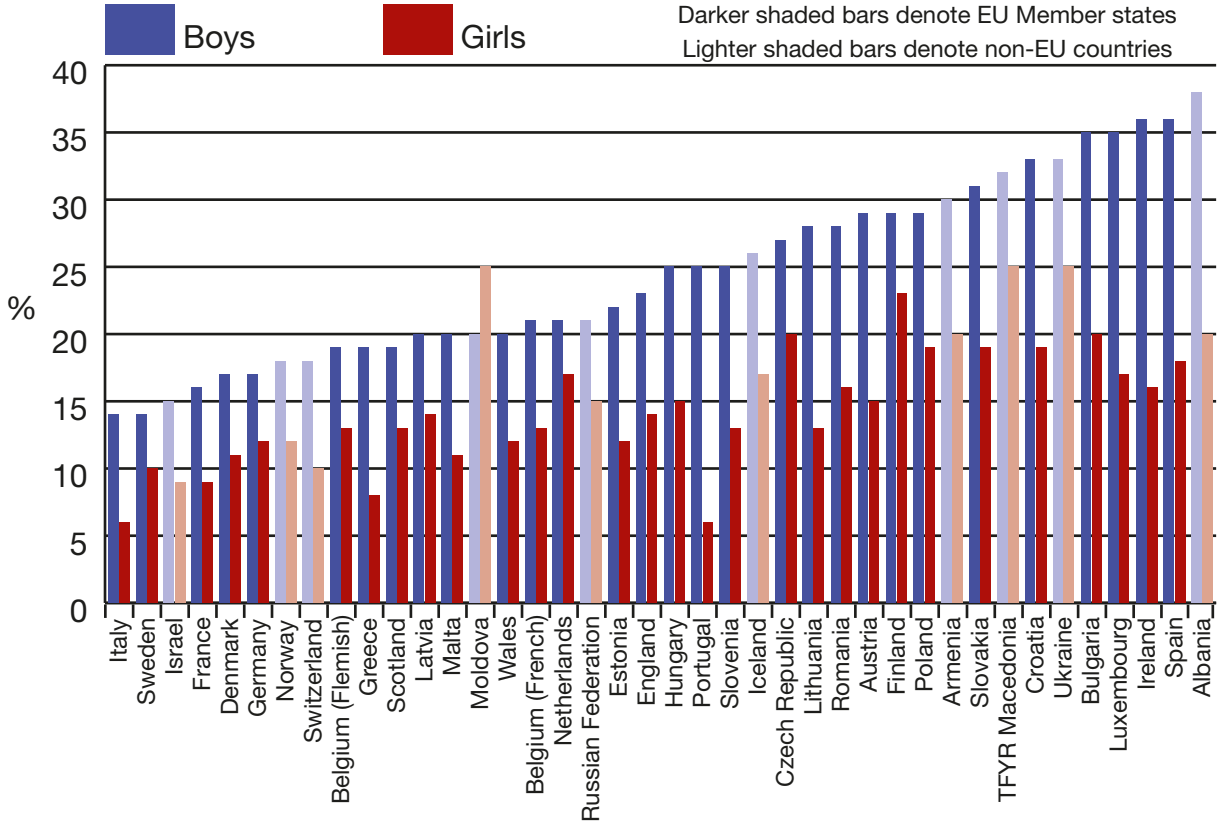


Figure 7.5c Proportion of 15 year olds participating in 1 hour or more of moderate to vigorous physical activity per day, by sex, 2013/14

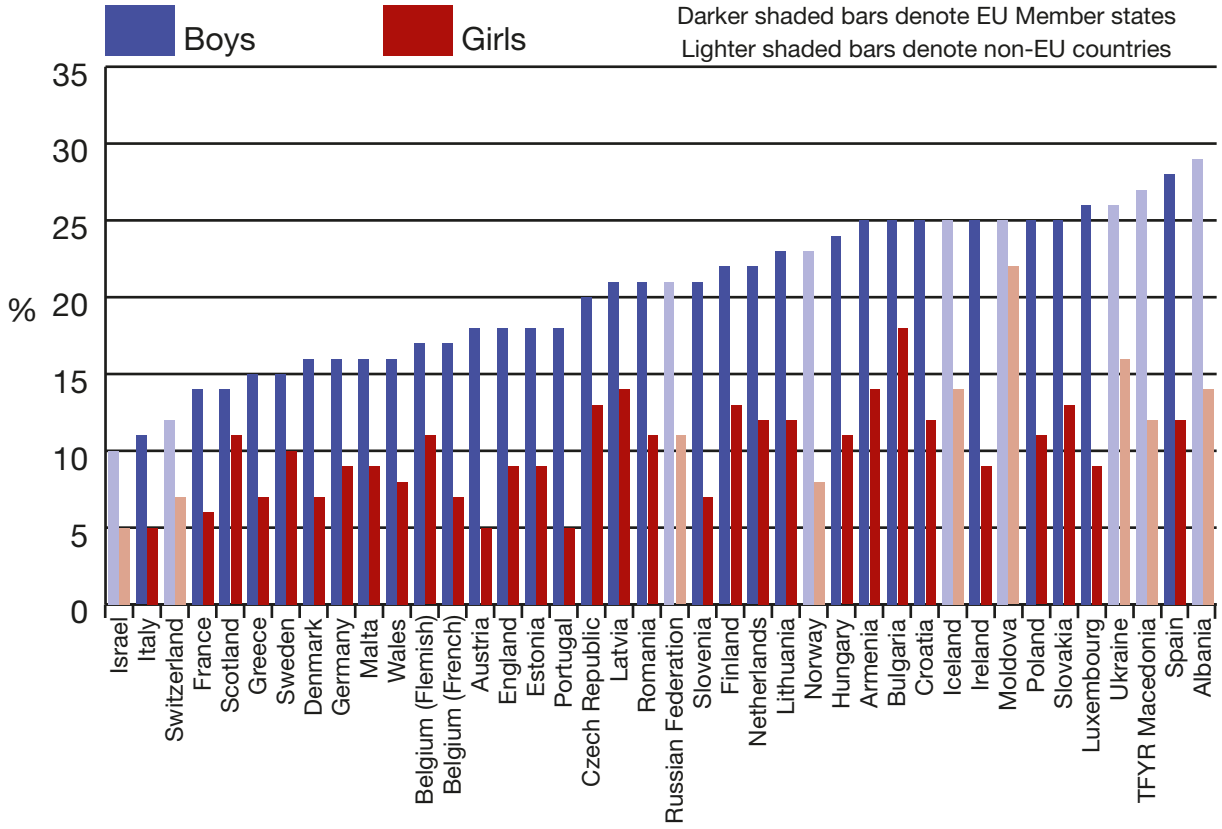


Table 7.6 Proportion of children who watch television for two or more hours per day on weekdays, aged 11, 13 or 15 years old, by sex, 2005/06, 2009/10, 2014/14, Europe

	Boys %									Girls %								
	2005/06			2009/10			2013/14			2005/06			2009/10			2013/14		
	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds	11 year olds	13 year olds	15 year olds
Albania							51	65	73							47	69	75
Armenia				66	74	79	48	62	73				61	75	82	47	58	66
Austria*	55	65	70	46	61	63	50	63	54	42	65	62	37	55	60	40	53	57
Belgium (Flemish)*	64	69	69	58	61	65	55	59	61	62	70	67	55	64	65	54	63	59
Belgium (French)*	49	60	60	43	55	58	48	60	64	42	54	51	40	49	54	43	58	55
Bulgaria*	80	82	78				64	73	70	81	86	84				66	79	72
Croatia*	74	80	76	69	76	71	49	65	66	70	83	70	69	77	67	47	66	59
Czech Republic*	70	76	71	61	72	63	62	62	65	65	71	67	56	69	59	48	58	59
Denmark*	64	73	69	64	65	69	60	65	71	57	70	69	58	68	67	49	66	68
England*	58	66	63	64	74	71	51	66	67	51	57	61	60	68	64	51	68	66
Estonia*	74	80	71	69	74	66	61	62	59	75	79	72	68	75	63	56	62	57
Finland*	55	62	62	61	60	55	58	65	61	55	58	57	58	59	50	55	59	52
France*	53	63	61	49	59	54	50	62	62	50	58	57	42	55	48	39	62	58
Germany*	50	66	67	44	65	68	45	64	66	42	64	68	43	59	64	36	58	60
Greece*	68	77	75	69	73	71	53	66	71	70	82	77	64	74	70	45	66	65
Hungary*	57	68	64	50	64	64	47	57	62	50	67	59	48	65	57	40	56	58
Iceland	62	72	62	49	60	52	40	57	58	50	64	61	41	52	46	30	49	54
Ireland*	63	66	65	55	56	60	46	53	56	56	63	61	48	52	56	42	52	54
Israel	72	75	78				69	64	67	78	85	74				69	75	67
Italy*	56	66	69	48	59	62	47	57	59	52	66	65	42	60	61	40	48	52
Latvia*	77	82	75	70	74	68	63	69	68	73	78	70	65	73	68	54	67	67
Lithuania*	75	82	77	69	72	72	59	62	58	79	83	78	69	75	70	54	63	58
Luxembourg*	45	55	59	42	56	63	44	61	66	37	50	53	40	52	58	37	53	61
Malta*							53	58	65							41	54	54
Moldova							54	68	73							53	71	77
Netherlands*	65	76	79	69	71	71	61	70	73	63	70	76	64	69	69	61	71	75
Norway	50	59	66	47	59	64	46	62	63	48	69	72	42	61	66	41	56	61
Poland*	66	74	69	64	68	67	56	60	62	63	73	64	61	67	65	49	65	64
Portugal*	68	76	77	61	72	67	52	61	55	67	82	78	60	75	64	45	62	51
Romania*	79	81	82	65	77	69	67	67	73	73	80	74	64	75	68	56	68	75
Russian Federation	71	74	71	67	67	63	57	66	63	73	76	73	69	71	65	52	62	60
Scotland*	69	73	74	61	66	69	60	71	72	64	69	69	58	67	68	51	65	64
Slovakia*	76	84	85	71	75	73	59	69	70	74	82	83	66	78	72	54	70	69
Slovenia*	65	70	63	63	67	54	49	61	59	63	68	48	55	64	46	40	57	50
Spain*	53	64	67	48	60	65	43	51	63	45	62	69	45	54	63	30	55	59
Sweden*	55	67	61	60	66	63	58	67	70	48	66	59	56	67	60	51	68	67
Switzerland	31	39	51	29	35	45	32	45	58	29	38	42	24	34	38	29	40	51
TFYR Macedonia	55	67	66	52	63	61	46	57	57	51	70	66	47	70	65	43	57	56
Turkey	63	63	70	60	67	68				59	62	68	53	65	67			
Ukraine	77	83	77	69	76	69	52	65	61	77	83	79	71	76	69	46	63	64
Wales*	62	76	75	62	71	73	62	73	72	66	72	72	56	69	67	53	68	73

Source: Inchley J et al. (2016) Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: international report from the 2013/2014 survey. WHO Regional Office for Europe: Copenhagen, Denmark.

Notes: Blank cells indicate that data were not available.

*Asterisk denotes EU member states.

Figure 7.6a Proportion of 11 year olds watching 2 or more hours of television per day, by sex, 2013/14, Europe

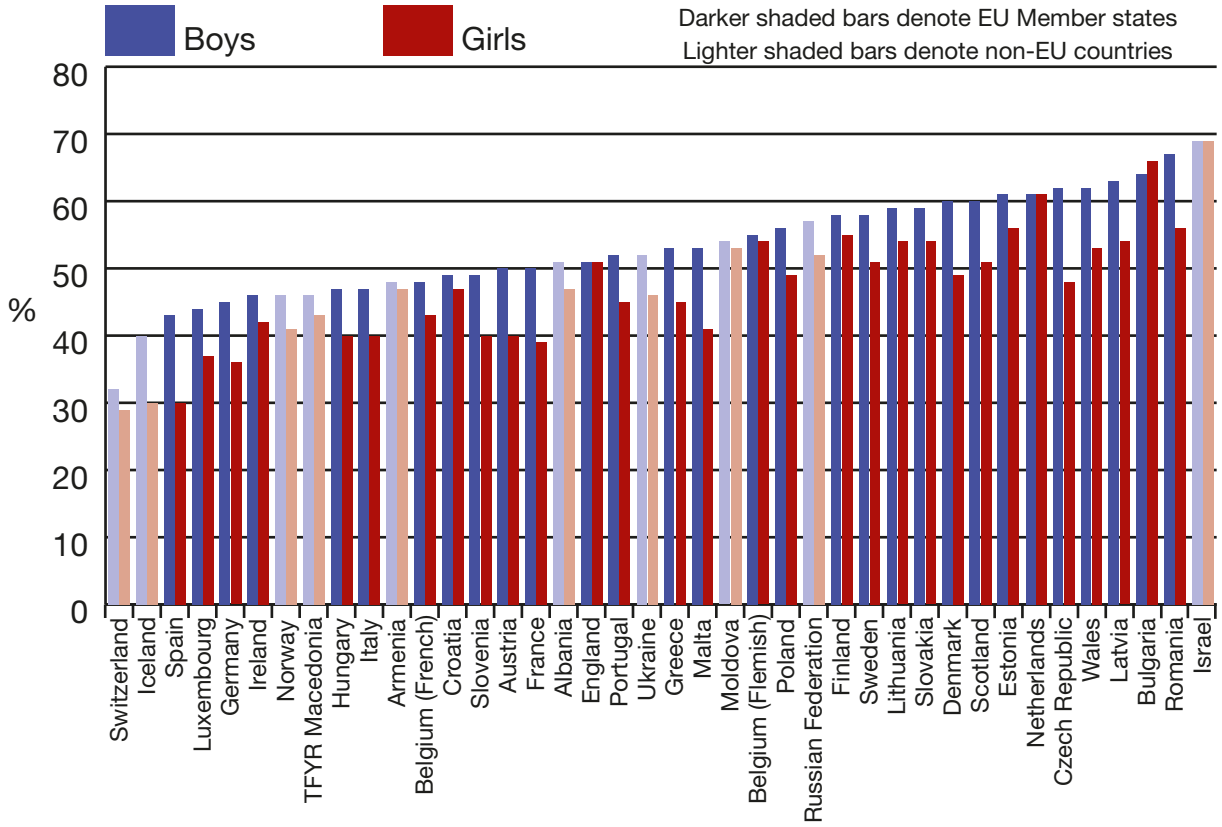


Figure 7.6b Proportion of 13 year olds watching 2 or more hours of television per day, by sex, 2013/14, Europe

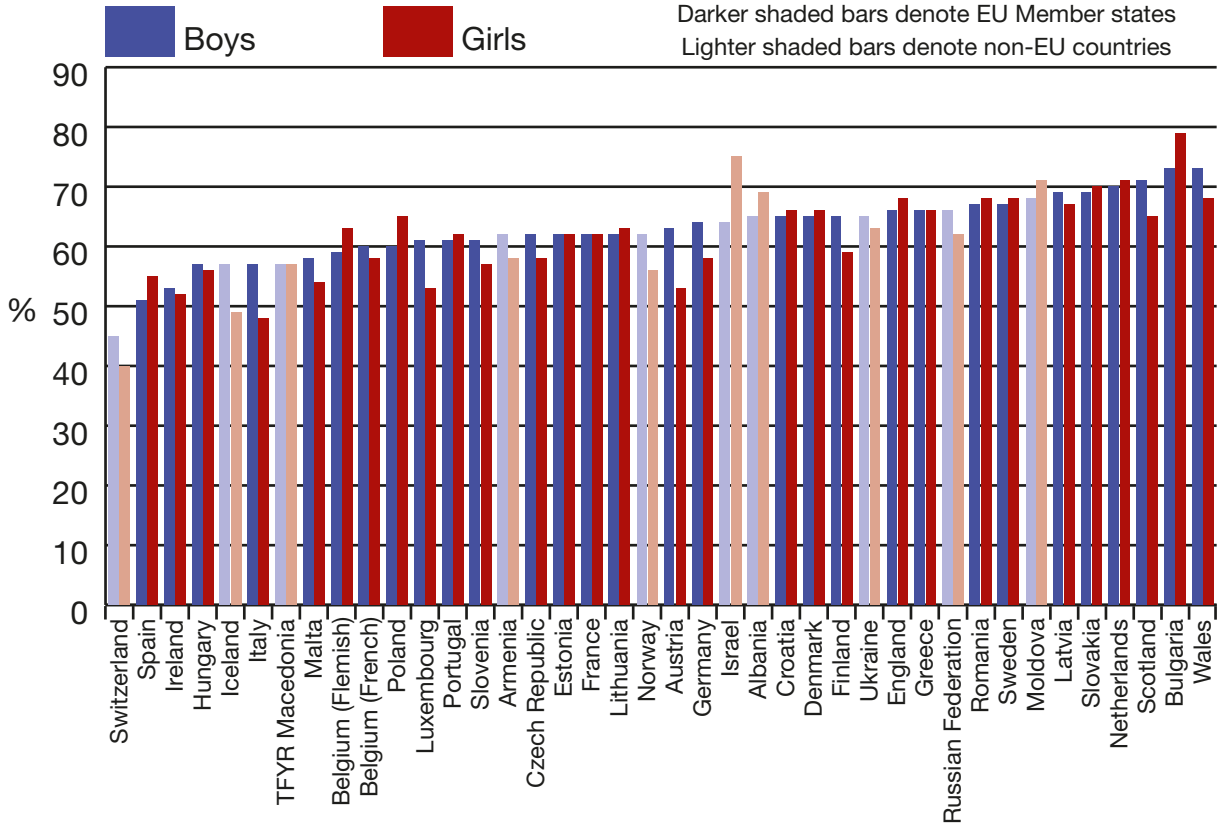
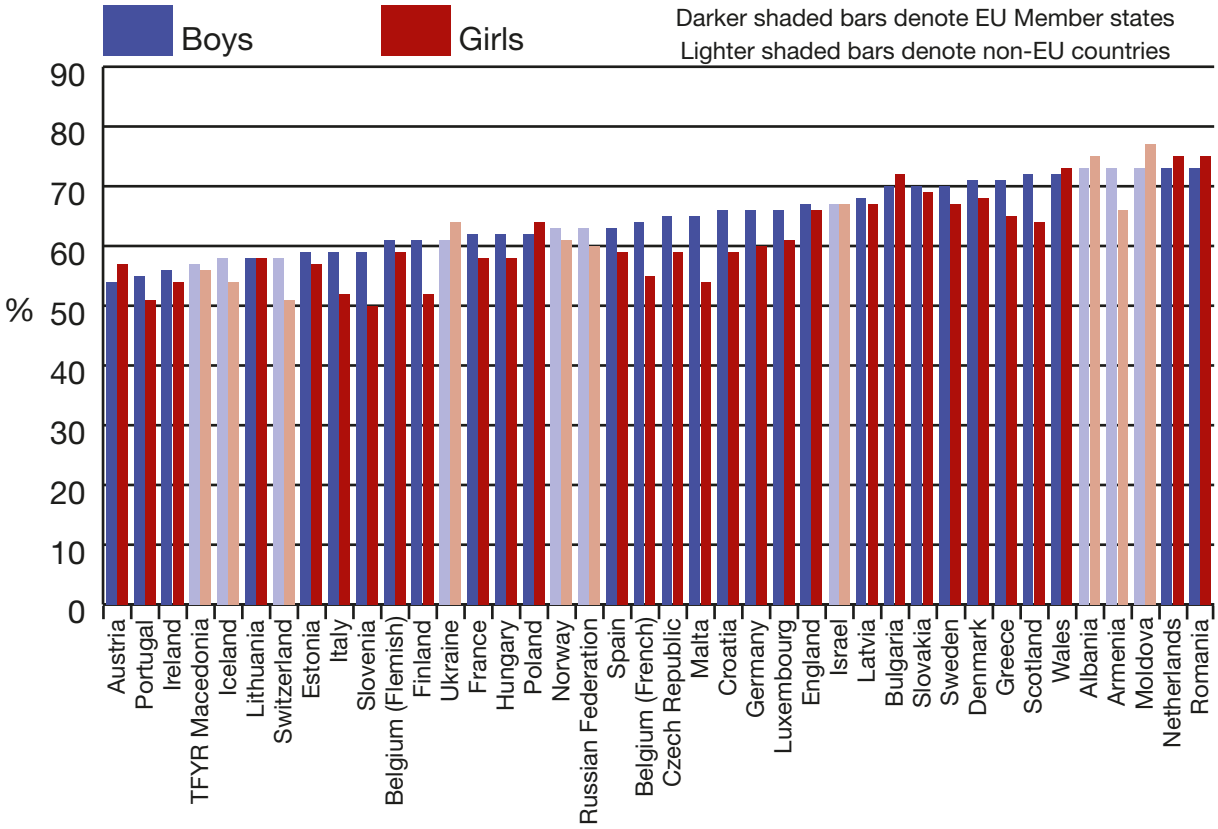


Figure 7.6c Proportion of 15 year olds watching 2 or more hours of television per day, by sex, 2013/14, Europe



8. Alcohol

High alcohol consumption, particularly binge drinking, increases the risk of CVD by raising blood pressure and blood levels of triglycerides. In addition, high levels of alcohol consumption increase the risk of liver cirrhosis, injuries, and some forms of cancer. While modest levels of alcohol intake (one or two drinks a day) may have a protective effect on the risk of some cardiovascular diseases, on balance, the positive effects of alcohol on the health of populations, beyond very low levels of consumption, are generally outweighed by its negative effects[1].

Levels of alcohol consumption

In 2014, the average recorded level of alcohol consumption recorded as litres of pure alcohol per person per year was 8.6 litres for Europe as a whole. The average for the EU was almost 20% higher than that for Europe, at 10.2 litres per person per year (Table 8.1, Figure 8.1a). Within the EU, the highest levels of alcohol consumption tended to be in Central and Western European countries, while lower levels were recorded in Northern and Southern countries. For example, the Czech Republic (12.7 litres/capita/year) and Belgium (12.6 litres/capita/year) recorded the highest levels of alcohol consumption, while recorded consumption was lowest in Sweden (7.3 litres/capita/year), Greece (7.5 litres/capita/year) and Italy (7.6 litres/capita/year). Outside of the EU, Russia (10.1 litres/capita/year) and Moldova (10.0 litres/capita/year) recorded the highest alcohol consumption. Consumption was much lower in Southern European and Western Asian countries, with the lowest levels in Tajikistan (0.3 litres/capita/year) and Macedonia (1.1 litres/capita/year) (Table 8.1, Figure 8.1a). It is important to note that variation in actual levels of alcohol consumption may be less than that for recorded levels owing to high under-recording in many countries with low recorded rates[2].

Over the past 30 years, average alcohol consumption in Europe as a whole has decreased very gradually, from 9.1 litres/person/year in 1986-1990 to 8.6 litres/person/year in 2014 (a 6% decrease). Alcohol intake has also decreased in the EU on average, from 12.3 litres/person/year in 1986/1990 to 10.2 litres/person/year in 2014 (a 17% decline), although over the last five years EU levels have plateaued somewhat. Trends in alcohol consumption in individual European countries are varied. Over the past 30 years steady decreases have been observed in France, Italy and Hungary amongst others, while in Sweden and Turkey, rates have remained relatively stable, and in Lithuania and Belarus they have increased (Table 8.1, Figure 8.1b).

Heavy episodic drinking

Heavy drinking at a single occasion[3], or 'binge drinking', is a major risk factor for CVD. The WHO Global Health Observatory provide age-standardised[4] data on the prevalence of heavy episodic drinking among adults aged 15 years and over in 51 European countries. In all countries, the prevalence of binge drinking was considerably higher in males than females (Table 8.2, Figures 8.2a-8.2c). Among males, the prevalence of heavy drinking within the EU ranged from 9% in Italy to 55% in the Czech Republic. Outside of the EU the prevalence of heavy drinking among males ranged from 0.3% in Turkey to 49% in Moldova (Table 8.2, Figures 8.2a, 8.2b). Among females, within the EU heavy drinking was least prevalent in Italy (0.6%) and most prevalent in Lithuania (24%), whilst outside of the EU the prevalence of heavy drinking ranged from a reported 0% in Turkey to 17% in Moldova (Table 8.2, Figures 8.2a, 8.2c).

1 Nichols M, Scarborough P, Allender S, Rayner M. 'What is the optimal level of population alcohol consumption for chronic disease prevention in England? Modelling the impact of changes in average consumption levels'. BMJ Open 2012;2(3).

2 Estimates from WHO suggest that unrecorded alcohol consumption is twice that of recorded consumption in Latvia and is four times that of recorded consumption in TFYR Macedonia. For more details see: Rehn N, with Room R and Edwards G (2001) Alcohol in the European Region – consumption, harm and policies. www.who.dk/document/E76240.pdf.

3 Heavy episodic drinking is defined by the WHO Global Health Observatory as the proportion of the population that consumes at least 60 grams of pure alcohol on at least one occasion.

4 Data are age-standardised to the WHO standard population.

Table 8.1 Alcohol consumption, adults aged 15+ years, 1986 to 2015, Europe

	Pure alcohol consumption, litres per capita per year																	
	1986-1990	1991-1995	1996-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania	1.7	2.0	2.5	4.3	3.7	4.3	4.5	5.2	5.3	5.6	5.6	5.8	5.3	5.4	5.1	4.8	4.5	
Andorra			12.4	11.6	12.6	12.4	12.2	12.0	11.9	11.6	11.0	10.9	10.6	10.6	10.3	10.0		
Armenia	3.2	3.1	2.5	2.9	2.9	3.0	3.8	4.3	4.0	4.0	4.0	4.0	4.2	4.1	3.9	3.8	3.9	
Austria*	13.7	13.4	13.1	12.4	12.5	12.2	12.1	12.4	12.4	12.5	12.0	11.3	12.1	12.0	12.3	11.8	12.3	
Azerbaijan	2.9	2.5	1.1	0.5	0.6	0.6	0.6	0.7	0.9	1.0	1.2	2.1	2.0	2.0		2.1		
Belarus	6.7	9.4	11.8	10.7	12.2	11.2	12.1	11.0	12.6	14.2	14.7	14.1	14.4	17.3	16.4	14.7	13.9	
Belgium*	12.4	11.4	10.6	11.0	11.3	11.3	12.1	12.3	11.0	10.3	10.5	10.1	10.2	10.1	10.1	11.8	12.6	
Bosnia and Herzegovina	11.9	9.8	8.1	3.9	3.8	4.1	4.3	4.6	4.8	5.2	5.1	4.8	4.5	4.6	4.6	4.1	4.0	
Bulgaria*	11.3	9.7	8.5	10.7	10.2	11.2	11.0	10.5	10.4	10.9	11.0	10.9	10.8	10.7	11.0	12.1	12.0	
Croatia*	12.9	11.8	12.6	13.2	13.4	13.8	13.1	11.6	11.8	12.6	12.1	12.2	12.1	12.2	11.5	12.4	12.1	
Cyprus*	9.1	9.6	8.8	10.2	11.7	10.6	13.0	11.4	11.5	11.6	12.0	10.8	11.3	10.7	10.6	9.0		
Czech Republic*	13.0	13.8	14.0	13.4	13.5	13.0	13.2	13.2	13.0	13.4	13.3	13.2	12.7	12.4	12.7	12.5	12.7	
Denmark*	11.9	12.0	11.9	11.6	11.3	11.5	11.3	11.3	11.0	11.0	10.7	10.1	10.3	10.5	9.3	9.5	9.6	
Estonia*	9.8	8.3	8.2	9.2	10.4	11.6	13.2	13.1	13.4	14.7	14.2	11.9	11.4	11.6				
Finland*	9.0	8.6	8.5	8.9	9.3	9.3	9.9	10.0	10.2	10.5	10.3	10.0	9.7	9.8	9.2	9.0	8.8	
France*	15.9	14.4	13.4	13.9	13.8	13.5	13.2	12.2	12.4	12.2	11.9	11.8	11.7	11.8	11.5	11.1	11.5	
Georgia	4.8	5.0	2.7	2.8	2.7	3.4	3.7	4.7	6.2	8.7	7.2	6.7	7.2	8.1	7.7	5.9	6.1	
Germany*	14.7	13.6	12.9	12.5	12.3	11.9	11.8	11.7	11.8	11.5	11.4	11.2	11.2	11.2	11.2	10.9	11.0	
Greece*	9.9	10.3	9.2	8.6	8.1	9.5	9.6	10.0	9.4	9.7	9.5	9.1	9.0	8.0	8.2	7.5	7.5	
Hungary*	16.0	14.1	12.4	13.2	13.3	13.2	13.3	12.9	13.2	12.6	11.6	11.5	10.8	11.5	11.3	10.9		
Iceland	5.4	4.7	5.5	6.4	6.6	6.6	6.8	7.1	7.2	7.5	8.5	10.2	8.3	8.1	7.8	7.3	7.5	
Ireland*	11.4	11.9	13.7	14.3	14.2	13.2	13.3	13.3	13.4	13.6	12.7	11.4	11.9	11.7	11.5	10.5	10.8	
Israel	2.1	1.8	2.1	2.5	2.5	2.3	2.2	2.4	2.2	2.3	2.5	2.6	2.6	2.7	2.8	2.7	2.6	
Italy*	11.5	10.3	9.2	9.7	9.3	9.3	9.0	8.7	8.4	8.4	8.0	7.3	7.0	7.0	7.5	7.4	7.6	
Kazakhstan	11.9	9.6	4.0	5.8	6.0	6.6	6.6	6.9	7.1	7.4	7.6	6.6	6.8	6.6	6.8	6.5	6.3	
Kyrgyzstan	3.8	3.1	2.5	2.6	3.3	3.5	3.4	2.8	2.5	2.8	2.5	2.4	2.7	3.3				
Latvia*	6.8	8.0	8.3	6.7	7.4	8.2	8.8	9.9	10.4	12.1	11.8	9.9	9.8	10.1	10.2	10.4		
Lithuania*	7.3	5.1	7.5	10.2	11.0	11.3	12.1	12.3	12.7	13.4	13.3	12.4	12.9	12.7	15.1	15.0	15.2	
Luxembourg*	15.2	13.9	13.1	12.9	12.9	12.6	12.4	11.8	12.0	11.8	11.5	11.4	11.4	11.5	11.3	11.0	11.1	
Malta*	6.4	7.2	6.6	5.6	5.7	6.7	6.5	6.4	8.8	7.5	7.1	7.4	7.9	6.9	7.7	8.6	8.5	
Montenegro									5.4	5.0	6.2	6.5	6.6	6.6				
Netherlands*	10.2	9.8	10.0	10.0	9.7	9.6	9.6	9.7	9.8	9.5	9.6	9.2	9.3	9.0	9.1	8.7		
Norway	5.2	4.7	5.3	5.5	5.9	6.0	6.2	6.4	6.5	6.6	6.8	6.7	6.6	6.5	6.2	6.2	6.1	6.0
Poland*	9.1	8.3	8.3	7.7	8.0	9.1	9.2	9.5	10.4	10.9	11.4	10.7	10.6	10.9	10.8	11.6	10.7	
Portugal*	13.6	13.4	12.1	12.2	12.0	14.2	13.5	13.3	13.1	12.6	12.4	12.0	12.3	11.9	12.0	10.0	9.9	
Republic of Moldova		13.4	14.8	11.0	6.7	8.2	12.3	10.8	8.4	9.7	9.1	8.5	8.3	9.5	10.7	10.5	10.0	
Romania*	10.1	11.2	10.4	9.8	9.6	8.8	9.8	7.7	8.5	10.6	11.9	10.4	9.0	9.1	9.6	9.6		
Russian Federation	5.6	8.7	9.8	10.5	10.9	11.3	11.5	11.6	11.8	12.2	12.0	11.2	11.1	11.0	11.0	10.6	10.1	
Serbia			7.4	7.5	7.0	7.3	7.4	9.6	8.6	9.3	9.5	9.9	9.7	9.6	9.4	9.2	9.1	
Slovakia*	13.1	12.7	12.3	10.7	10.8	9.9	10.0	10.8	10.3	10.6	11.4	10.6	10.1	10.2	10.1	9.9	10.6	
Slovenia*	15.3	13.6	10.3	10.8	9.3	11.6	10.0	11.1	12.3	11.0	10.9	10.5	10.3	10.6	11.0	9.5	10.5	
Spain*	13.7	11.8	11.3	9.9	12.3	12.1	12.0	11.9	11.9	11.1	10.2	10.0	9.8	9.6	9.4	9.3		
Sweden*	7.3	7.5	6.8	6.6	6.9	6.9	6.6	6.5	6.5	6.9	6.9	7.3	7.2	7.4	7.4	7.3	7.3	
Switzerland	13.8	12.2	11.2	11.1	10.9	10.8	10.6	10.2	10.2	10.4	10.3	10.2	10.0	10.0	9.9	9.7	9.6	
Tajikistan		1.7	0.8	0.9	0.6	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3				
TFYR Macedonia		6.6	5.1	3.3	2.5	2.4	2.1	1.8	1.7	1.8	1.7	1.8	1.5	1.2	1.2	1.0	1.1	
Turkey	0.8	1.4	1.5	1.5	1.5	1.4	1.4	1.3	1.3	1.3	1.4	1.4	1.5	1.5	1.5	1.4	1.5	
Turkmenistan		1.2	1.9	2.4	2.3	2.9	2.9	2.9	2.7	2.6	2.4	2.4	2.5	2.6	2.8	2.9	2.9	
Ukraine	4.8	5.0	3.9	4.3	4.9	5.9	6.8	7.3	8.0	8.9	9.5	8.7	8.4	8.5	8.4	8.4	8.1	
United Kingdom*	9.9	9.6	10.1	10.9	11.4	11.9	12.2	12.1	11.6	11.8	11.5	10.8	10.9	10.7	10.4	10.3	10.4	10.7
Uzbekistan		1.5	1.7	1.5	1.5	1.5	1.6	1.8	2.0	2.2	2.4	2.6	2.7	2.8				
EU	12.3	11.5	11.0	11.0	11.2	11.3	11.3	11.0	11.0	11.0	10.9	10.4	10.3	10.3	10.2	10.1	10.2	
Europe	9.1	9.1	8.8	8.9	9.1	9.3	9.4	9.3	9.4	9.5	9.4	9.0	8.9	8.9	8.8	8.6	8.6	

Source: WHO Europe, Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/.

Notes: Recorded APC is defined as the recorded amount of alcohol consumed per adult (15+ years) over a calendar year in a country, in litres of pure alcohol. The indicator only takes into account the consumption which is recorded from production, import, export, and sales data, often via taxation. Where 5-year age ranges are given, values are averages of available data for the 5 years. Blank cells indicate that data were not available. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 8.1a Alcohol consumption, aged adults 15+ years, latest available year, Europe

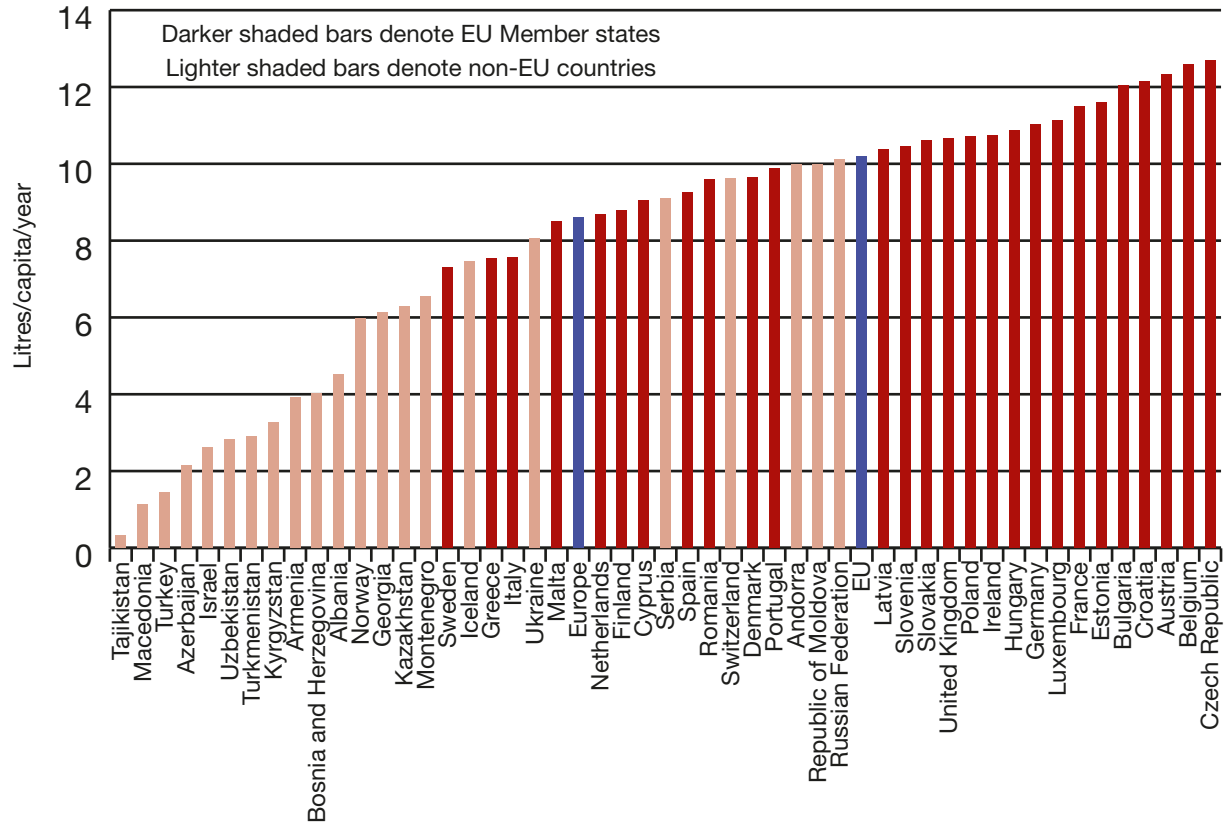


Figure 8.1b Alcohol consumption, aged adults 15+ years, 1986 to 2015, selected European countries

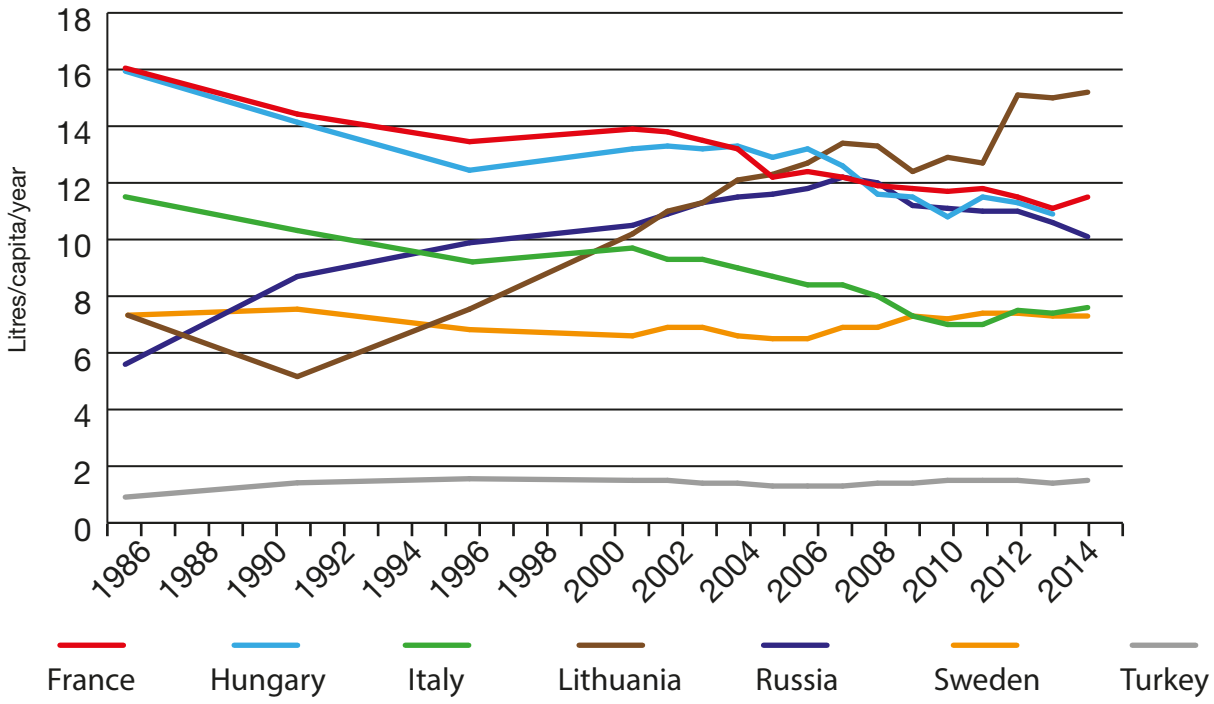


Table 8.2 Age-standardised prevalence of heavy episodic drinking in the past 30 days, aged 15+ years, 2010, Europe

	%		
	Males	Females	Both
Albania	11.7	1.0	6.4
Andorra	7.5	0.7	4.2
Armenia	38.3	2.2	20.3
Austria*	53.5	23.6	38.5
Azerbaijan	19.9	1.2	10.3
Belarus	47.6	7.2	26.5
Belgium*	49.6	17.6	33.7
Bosnia and Herzegovina	12.4	0.7	6.5
Bulgaria*	28.0	9.6	18.9
Croatia*	22.3	1.5	11.9
Cyprus*	42.4	7.1	25.4
Czech Republic*	54.5	18.1	36.5
Denmark*	41.9	15.8	29.1
Estonia*	41.4	9.1	24.8
Finland*	53.6	17.9	35.9
France*	45.4	14.4	29.8
Georgia	19.1	0.6	9.3
Germany*	21.3	5.0	13.3
Greece*	48.2	18.8	33.6
Hungary*	44.4	7.6	25.4
Iceland	34.3	11.0	22.9
Ireland*	53.8	19.3	36.5
Israel	12.6	2.4	7.5
Italy*	8.8	0.6	4.7
Kazakhstan	14.7	1.3	7.7
Kyrgyzstan	14.5	1.1	7.6
Latvia*	31.0	12.9	21.6
Lithuania*	50.4	24.3	36.7
Luxembourg*	38.3	9.0	23.8
Malta*	40.1	12.3	26.5
Montenegro	13.8	1.1	7.4
Netherlands*	11.5	1.1	6.3
Norway	19.5	5.2	12.6
Poland*	10.3	0.6	5.4
Portugal*	30.0	9.4	19.4
Republic of Moldova	49.1	16.5	32.2
Romania*	14.5	1.2	7.9
Russian Federation	29.6	9.9	19.3
Serbia	14.0	1.1	7.6
Slovakia*	41.4	11.7	26.2
Slovenia*	14.0	1.2	7.8
Spain*	20.3	5.9	13.2
Sweden*	36.3	11.8	24.3
Switzerland	28.4	9.7	19.1
Tajikistan	1.9	0.1	1.0
TFYR Macedonia	12.3	0.7	6.6
Turkey	0.3	0.0	0.2
Turkmenistan	23.5	0.4	11.6
Ukraine	35.6	11.8	23.2
United Kingdom*	37.2	16.8	27.1
Uzbekistan	20.4	0.4	10.2

Source: WHO Global Health Observatory http://www.who.int/gho/en/.

Notes: 'Heavy episodic drinking' is defined as consumption of at least 60 grams of pure alcohol on at least one occasion in the past 30 days. Data come from population surveys. Data are weighted for abstainers and population size and are age-standardised to the WHO standard population.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 8.2a Age-standardised prevalence of heavy episodic drinking in the past 30 days, aged 15+ years, 2010, Europe

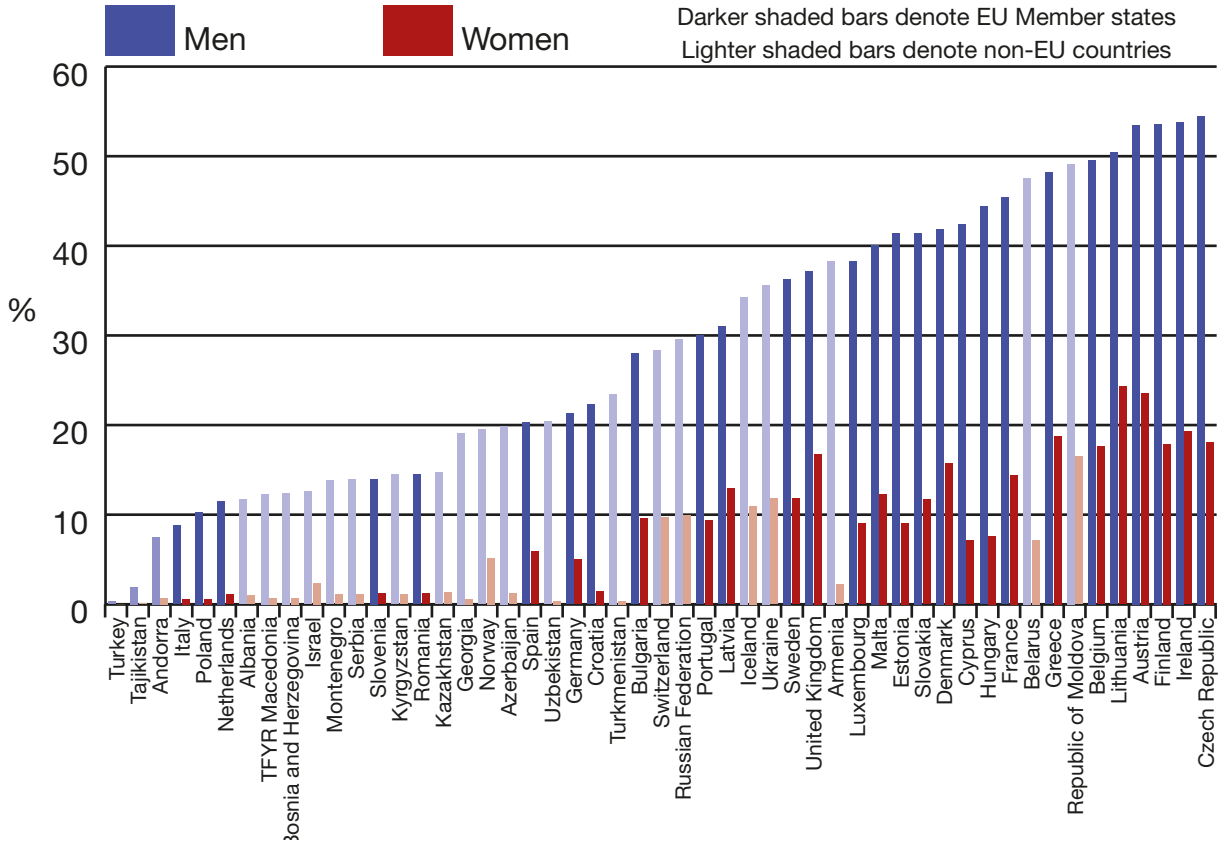


Figure 8.2b Age-standardised prevalence of heavy episodic drinking in the past 30 days, aged 15+ years, males, 2010, Europe

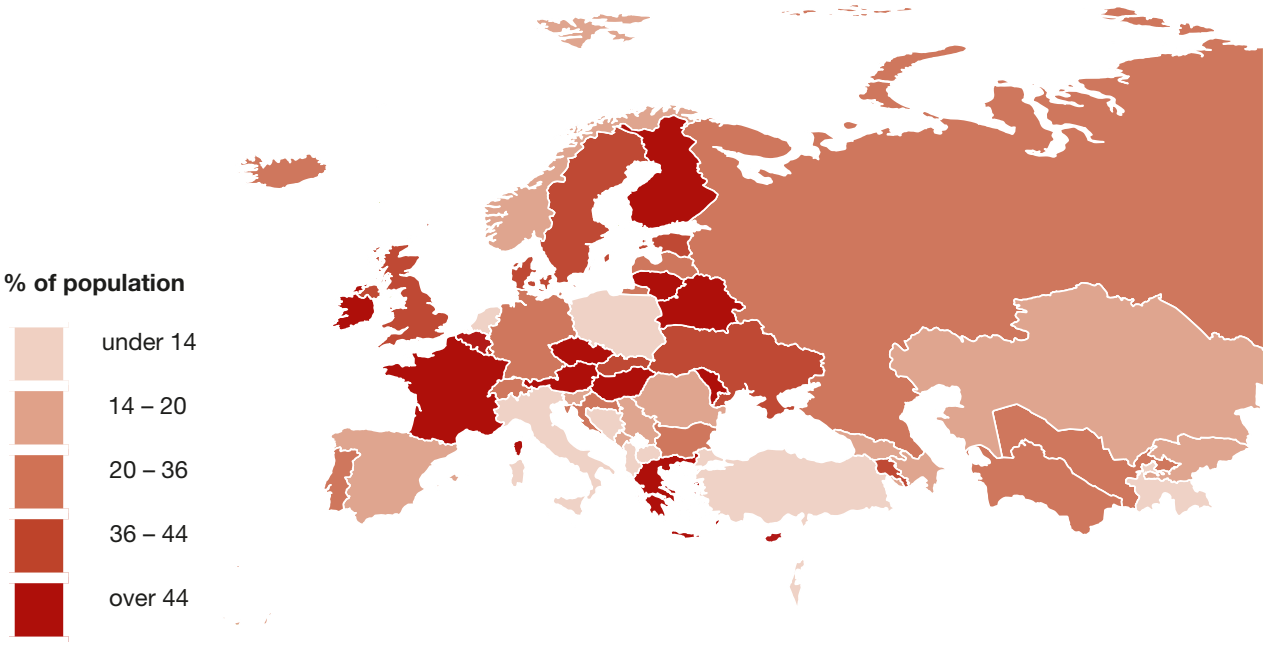
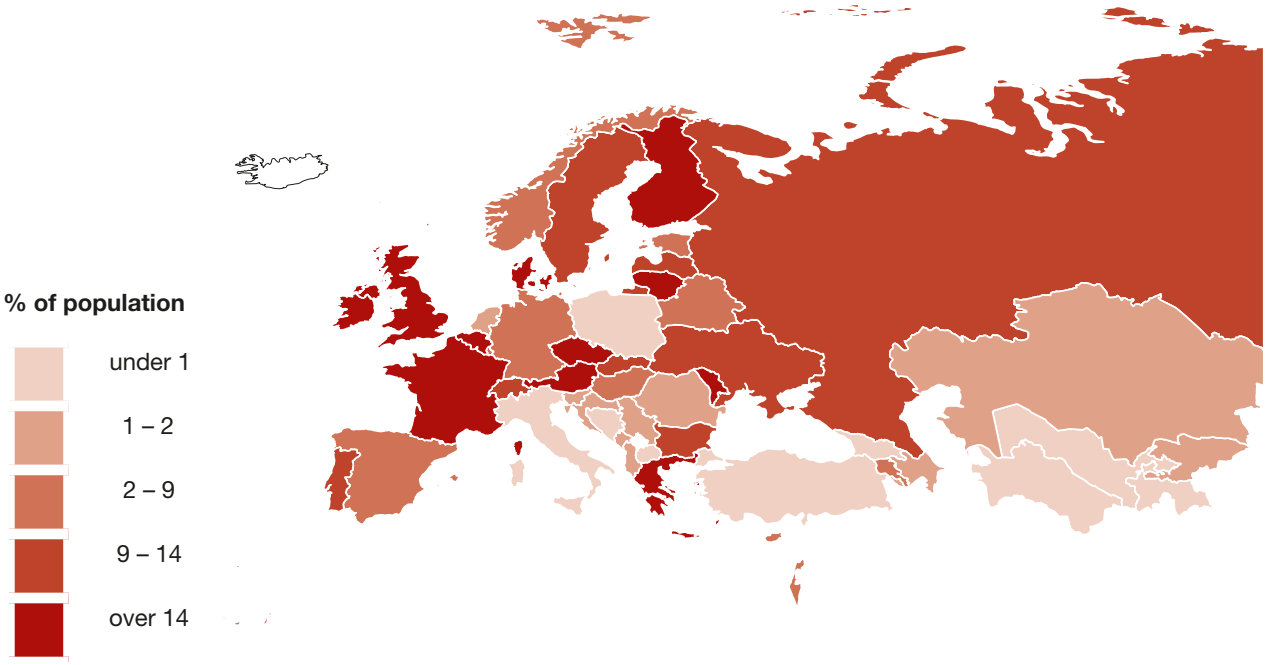


Figure 8.2c Age-standardised prevalence of heavy episodic drinking in the past 30 days, aged 15+ years, females, 2010, Europe



9. Blood pressure

The risk of CVD is directly related to both systolic and diastolic blood pressure levels. Unhealthy diet, physical inactivity and obesity all increase the risk of raised blood pressure (hypertension), while high blood pressure can be effectively lowered in response to lifestyle changes such as weight loss, increased physical activity and reduced salt and alcohol intake, as well as drug treatment.

Current blood pressure estimates

The WHO Global Health Observatory presents age-standardised[1] estimates of the prevalence of hypertension[2] and the mean systolic blood pressure by sex for 51 European national populations. Across both EU and non-EU member states, the prevalence of hypertension tended to be highest in Central and Eastern European countries and lowest in Northern and Southern countries (Table 9.1, Figures 9.1a-9.1c). For both sexes combined, within the EU in 2014 hypertension was most common in Estonia (32%) and least common in the UK (15%); outside of the EU, the prevalence of hypertension ranged from 18% in Israel, Norway and Switzerland to 31% in Moldova (Table 9.1, Figure 9.1a). Hypertension was more common in males than females in nearly all countries for which data were available, with the exceptions of Ireland, Tajikistan and Turkey where the prevalence was the same in both sexes (Table 9.1, Figure 9.1a).

WHO estimates of mean systolic blood pressure among adults aged 18 years and above in 2014 were also higher among males than females in all countries, with the exception of Turkey (120.6 mmHg in males, 121.1 mmHg in females). Mean levels of systolic blood pressure also showed similar regional variation to the prevalence of hypertension, with higher levels generally found in Central and Eastern European countries and lower levels in Southern, Western and Northern European countries. For example, within the EU, in males the mean systolic blood pressure ranged from 124 mmHg in Greece to 138 mmHg in Estonia and Slovakia, while in females it ranged from 116 mmHg in Greece to 126 mmHg in Estonia, Latvia, Lithuania and Poland (Table 9.2, Figure 9.2a). Outside of the EU, the mean systolic blood pressure varied from 121 mmHg in Turkey to 136 mmHg in Albania and Belarus among males, and from 116 mmHg in Iceland to 130 mmHg in Albania, Armenia and Moldova among females (Table 9.2, Figure 9.2a).

Trends in blood pressure

The prevalence of hypertension in 2014 was lower than that in 2010 for most European countries, with the exceptions of Luxembourg, the Netherlands and Portugal in which a higher prevalence was observed in 2014 (Table 9.1). WHO estimates also reveal a decrease in the mean systolic blood pressure in many European countries between 1980 and 2014, with a particularly sharp decrease since around 2008 in both sexes. The greatest decreases seem to have occurred in Northern and Western European countries, while the levels in many Eastern European countries have remained more stable (Table 9.2, Figures 9.2b, 9.2c).

1 Data are age-standardised to the WHO standard population.
2 Hypertension is defined as a systolic blood pressure of ≥140 mmHg or a diastolic blood pressure of ≥90mmHg.

Table 9.1 Age-standardised prevalence of raised blood pressure, aged 18+ years, by sex, 2014, Europe

	2010			2014		
	%			%		
	Males	Females	Both sexes	Males	Females	Both sexes
Albania	32.1	25.7	28.9	31.4	24.5	28.0
Andorra	26.1	16.6	21.3	23.2	14.4	18.8
Armenia	29.5	25.4	27.5	29.0	24.2	26.6
Austria*	25.7	16.6	21.1	23.1	14.8	18.8
Azerbaijan	28.2	25.5	26.8	27.7	24.5	26.1
Belarus	35.9	26.3	30.7	34.4	24.3	29.0
Belgium*	25.1	15.1	20.0	22.5	13.3	17.8
Bosnia and Herzegovina	31.3	26.9	29.1	30.9	25.9	28.4
Bulgaria*	34.2	24.8	29.4	33.4	23.7	28.4
Croatia*	34.0	24.5	29.1	33.0	23.0	27.8
Cyprus*	25.8	17.6	21.8	23.5	15.8	19.7
Czech Republic*	34.8	22.4	28.5	33.2	21.0	27.0
Denmark*	29.1	16.2	22.6	26.0	14.2	20.0
Estonia*	39.6	27.4	33.0	38.3	26.0	31.7
Finland*	27.0	17.3	22.1	24.5	15.4	19.9
France*	29.3	18.0	23.5	26.3	16.0	21.0
Georgia	29.7	25.5	27.5	30.0	25.4	27.6
Germany*	27.1	17.1	22.0	24.2	14.9	19.5
Greece*	23.6	16.6	20.1	21.9	15.0	18.4
Hungary*	36.3	24.7	30.2	34.6	23.1	28.6
Iceland	28.8	16.2	22.5	26.1	14.0	20.1
Ireland*	24.7	16.8	20.7	28.0	27.8	27.9
Israel	23.6	15.7	19.6	21.3	14.9	18.1
Italy*	26.4	18.4	22.3	21.5	13.8	17.7
Kazakhstan	31.1	25.5	28.2	23.4	16.0	19.6
Kyrgyzstan	28.7	26.8	27.7	30.4	24.2	27.2
Latvia*	36.8	26.1	31.0	28.8	27.1	27.9
Lithuania*	36.2	26.0	30.7	36.1	24.4	29.8
Luxembourg*	30.3	17.5	23.9	35.2	24.3	29.3
Malta*	26.9	17.2	22.0	27.2	15.2	21.2
Montenegro	34.0	24.6	29.2	24.5	15.2	19.8
Netherlands*	25.0	15.7	20.3	32.8	23.1	27.9
Norway	25.7	15.7	20.7	22.4	13.8	18.1
Poland*	34.9	24.5	29.6	23.2	13.7	18.4
Portugal*	28.8	20.0	24.3	33.4	23.1	28.1
Republic of Moldova	33.6	28.5	30.9	33.9	28.2	30.9
Romania*	32.8	24.3	28.5	31.8	23.2	27.4
Russian Federation	34.6	26.2	30.1	33.5	24.5	28.7
Serbia	34.6	26.2	30.4	33.2	24.9	29.0
Slovakia*	34.3	23.9	29.0	32.5	22.4	27.3
Slovenia*	34.6	24.5	29.5	33.0	23.0	28.0
Spain*	25.7	17.0	21.3	23.0	15.0	19.0
Sweden*	27.3	16.7	22.0	24.4	14.5	19.4
Switzerland	24.1	15.0	19.5	22.2	13.6	17.8
Tajikistan	27.0	26.8	26.9	27.3	27.1	27.2
TFYR Macedonia	32.0	24.7	28.4	31.0	23.5	27.3
Turkey	24.4	24.7	24.6	23.0	22.9	23.0
Turkmenistan	28.5	26.1	27.3	28.0	25.4	26.7
Ukraine	34.2	26.5	30.0	33.4	25.2	29.0
United Kingdom*	20.6	14.5	17.5	18.0	12.5	15.2
Uzbekistan	27.0	25.5	26.2	26.8	25.5	26.1

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.

Notes: High blood pressure is defined as a systolic blood pressure of ≥140 mmHg or a diastolic blood pressure of ≥90mmHg.

Data come from population-based surveys and surveillance systems of measured blood pressure.

Data are age-standardised to the WHO standard population. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 9.1a Prevalence of raised blood pressure, aged 18+ years, by sex, 2014, Europe

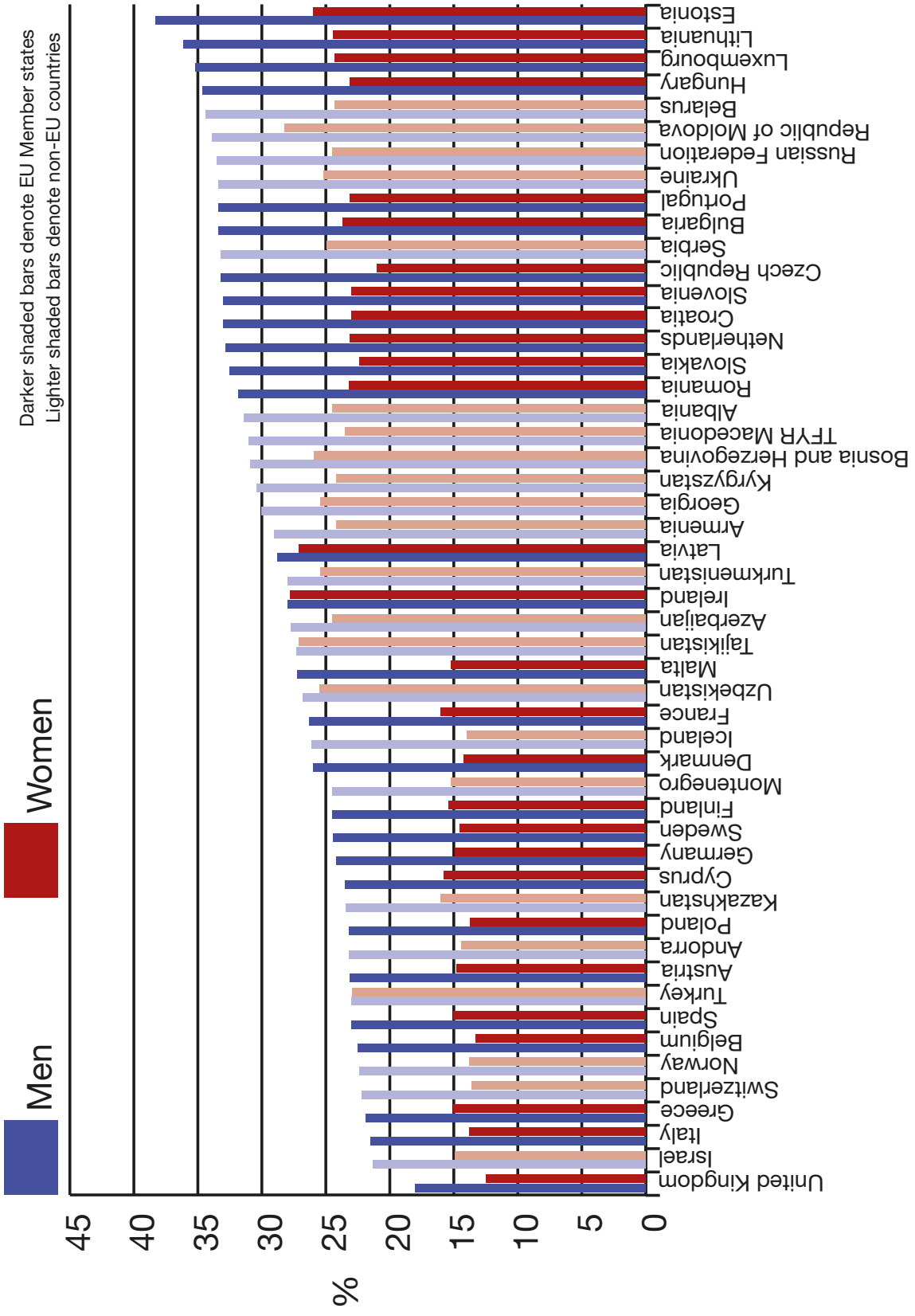


Figure 9.1b Prevalence of raised blood pressure, aged 18+ years, males, 2014, Europe

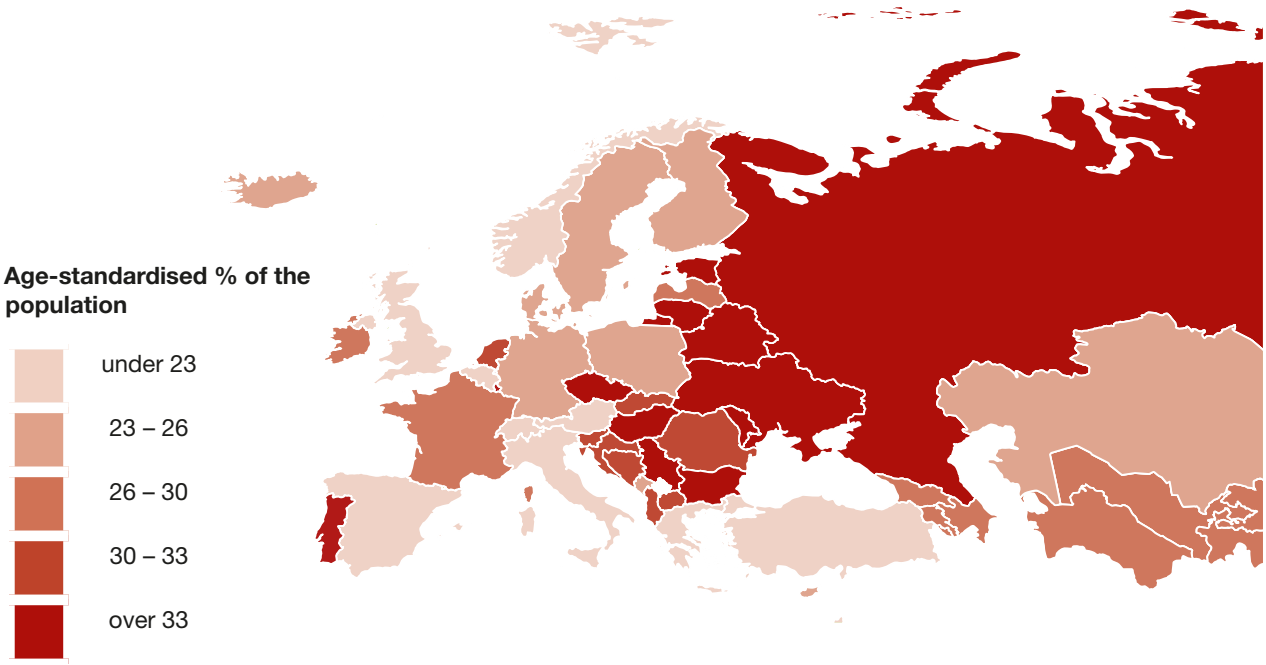


Figure 9.1c Prevalence of raised blood pressure, aged 18+ years, females, 2014, Europe

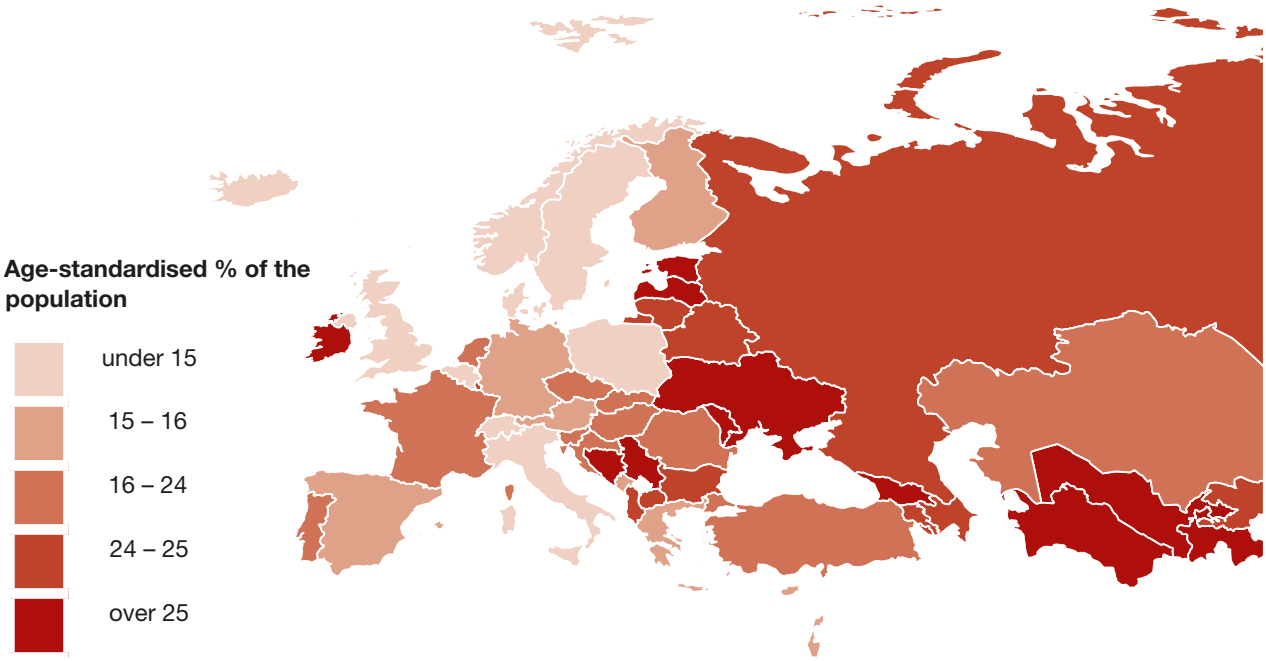


Table 9.2 Mean systolic blood pressure, aged 18+ years, by sex, 1980 to 2014, Europe

Males Mean systolic blood pressure, mmHg

	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2010	2014
Albania	132.9	133.5	133.4	132.1	132.0	132.2	132.4	132.6	132.8	133.0	133.2	133.3	133.5	135.1	136.0
Andorra	140.8	137.2	135.5	134.0	132.8	132.6	132.4	132.2	132.1	131.9	131.7	131.6	131.4	127.5	126.1
Armenia	136.4	136.1	135.6	134.1	133.6	133.6	133.8	134.0	134.2	134.4	134.7	134.9	135.1	133.6	133.9
Austria*	138.5	136.1	135.0	134.0	132.8	132.6	132.4	132.2	132.0	131.8	131.6	131.5	131.4	128.8	127.4
Azerbaijan	134.6	134.6	134.2	132.3	131.3	131.3	131.3	131.4	131.4	131.5	131.7	131.8	132.0	129.8	130.0
Belarus	137.8	137.6	136.8	135.5	135.0	135.1	135.2	135.4	135.5	135.7	135.9	136.1	136.3	135.8	136.2
Belgium*	136.3	134.0	133.4	132.7	131.3	131.0	130.6	130.3	130.0	129.6	129.3	129.0	128.7	128.5	127.0
Bosnia and Herzegovina	131.7	133.2	133.4	131.5	131.7	131.9	132.1	132.3	132.5	132.7	132.8	133.0	133.1	132.2	133.1
Bulgaria*	135.0	135.9	135.8	134.7	133.7	133.6	133.6	133.5	133.5	133.6	133.6	133.7	133.8	133.6	134.1
Croatia*	138.1	138.2	137.9	136.5	135.6	135.5	135.4	135.4	135.3	135.3	135.2	135.2	135.2	132.4	133.0
Cyprus*	134.5	133.1	133.0	132.5	131.9	131.8	131.7	131.6	131.6	131.5	131.4	131.3	131.2	127.9	126.8
Czech Republic*	136.6	136.7	136.2	134.8	133.6	133.5	133.5	133.4	133.4	133.4	133.4	133.4	133.4	131.1	131.2
Denmark*	136.6	133.7	132.8	132.3	131.4	131.2	131.0	130.8	130.5	130.3	130.1	129.9	129.7	129.3	127.3
Estonia*	140.7	140.0	139.1	137.7	137.1	137.1	137.2	137.4	137.6	137.8	137.9	138.1	138.2	137.4	137.6
Finland*	143.1	140.0	138.2	136.3	134.9	134.8	134.7	134.7	134.8	134.9	135.0	135.1	135.3	128.7	127.4
France*	138.8	136.2	134.8	133.8	132.8	132.6	132.4	132.2	132.0	131.7	131.5	131.3	131.1	127.1	125.7
Georgia	138.3	138.6	138.4	136.3	135.0	134.9	134.8	134.9	134.9	135.1	135.2	135.3	135.3	133.9	134.3
Germany*	140.1	138.2	138.0	137.6	136.5	136.1	135.6	135.2	134.8	134.3	133.9	133.4	133.0	129.0	126.9
Greece*	133.7	131.2	130.2	129.5	129.1	129.0	128.9	128.8	128.7	128.7	128.7	128.7	128.6	124.9	124.0
Hungary*	137.9	138.9	138.8	137.2	136.1	136.0	135.9	135.8	135.7	135.6	135.5	135.4	135.4	134.9	134.7
Iceland	137.7	134.0	131.8	130.4	129.8	129.7	129.6	129.6	129.6	129.6	129.5	129.5	129.4	127.4	126.6
Ireland*	139.5	137.1	136.1	135.8	135.9	135.9	135.8	135.7	135.6	135.5	135.3	135.1	135.0	130.8	128.6
Israel	132.6	130.7	129.6	128.6	127.8	127.7	127.5	127.3	127.2	127.1	127.1	127.0	126.9	124.6	123.9
Italy*	136.8	135.4	135.1	133.9	132.3	132.1	131.8	131.6	131.4	131.3	131.2	131.1	131.0	128.2	126.7
Kazakhstan	136.9	136.5	135.7	133.8	133.2	133.3	133.4	133.5	133.7	133.8	133.9	134.0	134.1	131.7	132.0
Kyrgyzstan	133.6	133.6	133.3	132.0	131.5	131.6	131.8	132.0	132.2	132.4	132.6	132.8	133.0	130.4	131.3
Latvia*	138.7	138.3	137.5	135.7	135.3	135.3	135.4	135.5	135.7	135.9	136.1	136.3	136.4	135.9	136.5
Lithuania*	140.0	139.5	138.5	136.7	135.7	135.7	135.8	135.9	136.1	136.3	136.6	136.8	137.0	136.4	136.9
Luxembourg*	139.6	136.8	135.7	134.5	133.0	132.8	132.4	132.1	131.9	131.6	131.4	131.2	130.9	131.1	129.4
Malta*	136.6	134.4	133.4	133.0	132.6	132.6	132.5	132.4	132.3	132.2	132.2	132.1	132.0	129.0	128.2
Montenegro	137.1	137.3	136.9	135.1	134.6	134.6	134.7	134.8	134.9	134.9	135.0	135.0	135.0	133.7	134.3
Netherlands*	138.8	135.8	134.1	132.9	132.1	132.0	131.9	131.7	131.6	131.5	131.4	131.3	131.2	128.9	127.5
Norway	142.1	139.0	137.3	136.2	135.3	135.2	135.1	134.9	134.8	134.8	134.7	134.6	134.6	130.2	128.8
Poland*	136.7	136.8	136.0	134.2	133.6	133.6	133.7	133.9	134.0	134.2	134.3	134.5	134.6	135.6	136.0
Portugal*	138.3	136.2	135.5	135.4	135.2	135.1	135.1	135.0	134.9	134.8	134.7	134.7	134.6	129.6	128.1
Republic of Moldova	136.1	136.1	135.2	132.8	132.2	132.3	132.4	132.6	132.8	133.1	133.4	133.7	134.1	134.2	135.5
Romania*	134.7	135.7	135.5	134.0	132.9	132.8	132.8	132.8	132.8	132.8	132.8	133.0	133.1	131.8	132.2
Russian Federation	134.5	134.7	133.7	131.9	130.9	130.9	131.0	131.1	131.3	131.5	131.7	132.0	132.2	131.0	131.5
Serbia	138.0	139.0	139.0	137.2	135.9	135.8	135.7	135.7	135.6	135.5	135.4	135.3	135.2	131.5	131.1
Slovakia*	137.2	137.6	137.4	136.1	135.3	135.2	135.1	135.1	135.0	135.0	135.0	135.0	135.1	136.2	137.6
Slovenia*	138.4	138.6	138.2	137.0	136.2	136.1	136.0	136.0	135.9	135.9	135.8	135.8	135.7	134.8	134.8
Spain*	136.7	133.3	131.6	130.6	130.3	130.2	130.2	130.2	130.2	130.2	130.3	130.3	130.4	128.1	127.2
Sweden*	138.8	135.5	134.2	133.4	133.0	132.8	132.7	132.6	132.5	132.3	132.1	131.9	131.7	130.2	128.7
Switzerland	138.5	135.5	133.9	132.3	131.1	131.0	130.9	130.8	130.7	130.7	130.6	130.6	130.6	126.4	125.3
Tajikistan	133.7	133.8	133.5	131.6	130.6	130.6	130.8	131.0	131.2	131.5	131.8	132.0	132.3	128.9	129.5
TFYR Macedonia	136.1	136.4	135.8	134.1	133.2	133.1	133.2	133.2	133.3	133.4	133.5	133.6	133.7	133.0	133.5
Turkey	125.7	125.9	126.1	125.9	125.7	125.5	125.4	125.2	124.9	124.6	124.3	124.0	123.7	121.5	120.6
Turkmenistan	135.0	134.8	134.1	132.4	131.5	131.6	131.7	131.9	132.1	132.3	132.5	132.7	132.9	128.9	129.2
Ukraine	139.6	139.0	137.9	135.8	135.1	135.2	135.3	135.6	135.8	136.1	136.5	136.8	137.2	134.9	135.5
United Kingdom*	136.5	135.7	136.6	136.4	134.8	134.4	133.9	133.5	133.0	132.5	132.1	131.7	131.2	127.5	125.3
Uzbekistan	130.2	129.8	128.8	127.0	126.5	126.6	126.8	127.0	127.2	127.5	127.8	128.0	128.3	126.9	127.4

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.
Notes: Data come from population-based surveys and surveillance systems of measured blood pressure.
Data were not available for Monaco or San Marino.
*Asterisk denotes EU member states.

Table 9.2 Mean systolic blood pressure, aged 18+ years, by sex, 1980 to 2014, Europe

Females Mean systolic blood pressure, mmHg

	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2010	2014
Albania	132.5	132.1	131.3	129.7	129.3	129.3	129.3	129.3	129.3	129.3	129.3	129.3	129.3	129.9	129.6
Andorra	136.7	133.3	130.8	128.4	125.6	125.1	124.6	124.1	123.7	123.2	122.7	122.2	121.7	118.6	116.7
Armenia	136.3	135.5	134.7	133.3	132.7	132.7	132.6	132.6	132.6	132.7	132.7	132.7	132.7	130.1	129.6
Austria*	133.8	131.5	130.2	128.8	126.6	126.3	125.9	125.6	125.3	125.0	124.7	124.4	124.0	120.8	119.3
Azerbaijan	132.1	131.5	131.0	129.8	128.7	128.7	128.6	128.6	128.6	128.6	128.7	128.7	128.6	125.9	125.4
Belarus	134.5	134.0	132.9	131.0	129.8	129.7	129.7	129.6	129.6	129.6	129.6	129.6	129.5	127.0	126.3
Belgium*	131.3	129.3	128.5	128.0	125.9	125.4	124.9	124.3	123.8	123.2	122.7	122.2	121.6	118.4	116.5
Bosnia and Herzegovina	132.1	132.8	133.3	133.0	133.4	133.4	133.4	133.4	133.4	133.4	133.4	133.3	133.2	129.2	128.4
Bulgaria*	135.5	134.2	132.9	131.1	129.6	129.4	129.2	129.1	128.9	128.8	128.6	128.4	128.3	126.1	125.3
Croatia*	136.3	135.4	134.2	132.6	131.7	131.6	131.4	131.2	131.0	130.9	130.7	130.5	130.3	124.1	123.2
Cyprus*	130.7	129.8	128.7	127.4	125.5	125.1	124.7	124.3	123.9	123.6	123.3	123.0	122.7	119.4	118.0
Czech Republic*	136.0	134.4	132.5	129.9	127.8	127.4	127.1	126.8	126.5	126.3	126.0	125.8	125.6	121.6	120.6
Denmark*	129.9	127.7	126.3	124.9	122.9	122.4	122.0	121.6	121.2	120.7	120.3	119.9	119.4	118.5	116.8
Estonia*	137.8	136.2	133.9	131.1	130.0	129.9	129.8	129.7	129.5	129.5	129.4	129.4	129.3	126.2	125.6
Finland*	138.4	135.9	134.1	132.0	129.6	129.2	128.8	128.4	128.0	127.7	127.3	127.0	126.6	121.6	120.1
France*	132.0	129.7	128.0	126.4	123.9	123.4	122.9	122.4	121.9	121.5	121.0	120.5	120.0	116.8	115.2
Georgia	135.0	134.5	133.9	132.1	131.2	131.1	131.0	131.0	130.9	130.8	130.7	130.6	130.6	127.5	127.5
Germany*	135.2	133.5	132.5	131.4	129.1	128.6	128.0	127.5	127.0	126.4	125.9	125.4	124.8	120.8	118.6
Greece*	131.7	129.5	128.0	126.7	125.0	124.7	124.5	124.2	124.0	123.7	123.5	123.2	122.9	117.3	116.0
Hungary*	135.2	134.1	132.8	131.2	130.1	129.9	129.6	129.4	129.3	129.1	128.9	128.7	128.4	125.1	124.1
Iceland	131.5	127.5	125.3	123.5	121.4	121.0	120.6	120.2	119.8	119.4	119.1	118.8	118.4	117.4	116.0
Ireland*	130.5	129.1	128.6	128.0	126.7	126.4	126.2	125.9	125.7	125.4	125.2	124.9	124.7	120.2	118.3
Israel	130.4	128.9	128.1	126.8	124.6	124.1	123.7	123.2	122.7	122.3	121.9	121.4	121.0	118.2	116.6
Italy*	135.6	132.5	130.6	128.7	126.4	126.0	125.6	125.3	125.0	124.7	124.4	124.1	123.8	120.6	118.9
Kazakhstan	134.4	133.5	132.4	130.7	129.5	129.4	129.3	129.2	129.2	129.1	129.0	128.9	128.8	125.5	124.9
Kyrgyzstan	130.7	130.4	130.2	129.2	128.9	129.0	129.0	129.2	129.3	129.5	129.7	129.8	129.9	125.7	126.3
Latvia*	136.7	135.7	134.0	131.1	130.2	130.2	130.1	130.0	130.0	129.9	129.8	129.6	129.4	126.7	126.0
Lithuania*	137.8	136.7	135.0	132.4	131.5	131.4	131.3	131.2	131.0	130.9	130.7	130.6	130.5	126.6	125.9
Luxembourg*	133.8	131.2	129.6	128.3	126.0	125.5	125.0	124.5	124.0	123.5	123.1	122.6	122.1	121.4	119.5
Malta*	135.2	133.1	131.4	129.8	127.6	127.2	126.7	126.3	125.9	125.5	125.1	124.7	124.3	121.2	119.7
Montenegro	134.7	133.9	133.0	131.1	130.0	129.8	129.7	129.6	129.6	129.5	129.4	129.3	129.2	125.8	125.1
Netherlands*	132.1	129.5	128.0	126.7	124.6	124.2	123.8	123.5	123.1	122.8	122.4	122.1	121.7	119.1	117.4
Norway	137.0	134.0	132.1	130.5	128.7	128.3	127.9	127.6	127.3	126.9	126.6	126.3	125.9	121.4	119.6
Poland*	137.5	135.3	133.1	131.2	130.3	130.1	130.0	129.9	129.9	129.8	129.8	129.7	129.6	126.5	125.8
Portugal*	135.3	133.6	132.8	131.7	129.9	129.6	129.2	128.9	128.6	128.2	127.9	127.6	127.2	122.4	120.8
Republic of Moldova	132.5	132.4	132.0	130.8	129.9	129.9	129.9	130.0	130.1	130.1	130.2	130.3	130.3	129.3	129.9
Romania*	133.9	133.7	132.6	130.8	129.7	129.6	129.5	129.4	129.3	129.2	129.1	129.0	128.8	123.9	123.1
Russian Federation	133.9	133.7	132.4	129.9	128.5	128.5	128.4	128.4	128.4	128.4	128.5	128.5	128.5	125.4	124.8
Serbia	136.5	135.6	134.5	132.6	131.0	130.8	130.6	130.5	130.5	130.3	130.2	130.1	130.0	125.8	126.7
Slovakia*	135.6	134.8	133.7	131.8	130.6	130.4	130.2	130.1	129.9	129.8	129.6	129.5	129.3	122.3	120.9
Slovenia*	136.3	135.4	134.0	132.1	130.9	130.7	130.5	130.3	130.2	130.1	129.9	129.7	129.5	125.5	124.5
Spain*	133.5	130.2	127.9	126.0	124.1	123.8	123.5	123.2	123.0	122.7	122.5	122.3	122.0	118.0	116.8
Sweden*	133.0	130.6	129.3	127.9	125.9	125.5	125.1	124.7	124.3	123.9	123.6	123.3	122.9	120.9	119.3
Switzerland	131.2	128.6	126.8	124.8	122.5	122.1	121.7	121.3	120.9	120.6	120.2	119.9	119.6	117.0	115.6
Tajikistan	130.4	130.2	130.0	129.2	128.9	129.0	129.1	129.3	129.5	129.7	130.0	130.2	130.4	126.3	126.8
TFYR Macedonia	134.9	133.9	132.9	131.7	130.8	130.7	130.5	130.4	130.3	130.2	130.1	129.9	129.8	126.4	125.7
Turkey	127.0	127.5	128.2	128.1	126.9	126.5	126.2	125.8	125.5	125.1	124.7	124.3	123.9	122.7	121.1
Turkmenistan	132.3	131.6	131.0	130.0	129.3	129.3	129.3	129.3	129.3	129.4	129.4	129.4	129.4	127.0	127.0
Ukraine	136.1	135.5	134.4	132.7	131.4	131.3	131.3	131.3	131.4	131.5	131.5	131.5	131.5	128.8	128.5
United Kingdom*	131.0	130.9	131.7	131.3	129.0	128.4	127.9	127.2	126.6	125.9	125.3	124.6	124.0	119.8	117.4
Uzbekistan	126.8	126.1	125.3	124.3	123.7	123.7	123.8	123.8	123.9	124.0	124.2	124.3	124.5	122.3	122.7

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.
Notes: Data come from population-based surveys and surveillance systems of measured blood pressure.
Data were not available for Monaco or San Marino.
*Asterisk denotes EU member states.

Figure 9.2a Mean systolic blood pressure, aged 18+ years, by sex, 2014, Europe

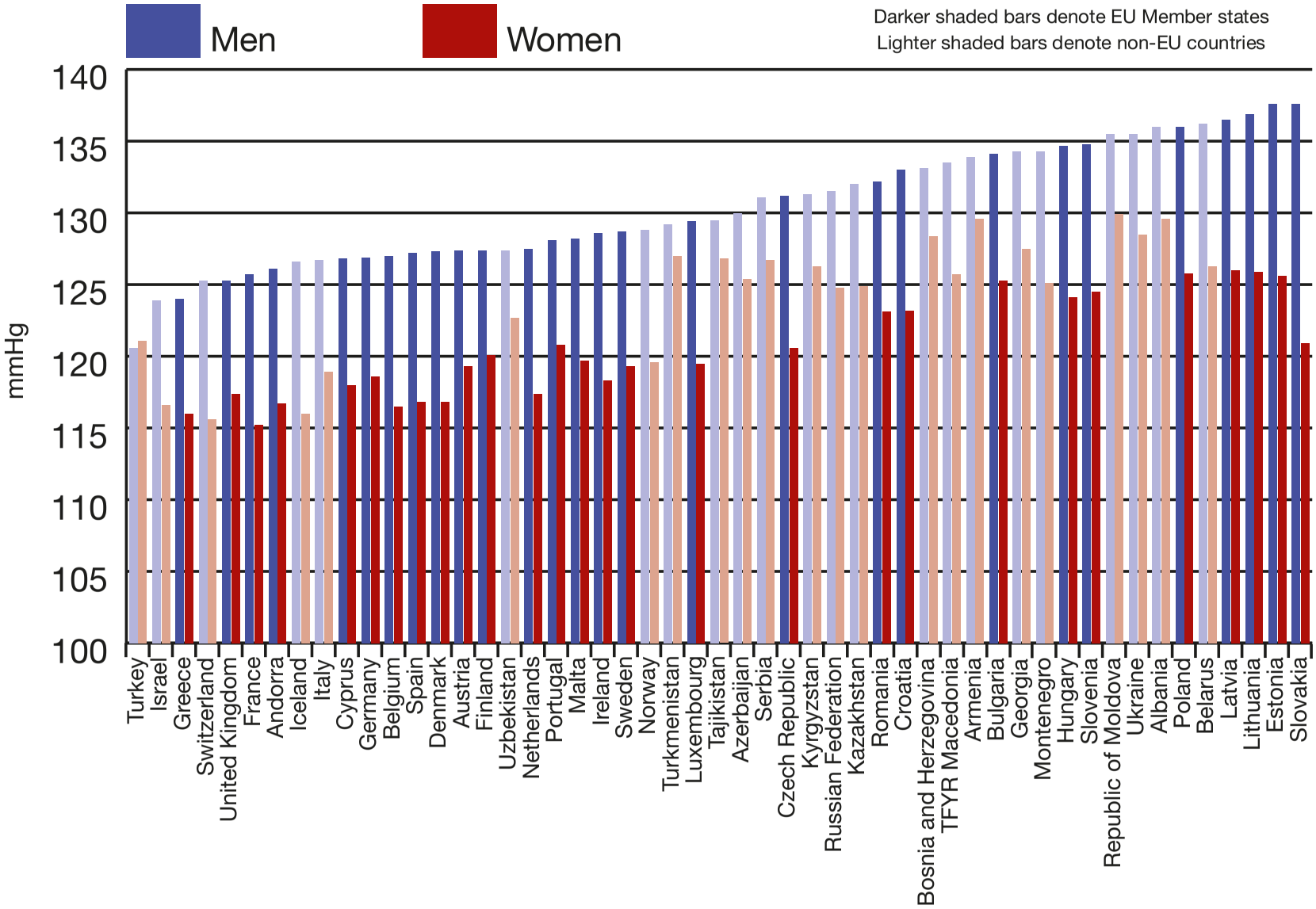


Figure 9.2b Mean systolic blood pressure, aged 18+ years, males, 1980 to 2014, Europe

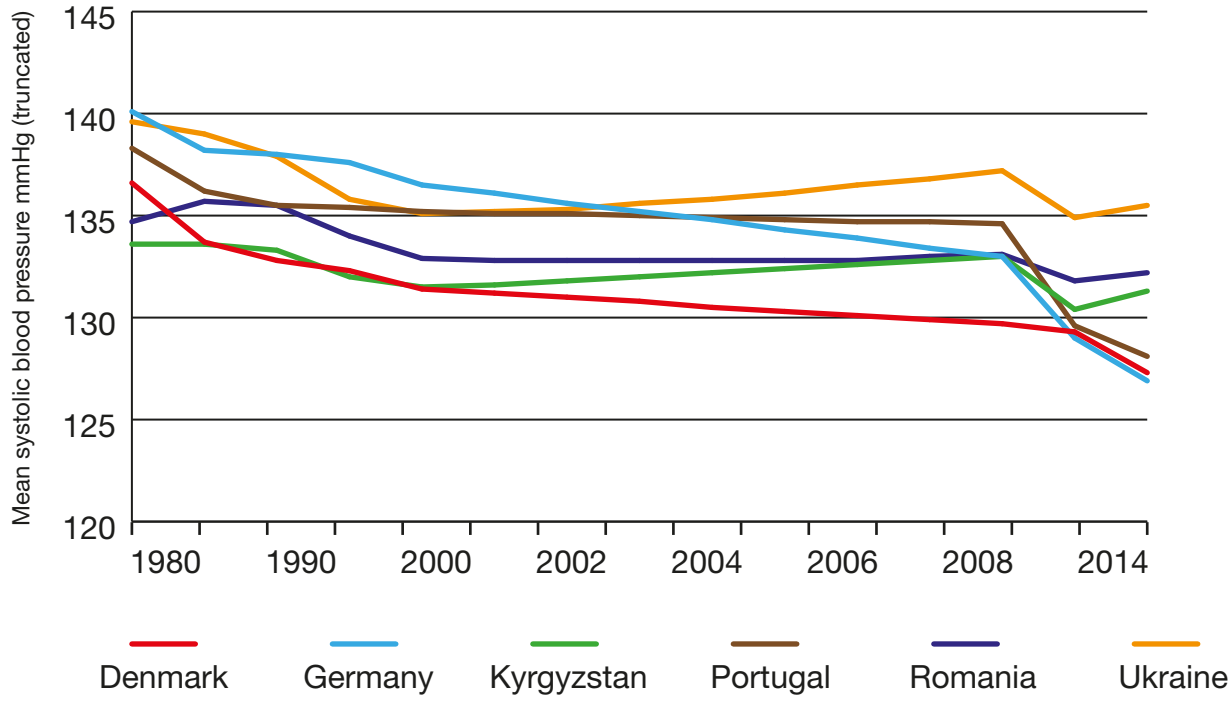
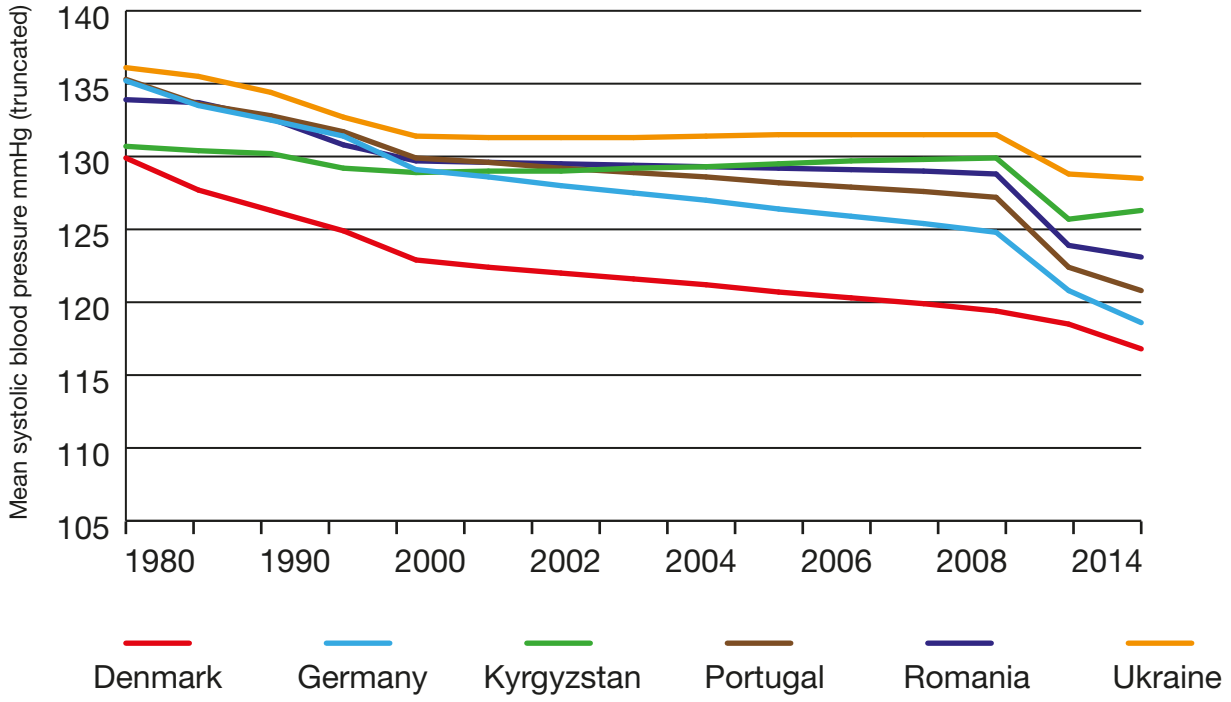


Figure 9.2c Mean systolic blood pressure, aged 18+ years, females, 1980 to 2014, Europe



10. Blood cholesterol

Blood cholesterol level is positively associated with CVD via its effect in promoting the formation of arterial plaques, which in turn increase the risk of atherosclerosis. Blood cholesterol levels can be effectively reduced with increased physical activity, dietary changes such as reduced saturated fat intake, and with drugs.

The WHO Global Health Observatory provides age-standardised[1] national estimates of the prevalence of elevated blood cholesterol levels for 51 European countries according to two thresholds (5.0mmol/L and 6.2mmol/L). In 2008[2], the prevalence of raised blood cholesterol among adults aged 25 years and over tended to be highest in Northern and Western European countries, lower in Central and Eastern European countries and lowest in Western Asian countries. Within the EU, for both sexes combined, the prevalence of blood cholesterol >6.2mmol/L ranged from 12.1% in Romania to 25.6% in Luxembourg. Outside of the EU, the prevalence of blood cholesterol >6.2mmol/L varied from 4.6% in Tajikistan to 29.1% in Iceland (Table 10.1). In Central and Eastern European and in Western Asian countries, raised blood cholesterol tended to be more common in females than in males. The largest percentage difference between females and males was seen in Uzbekistan, where females were 59% more likely than males to have a blood cholesterol level >6.2mmol/L. In Western European countries, by contrast, raised blood cholesterol tended to be more common among males than females. The greatest percentage difference between males and females was seen in Sweden, where males were 23% more likely than females to have blood cholesterol >6.2mmol/L (Table 10.1, Figures 10.1a-10.1c).

The WHO also provides age-standardised[3] time series data on mean blood cholesterol levels in those aged 25 years and over from 1980 to 2009[4]. In 2009, within the EU, the mean total blood cholesterol level ranged from 4.9mmol/L in Romania to 5.5mmol/L in Denmark, Germany, Luxembourg among males, and from 4.9mmol/L in Greece, Romania and Sweden to 5.5mmol/L in Luxembourg among females. Outside of the EU, the mean total blood cholesterol level varied from 4.2mmol/L in Tajikistan and Uzbekistan to 5.6mmol/L in Andorra and Iceland among males, and from 4.3mmol/L in Tajikistan to 5.6mmol/L in Iceland among females (Table 10.2).

Age-standardised mean total blood cholesterol levels have shown an overall decrease from 1980 to 2009 in all European countries in both sexes, with the exception of Poland, where levels remained stable over the period at 5.3mmol/L among males, and decreased only very slightly from 5.4mmol/L to 5.1mmol/L among females. In most countries, the greatest reduction occurred between 1980 and 2000, with relative stability in the levels between 2000 and 2009 (Table 10.2, Figures 10.2a, 10.2b).

1 Data are age-standardised to the WHO standard population.
2 The most recent data available on the prevalence of raised cholesterol relate to 2008, and therefore do not take account of possible changes over the last nine years.
3 Data are age-standardised to the WHO standard population.
4 The most recent data available on mean total cholesterol levels relate to 2009, and therefore do not take account of possible changes over the last seven years.

Table 10.1 Age-standardised prevalence of raised blood cholesterol, adults aged 25+ years, by sex, 2008, Europe

	% of raised blood cholesterol (≥5.0mmol/L)			% raised blood cholesterol (≥6.2mmol/L)		
	Males	Females	Both sexes	Males	Females	Both sexes
Albania	46.3	44.3	45.3	11.3	12.6	12.0
Andorra	69.7	64.1	67.1	26.7	24.1	25.5
Armenia	39.6	41.5	40.8	8.9	11.0	10.1
Austria*	61.3	57.7	59.7	19.6	18.9	19.4
Azerbaijan	33.1	36.0	34.8	6.7	8.7	7.8
Belarus	50.5	50.8	51.1	13.9	15.8	15.3
Belgium*	64.6	59.9	62.4	22.2	20.8	21.6
Bosnia and Herzegovina	38.5	39.5	39.2	8.5	10.1	9.4
Bulgaria*	50.3	49.0	49.9	13.5	14.5	14.2
Croatia*	49.4	49.7	49.8	13.1	14.9	14.3
Cyprus*	58.7	55.5	57.1	17.8	17.7	17.7
Czech Republic*	54.4	52.7	53.9	14.7	15.7	15.5
Denmark*	68.3	61.8	65.2	26.0	24.6	25.5
Estonia*	56.0	56.7	56.7	17.0	19.3	18.5
Finland*	57.5	59.3	59.0	16.4	21.7	19.7
France*	63.5	60.2	62.0	20.2	20.7	20.6
Georgia	35.6	38.0	37.1	7.5	9.5	8.7
Germany*	69.6	61.4	65.6	27.1	21.9	24.6
Greece*	50.1	45.9	48.2	12.7	12.8	12.8
Hungary*	55.4	54.0	55.2	16.5	18.5	17.9
Iceland	72.5	67.0	69.8	30.2	27.7	29.1
Ireland*	65.5	59.5	62.6	22.9	20.4	21.7
Israel	51.8	54.8	53.5	13.3	15.5	14.5
Italy*	62.3	61.6	62.2	19.0	20.8	20.1
Kazakhstan	45.0	45.6	45.7	11.0	12.9	12.3
Kyrgyzstan	28.3	31.2	30.1	5.3	7.0	6.3
Latvia*	55.3	55.2	55.7	16.6	18.6	18.0
Lithuania*	54.9	54.0	54.8	16.1	17.2	17.0
Luxembourg*	69.5	64.1	66.9	26.5	24.3	25.6
Malta*	60.7	56.9	59.0	19.2	18.9	19.2
Montenegro	48.4	47.9	48.3	12.6	13.9	13.4
Netherlands*	62.5	58.2	60.5	20.4	19.6	20.1
Norway	64.2	59.3	61.9	21.8	20.3	21.2
Poland*	59.9	53.8	57.1	18.3	16.5	17.6
Portugal*	57.2	54.3	55.9	16.7	16.5	16.7
Republic of Moldova	35.2	36.9	36.5	7.5	9.3	8.6
Romania*	46.0	45.2	45.8	11.4	12.6	12.1
Russian Federation	47.3	52.1	50.6	12.3	17.1	15.4
Serbia	47.4	52.0	49.8	11.9	14.9	13.5
Slovakia*	52.7	51.7	52.5	14.8	16.1	15.7
Slovenia*	56.8	55.3	56.3	17.3	18.4	18.1
Spain*	58.9	52.9	56.1	17.1	15.4	16.4
Sweden*	56.1	47.0	51.8	16.3	13.2	14.8
Switzerland	61.1	56.9	59.2	18.7	18.5	18.8
Tajikistan	22.5	25.3	24.0	3.8	5.3	4.6
TFYR Macedonia	42.4	43.7	43.2	10.0	11.8	11.0
Turkey	38.1	41.0	39.7	7.8	10.0	9.0
Turkmenistan	33.8	35.8	35.1	6.9	8.7	7.9
Ukraine	43.1	44.7	44.4	10.4	12.7	11.9
United Kingdom*	65.2	61.3	63.4	21.6	21.3	21.7
Uzbekistan	24.2	28.9	26.8	4.1	6.5	5.4

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.

Notes: Data come from population-based surveys and surveillance systems of measured blood pressure. Data are age-standardised to the WHO standard population.

Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 10.1a Prevalence of raised cholesterol (≥6.2mmol/L), by sex, 2008, Europe

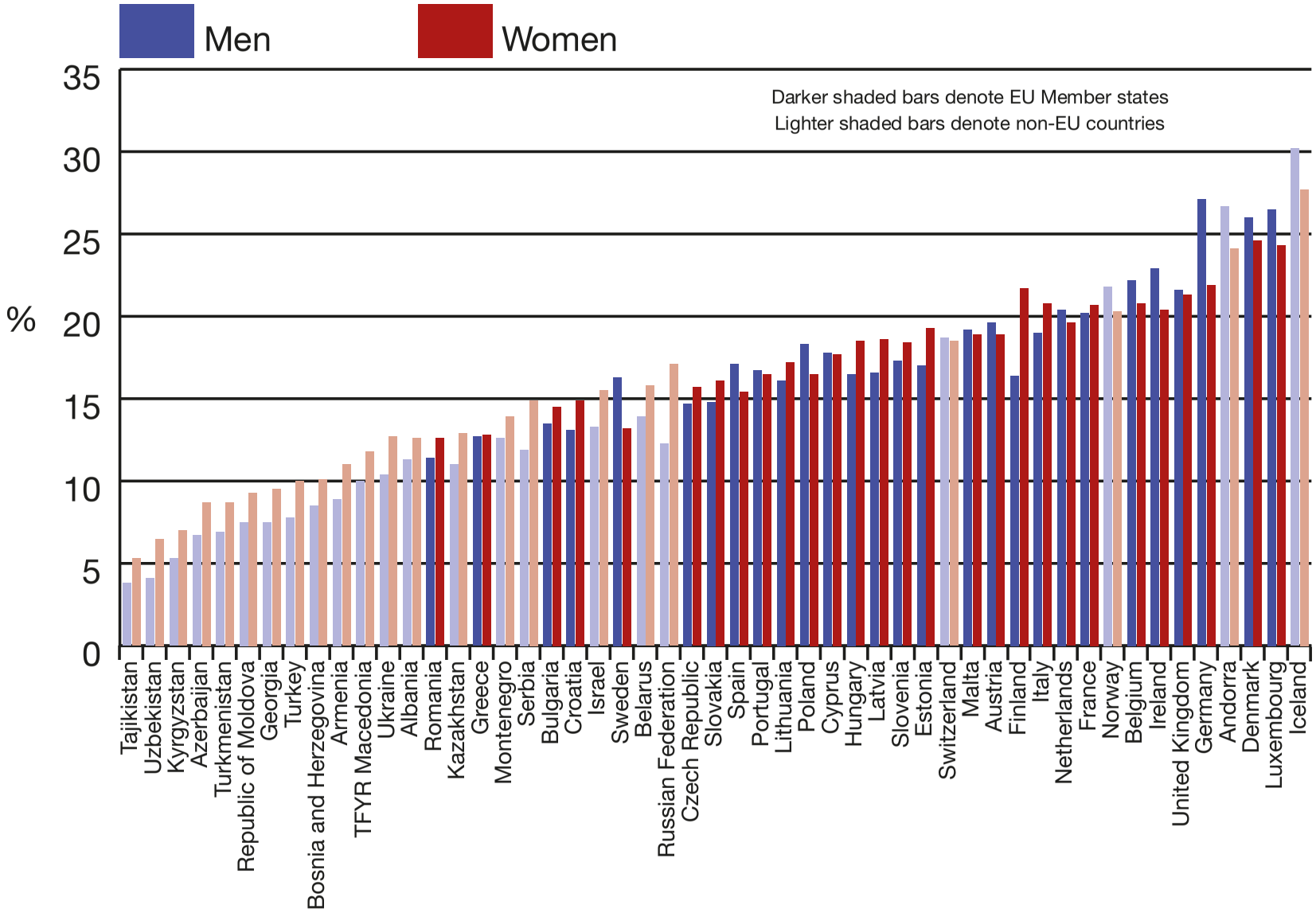


Figure 10.1b Prevalence of raised cholesterol (≥6.2mmol/L), males, 2008, Europe

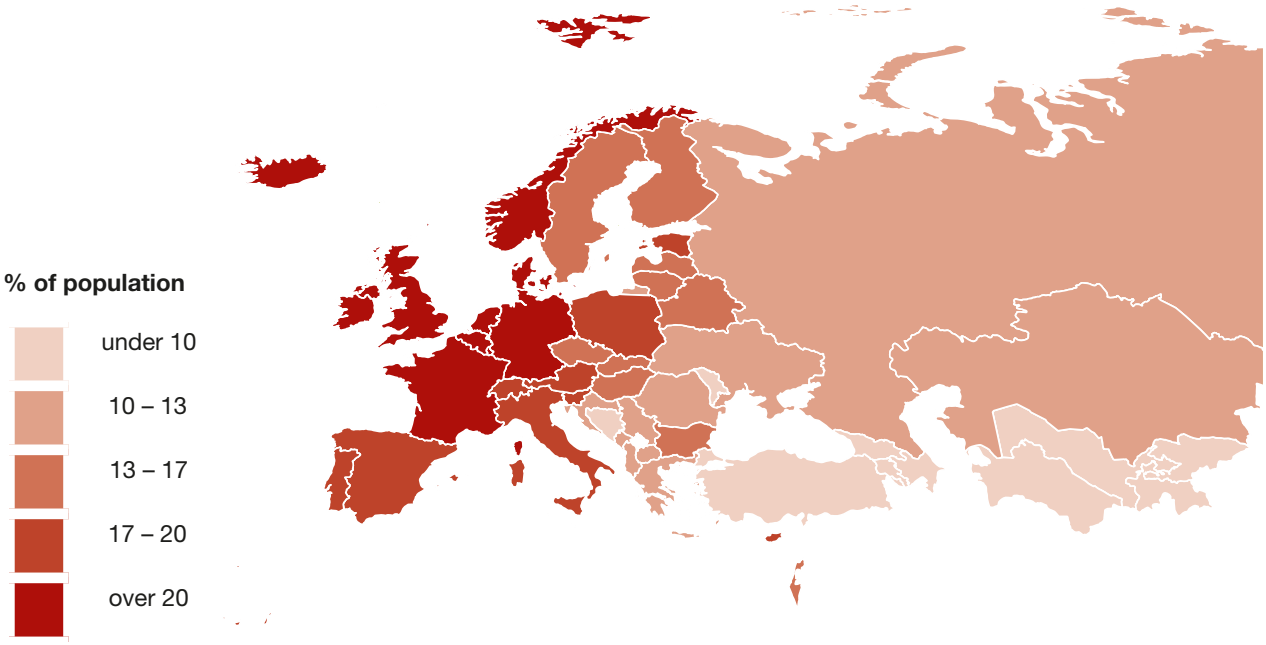


Figure 10.1c Prevalence of raised cholesterol (≥6.2mmol/L), females, 2008, Europe

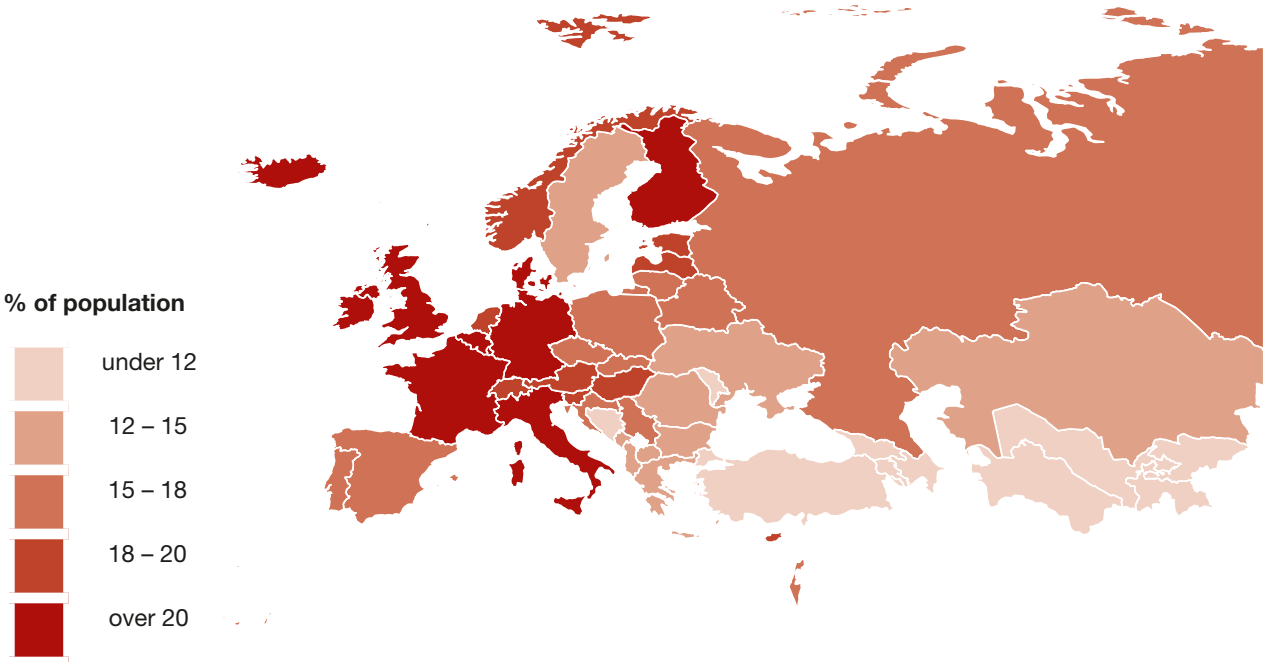


Table 10.2 Mean blood cholesterol levels, adults aged 25+ years, by sex, 1980 to 2009, Europe

Males Age-standardised estimate of mean blood cholesterol levels, mmol/L

	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Albania	5.0	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Andorra	6.2	6.0	5.9	5.8	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Armenia	5.2	5.1	5.0	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Austria*	5.9	5.8	5.7	5.6	5.5	5.5	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3
Azerbaijan	5.1	5.1	5.0	4.7	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Belarus	5.4	5.3	5.3	5.2	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0
Belgium*	6.1	6.0	5.9	5.7	5.6	5.6	5.5	5.5	5.5	5.5	5.5	5.4	5.4	5.4
Bosnia and Herzegovina	4.9	4.9	4.9	4.6	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Bulgaria*	5.3	5.3	5.3	5.2	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Croatia*	5.4	5.4	5.3	5.2	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Cyprus*	5.5	5.4	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.2
Czech Republic*	6.0	5.9	5.8	5.7	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.2	5.1	5.1
Denmark*	5.9	5.8	5.8	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.5	5.5	5.5
Estonia*	5.6	5.5	5.5	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Finland*	6.2	6.0	5.8	5.5	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2
France*	6.0	5.9	5.8	5.7	5.6	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.3
Georgia	5.2	5.2	5.1	4.8	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Germany*	5.8	5.9	5.9	5.9	5.8	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.5
Greece*	5.5	5.4	5.3	5.2	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Hungary*	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.1
Iceland	6.1	6.1	6.0	5.9	5.8	5.8	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.6
Ireland*	6.0	5.8	5.7	5.6	5.6	5.6	5.6	5.5	5.5	5.5	5.5	5.5	5.4	5.4
Israel	5.8	5.7	5.5	5.4	5.3	5.2	5.2	5.2	5.1	5.1	5.1	5.1	5.0	5.0
Italy*	5.7	5.5	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Kazakhstan	5.3	5.2	5.1	5.0	4.8	4.8	4.8	4.8	4.8	4.8	4.9	4.9	4.9	4.9
Kyrgyzstan	5.0	4.9	4.8	4.6	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.4
Latvia*	5.6	5.5	5.4	5.3	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Lithuania*	5.8	5.7	5.6	5.5	5.2	5.2	5.2	5.2	5.2	5.2	5.1	5.1	5.1	5.1
Luxembourg*	6.2	6.1	6.0	5.9	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.5
Malta*	5.9	5.8	5.7	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3
Montenegro	5.3	5.3	5.3	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.9
Netherlands*	5.9	5.8	5.7	5.6	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.3	5.3
Norway	6.0	5.9	5.7	5.6	5.5	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4
Poland*	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Portugal*	5.5	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2
Republic of Moldova	5.3	5.2	5.1	4.9	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Romania*	5.3	5.2	5.2	5.1	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Russian Federation	5.6	5.5	5.3	5.2	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Serbia	5.1	5.1	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Slovakia*	5.4	5.3	5.3	5.2	5.2	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Slovenia*	5.4	5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Spain*	5.6	5.5	5.5	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.2	5.2
Sweden*	6.0	5.9	5.7	5.5	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.1
Switzerland	6.0	5.9	5.8	5.6	5.5	5.4	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3
Tajikistan	5.0	4.9	4.8	4.5	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
TFYR Macedonia	5.3	5.3	5.2	5.0	4.9	4.9	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Turkey	4.8	4.8	4.8	4.8	4.8	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Turkmenistan	5.1	5.0	4.9	4.7	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Ukraine	5.5	5.4	5.3	5.1	4.9	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
United Kingdom*	6.2	6.1	5.9	5.7	5.6	5.5	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4
Uzbekistan	5.0	4.9	4.8	4.5	4.4	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.2

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.

Notes: Data come from population-based surveys and surveillance systems of measured blood cholesterol. Data are age-standardised to the WHO standard population. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Table 10.2 Mean blood cholesterol levels, adults aged 25+ years, by sex, 1980 to 2009, Europe

Females Age-standardised estimate of mean blood cholesterol levels, mmol/L

	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Albania	5.1	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Andorra	6.1	6.0	5.8	5.7	5.6	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Armenia	5.3	5.3	5.1	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Austria*	5.9	5.8	5.7	5.5	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.3
Azerbaijan	5.3	5.2	5.1	4.9	4.7	4.7	4.7	4.7	4.7	4.6	4.7	4.7	4.7	4.7
Belarus*	5.5	5.5	5.4	5.3	5.2	5.2	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Belgium*	6.0	5.9	5.8	5.6	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.3	5.3
Bosnia and Herzegovina	5.0	5.0	4.9	4.7	4.7	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Bulgaria*	5.3	5.4	5.3	5.2	5.1	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0
Croatia*	5.4	5.4	5.3	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.0	5.0
Cyprus*	5.5	5.5	5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2
Czech Republic*	5.9	5.9	5.8	5.7	5.5	5.5	5.4	5.4	5.3	5.3	5.2	5.2	5.1	5.1
Denmark*	6.0	5.8	5.7	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.4	5.4	5.4	5.4
Estonia*	5.7	5.6	5.6	5.5	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.2
Finland*	6.2	6.0	5.8	5.6	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.3
France*	6.0	5.9	5.7	5.6	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.3	5.3
Georgia	5.4	5.3	5.2	4.9	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Germany*	5.8	5.8	5.8	5.8	5.7	5.6	5.6	5.6	5.5	5.5	5.4	5.4	5.4	5.3
Greece*	5.6	5.4	5.3	5.1	5.0	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.9	4.9
Hungary*	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Iceland	6.2	6.1	6.0	5.8	5.7	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Ireland*	5.9	5.8	5.6	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.3	5.3	5.3
Israel	5.9	5.8	5.6	5.5	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2
Italy*	5.6	5.5	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.4
Kazakhstan	5.4	5.3	5.2	5.1	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Kyrgyzstan	5.2	5.1	5.0	4.8	4.6	4.6	4.6	4.6	4.6	4.6	4.5	4.5	4.5	4.5
Latvia*	5.7	5.6	5.5	5.4	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Lithuania*	5.8	5.8	5.8	5.6	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.1
Luxembourg*	6.2	6.1	5.9	5.8	5.6	5.6	5.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Malta*	6.1	5.9	5.7	5.5	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.2
Montenegro	5.4	5.3	5.3	5.2	5.1	5.1	5.1	5.1	5.0	5.0	5.0	5.0	5.0	5.0
Netherlands*	5.9	5.8	5.6	5.5	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.3
Norway	6.0	5.8	5.7	5.6	5.5	5.4	5.4	5.4	5.4	5.4	5.3	5.3	5.3	5.3
Poland*	5.4	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.1
Portugal*	5.6	5.5	5.4	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Republic of Moldova	5.4	5.4	5.3	5.0	4.8	4.8	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Romania*	5.3	5.3	5.3	5.1	5.0	5.0	5.0	5.0	5.0	4.9	4.9	4.9	4.9	4.9
Russian Federation	5.8	5.7	5.6	5.4	5.2	5.2	5.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Serbia	5.2	5.1	5.1	5.0	5.0	5.0	5.0	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Slovakia*	5.4	5.4	5.4	5.3	5.2	5.2	5.2	5.2	5.1	5.1	5.1	5.1	5.1	5.1
Slovenia*	5.5	5.4	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2
Spain*	5.6	5.5	5.4	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.1	5.1	5.1	5.1
Sweden*	6.1	6.0	5.8	5.5	5.3	5.2	5.2	5.1	5.1	5.1	5.0	5.0	5.0	4.9
Switzerland	6.0	5.9	5.7	5.6	5.4	5.4	5.3	5.3	5.3	5.3	5.3	5.3	5.2	5.2
Tajikistan	5.2	5.1	5.0	4.7	4.4	4.4	4.4	4.4	4.4	4.3	4.3	4.3	4.3	4.3
TFYR Macedonia	5.4	5.3	5.2	5.1	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Turkey	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.8	4.8	4.8	4.8	4.8	4.8	4.8
Turkmenistan	5.3	5.2	5.1	4.9	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.6
Ukraine	5.5	5.5	5.4	5.2	5.0	5.0	5.0	4.9	4.9	4.9	4.9	4.9	4.9	4.9
United Kingdom*	6.2	6.0	5.9	5.7	5.5	5.5	5.5	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Uzbekistan	5.2	5.1	4.9	4.7	4.6	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.4	4.4

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.

Notes: Data come from population-based surveys and surveillance systems of measured blood cholesterol. Data are age-standardised to the WHO standard population. Data were not available for Monaco or San Marino.

*Asterisk denotes EU member states.

Figure 10.2a Mean blood cholesterol levels, males, aged 25+ years 1980 to 2009, Europe

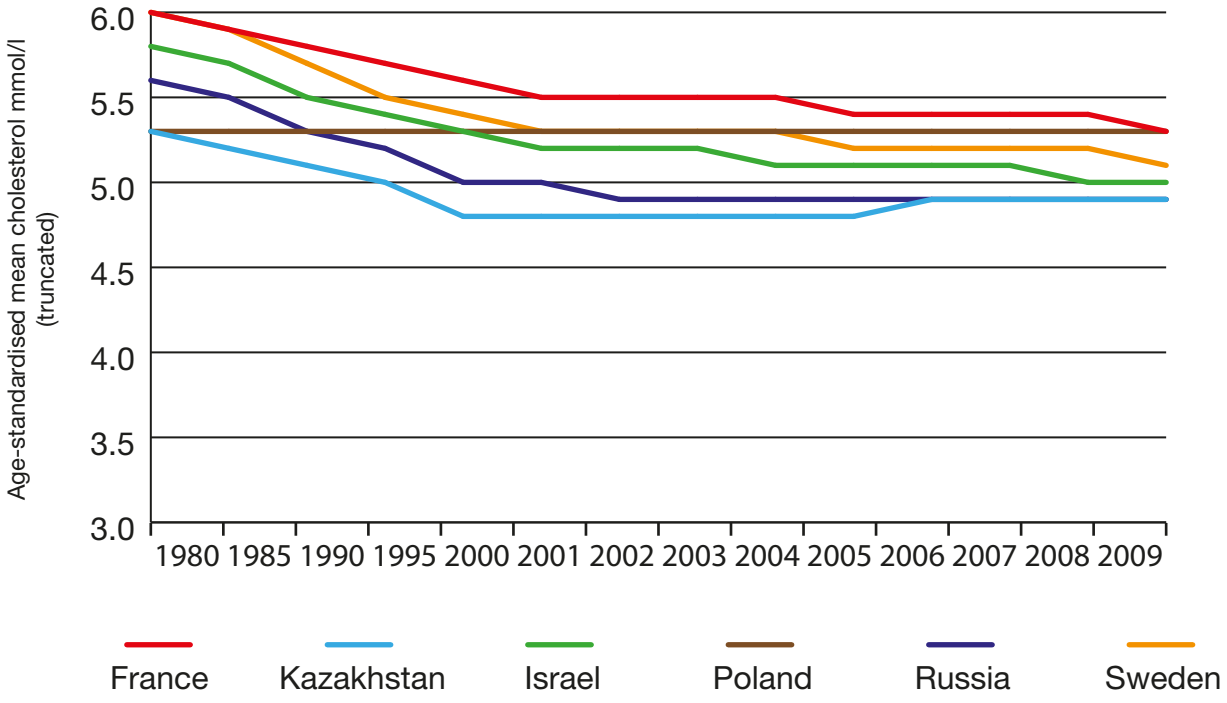
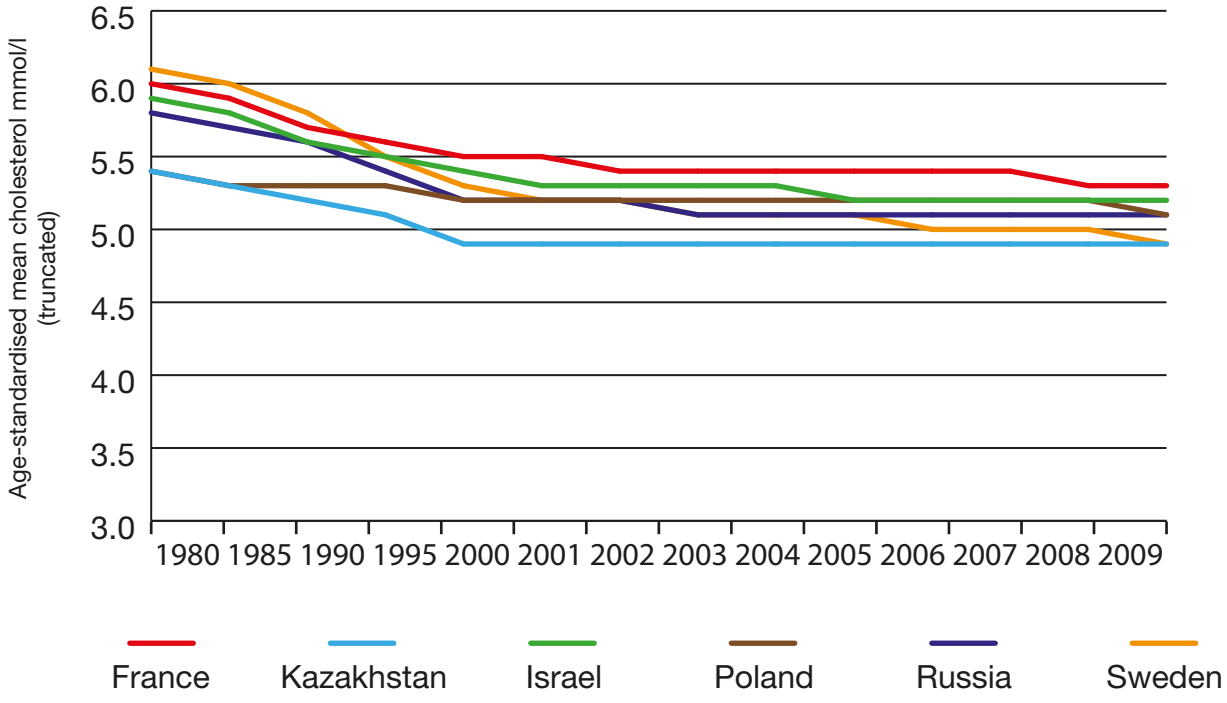


Figure 10.2b Mean blood cholesterol levels, females, aged 25+ years 1980 to 2009, Europe



11. Overweight and obesity

Overweight and obesity are key cardiovascular disease risk factors for CVD. Both result from a positive energy balance caused by energy consumption relative to energy expenditure through physical activity. As well as increasing the risk of CVD directly, obesity is a risk factor for high blood pressure, raised blood cholesterol, diabetes and impaired glucose tolerance[1]. Adults with a body mass index (BMI) (kg/m^2) of 25 to 30 are considered to be overweight while those with a BMI of more than 30 are considered to be obese[2].

Prevalence of overweight and obesity

The WHO Health for All Database collates national data on the age-standardised3 prevalence of overweight and obesity in Europe. These data are taken largely from national population-based surveys, which differ in terms of sampling frames, age range and methods (e.g. measured or self-reported height and weight values), thus limiting the comparability between them. The Health for All Database shows that in Europe as a whole in 2014, 62% of males and 55% of females were overweight or obese in 2014, while 21% of males and 25% of females were obese. The prevalence of overweight or obesity (65% among males and 53% among females) and obesity (23% in both males and females) in the EU in 2014 were comparable to those in Europe as a whole (Table 11.1, Figures 11.1a, 11.1b).

Substantial differences in overweight and obesity prevalence are apparent between countries. Within the EU in 2014 the prevalence of overweight or obesity ranged from 61% in Austria and Portugal to 70% in the Czech Republic among males, and from 45% in Austria to 60% in Malta among females. Outside of the EU, the range was larger, from 49% in Tajikistan to 72% in Andorra among males, and from 46% in Switzerland to 69% in Turkey among females. Considering all European countries, the prevalence of overweight or obesity was higher in males than females in all but eight, most of which were former Soviet states: Tajikistan, Kyrgyzstan, Moldova, Uzbekistan, Georgia, Turkmenistan, Azerbaijan and Turkey (Table 11.1, Figure 11.1a).

Cross-national variation in the prevalence of obesity was similar to that for overweight or obesity. Within the EU, the prevalence of obesity ranged from 20% in Portugal to 27% in the UK among males, and from 16% in Austria to 29% in the UK among females. Outside of the EU, the range was again greater, varying from 10% in Tajikistan to 29% in Andorra among males, and from 17% in Kyrgyzstan, Switzerland and Tajikistan to 36% in Turkey among females (Table 11.1, Figure 11.1b). In contrast to overweight or obesity, the prevalence of obesity tended to be higher in women than men in most countries. In only eleven countries, all in Western Europe, was obesity more common in men than women: Austria, Belgium, Denmark, Finland, Germany, Ireland, Iceland, Luxembourg, the Netherlands, Norway and Sweden (Table 11.1, Figure 11.1b).

According to WHO estimates, mean BMI for both men and women in 2014 was considerably higher than the optimum population mean BMI of 21kg/m^2 in all countries[4]. Within the EU, the mean BMI ranged from 25.7kg/m^2 in Romania to 27.9kg/m^2 in Ireland among males, and from 24.3kg/m^2 in Estonia to 27.1kg/m^2 in Ireland and the UK among females. Outside of the EU, the lowest mean BMI values for men occurred in countries of the former Soviet Union, with the very lowest in Tajikistan (25.5kg/m^2), while the highest BMI for men was found in Andorra (27.8kg/m^2) (Table 11.2, Figure 11.2a). By contrast, among women in non-EU countries, Kazakhstan (27.5kg/m^2), Armenia (27.4kg/m^2) and Georgia (27.3kg/m^2) had the highest mean BMI levels, while the lowest mean BMI was in Switzerland (23.8kg/m^2) (Table 11.2, Figure 11.2b).

Trends in overweight and obesity

WHO data show that from 1980 to 2014 mean BMI increased in all European countries among men and in nearly all European countries among women, with the exceptions of Belarus, Belgium, Bulgaria, Croatia, the Czech Republic and Estonia. The largest overall absolute increases (of more than 2.5 kg/m^2 between 1980 and 2014) occurred in Greece, Kazakhstan, Turkey and the UK for both men and women (Table 11.2, Figures 11.2c, 11.2d). Consistent with this increase in mean BMI, the prevalence of overweight or obesity increased between 2010 and 2014 among both men and women in all European and EU countries for which data are available (Table 11.1).

Overweight and obesity in children

Overweight and obesity in children are also measured using BMI. However, whereas in adults the BMI categories are fixed, in children BMI thresholds vary to take account of age- and sex. This reflects the rapid changes in body composition that take place through childhood and adolescence. There are several different child growth curve references, each with different age-/sex-specific BMI cut-offs. The most common system for international comparisons is that of the International Obesity Task Force (IOTF), which provides age and sex-specific BMI thresholds that correspond to a BMI of 25 (the adult threshold for overweight) and 30 (adult threshold for obesity)[5 6].

In addition to issues of defining overweight and obesity, differences in the age groups used in survey samples and in methods of data collection limit the comparability of data on the prevalence of childhood obesity in Europe. Bearing these limitations in mind, however, findings from the Health Behaviour in School-aged Children (HBSC) survey, suggest that in general the prevalence of overweight of obesity in adolescents is higher among boys than girls and increases with age (Table 11.3, Figures 11.3a-11.3c). Overall, the highest levels of overweight including obese were found in countries of Southern Europe across all adolescent age groups. Within the EU, the highest prevalence of overweight or obesity occurred in 15-year old boys in Malta (29%) and 11-year old girls in Ireland (29%), while the lowest prevalence of overweight including obese was found among 11-year old boys in Ireland (5%). This large difference in prevalence between 11 year old girls and boys in Ireland, is not replicated at any of the other ages and so should be treated with caution. Outside of the EU, the highest prevalence of overweight or obesity occurred among 11-year old boys in Macedonia, while the lowest rates were found among 15-year old girls in Albania (4%) (Table 11.3, Figures 11.3a-11.3c).

1 World Health Organization (2000) Obesity: preventing and managing the global epidemic. Report of a WHO consultation. World Health Organ Tech Rep Ser 894:i-xii, 1-253.
2 World Health Organization (WHO) (2016) Obesity and Overweight Factsheet. http://www.who.int/mediacentre/factsheets/fs311/en/ (Accessed December 2016).
3 Data are age-standardised to the WHO world standard population.
4 World Health Organization (2000) Obesity: preventing and managing the global epidemic. Report of a WHO consultation. World Health Organ Tech Rep Ser 894:i-xii, 1-253.
5 Cole TJ, Bellizzi MC, Flegal KM, Dietz WH (2000) 'Establishing a standard definition for child overweight and obesity worldwide: international survey'. British Medical Journal, 320(7244):1240-3.
6 Cole TJ and Lobstein T (2012) 'Extended international (IOTF) body mass index cut-offs for thinness, overweight and obesity'. Pediatr. Obes. 7(4):284-94.

Table 11.1 Age-standardised prevalence of overweight and obesity, aged 18+ years, by sex, 2014, Europe

	2010				2014			
	%				%			
	Males		Females		Males		Females	
	Overweight including obese	Obese	Overweight including obese	Obese	Overweight including obese	Obese	Overweight including obese	Obese
Albania	54.5	14.6	46.5	17.5	57.5	16.5	47.9	18.7
Andorra	70.2	26.1	60.3	28.8	72.0	28.5	61.9	30.5
Armenia	52.6	15.1	53.2	20.7	56.3	17.2	54.7	22.0
Austria*	59.3	18.5	43.8	15.0	61.1	20.5	45.4	16.3
Azerbaijan	52.7	15.5	55.7	23.2	57.4	19.0	58.7	26.1
Belarus	57.2	18.1	53.3	23.6	61.2	21.0	55.2	25.5
Belgium*	63.8	20.6	46.9	16.9	65.7	22.3	48.4	18.2
Bosnia and Herzegovina	53.0	14.5	48.1	19.0	55.4	16.3	48.5	19.4
Bulgaria*	61.6	19.5	52.8	22.7	64.1	21.8	54.4	24.5
Croatia*	61.7	20.1	52.4	22.7	64.4	22.5	53.6	24.1
Cyprus*	62.0	20.0	55.3	24.2	63.6	21.9	56.9	25.7
Czech Republic*	67.7	24.2	56.6	26.3	69.6	26.2	57.3	27.3
Denmark*	62.6	20.0	44.3	15.5	64.4	21.7	46.2	17.0
Estonia*	59.1	20.0	51.7	22.3	61.7	22.2	52.3	22.9
Finland*	60.2	19.8	47.3	18.3	62.1	21.6	48.6	19.6
France*	65.2	21.8	52.6	22.3	67.1	23.8	54.7	24.0
Georgia	51.5	15.0	53.8	21.8	54.3	17.2	56.0	24.0
Germany*	60.7	19.9	45.8	17.2	62.7	21.9	47.2	18.5
Greece*	64.2	20.0	54.0	22.6	65.8	21.9	55.2	23.8
Hungary*	64.6	22.1	52.4	22.8	66.6	24.0	53.3	23.9
Iceland	63.2	22.4	49.2	20.2	65.2	24.1	50.5	21.5
Ireland*	64.6	23.3	52.0	22.8	66.2	25.9	54.6	25.3
Israel	66.2	21.5	57.6	25.5	68.2	23.5	59.0	27.0
Italy*	62.7	18.8	52.0	20.3	64.3	20.4	53.7	21.6
Kazakhstan	57.0	18.8	55.4	23.4	60.5	21.6	57.1	25.0
Kyrgyzstan	42.7	10.1	46.9	15.7	45.2	11.5	49.1	17.3
Latvia*	59.0	19.6	53.9	24.4	62.0	22.0	54.5	25.1
Lithuania*	59.5	20.3	56.5	26.7	62.6	23.1	57.9	28.3
Luxembourg*	65.3	23.9	46.4	17.9	67.8	26.6	48.3	19.7
Malta*	66.4	22.6	57.9	26.9	68.5	24.6	59.6	28.5
Montenegro	59.5	17.7	49.2	19.8	61.7	19.3	50.1	20.7
Netherlands*	61.2	19.4	46.4	16.7	63.6	21.4	48.2	18.3
Norway	63.2	22.4	50.9	20.7	65.2	24.6	51.8	21.7
Poland*	63.4	21.0	55.2	25.1	65.8	23.5	56.7	26.7
Portugal*	59.3	17.8	48.5	18.9	61.4	19.8	50.2	20.3
Republic of Moldova	43.4	10.0	45.3	16.9	46.4	11.4	46.7	17.9
Romania*	60.3	18.5	51.9	21.7	62.7	20.5	52.7	22.7
Russian Federation	57.2	17.6	55.6	26.2	60.9	20.3	56.8	27.4
Serbia	57.6	16.7	47.7	19.1	59.9	18.6	49.2	20.5
Slovakia*	63.6	21.8	54.6	24.9	66.1	24.6	56.2	26.7
Slovenia*	64.1	22.2	54.0	24.2	66.1	24.6	55.1	25.5
Spain*	64.6	21.1	54.0	23.1	66.2	22.8	55.7	24.7
Sweden*	60.8	20.4	47.1	17.2	63.1	22.5	48.8	18.6
Switzerland	61.5	20.2	45.2	15.5	63.3	22.3	46.4	16.5
Tajikistan	38.6	8.6	46.6	15.6	41.0	9.9	48.8	17.3
TFYR Macedonia	57.5	16.5	49.5	19.9	59.8	18.3	50.5	20.9
Turkey	61.1	20.4	66.5	33.4	64.1	22.9	68.5	35.8
Turkmenistan	50.7	14.4	53.0	20.6	54.6	17.1	55.7	23.1
Ukraine	53.3	15.3	51.5	21.7	56.3	17.1	52.4	22.6
United Kingdom*	65.9	24.1	56.8	26.8	68.1	26.9	58.8	29.2
Uzbekistan	43.8	10.5	48.6	16.8	46.6	12.1	51.4	18.9
EU	**63.1**	**20.8**	**51.6**	**21.5**	**65.2**	**22.9**	**53.2**	**23.1**
Europe	**60.0**	**19.2**	**53.3**	**23.0**	**62.5**	**21.4**	**55.0**	**24.6**

Source: WHO Europe. Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/

Notes: Data were age standardised to the WHO standard population.

Overweight defined as BMI between 25kg/m^2 and 30kg/m^2, obesity defined as BMI 30 kg/m^2 and over. Data based on measured height and weight.

Data come from population-based surveys and surveillance systems. Data were not available for Monaco or San Marino. *Asterisk denotes EU member states.

Figure 11.1a Age-standardised prevalence of overweight including obese, aged 18+ years, 2014, Europe

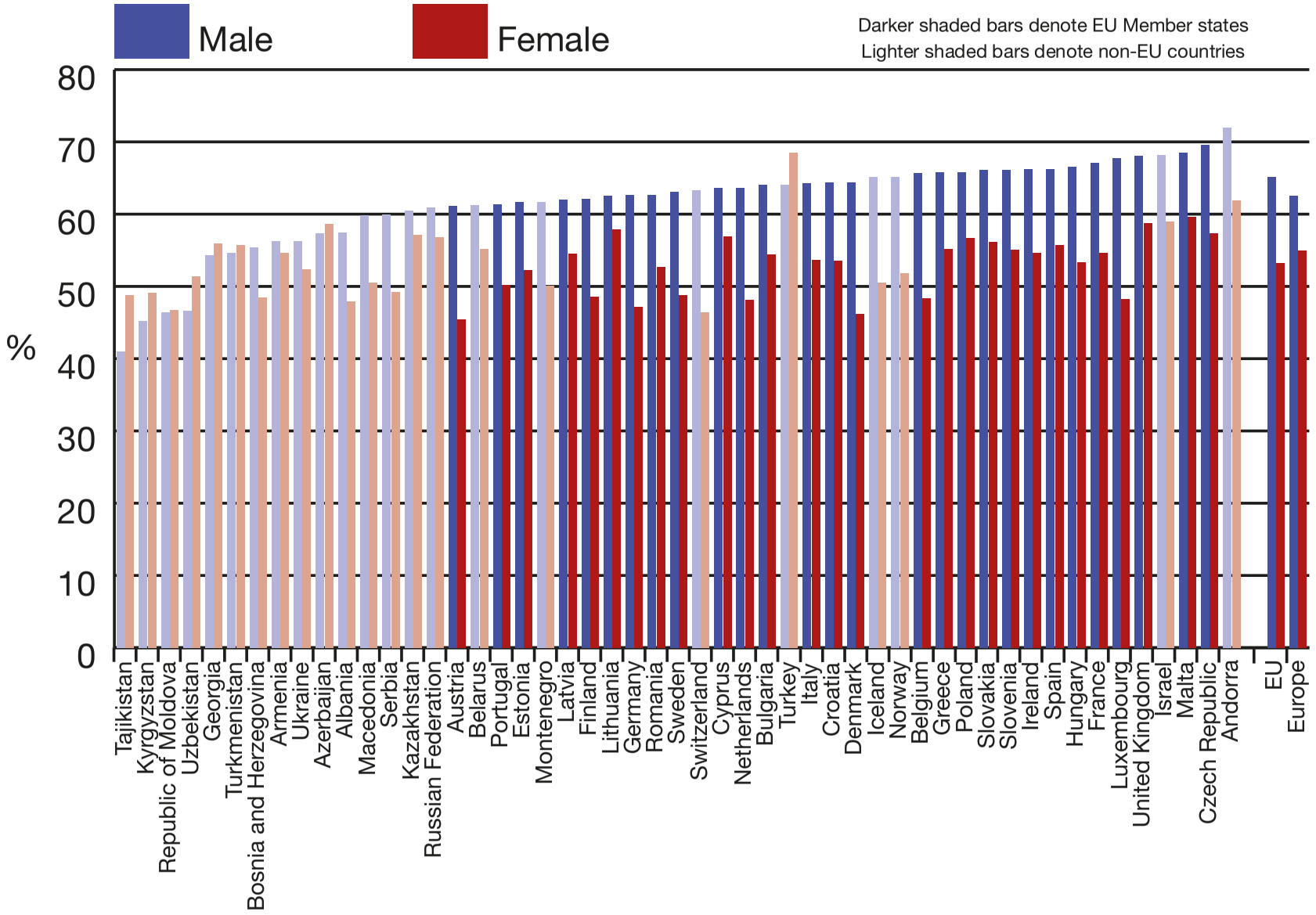


Figure 11.1b Age-standardised prevalence of obese only, aged 18+ years, 2014, Europe

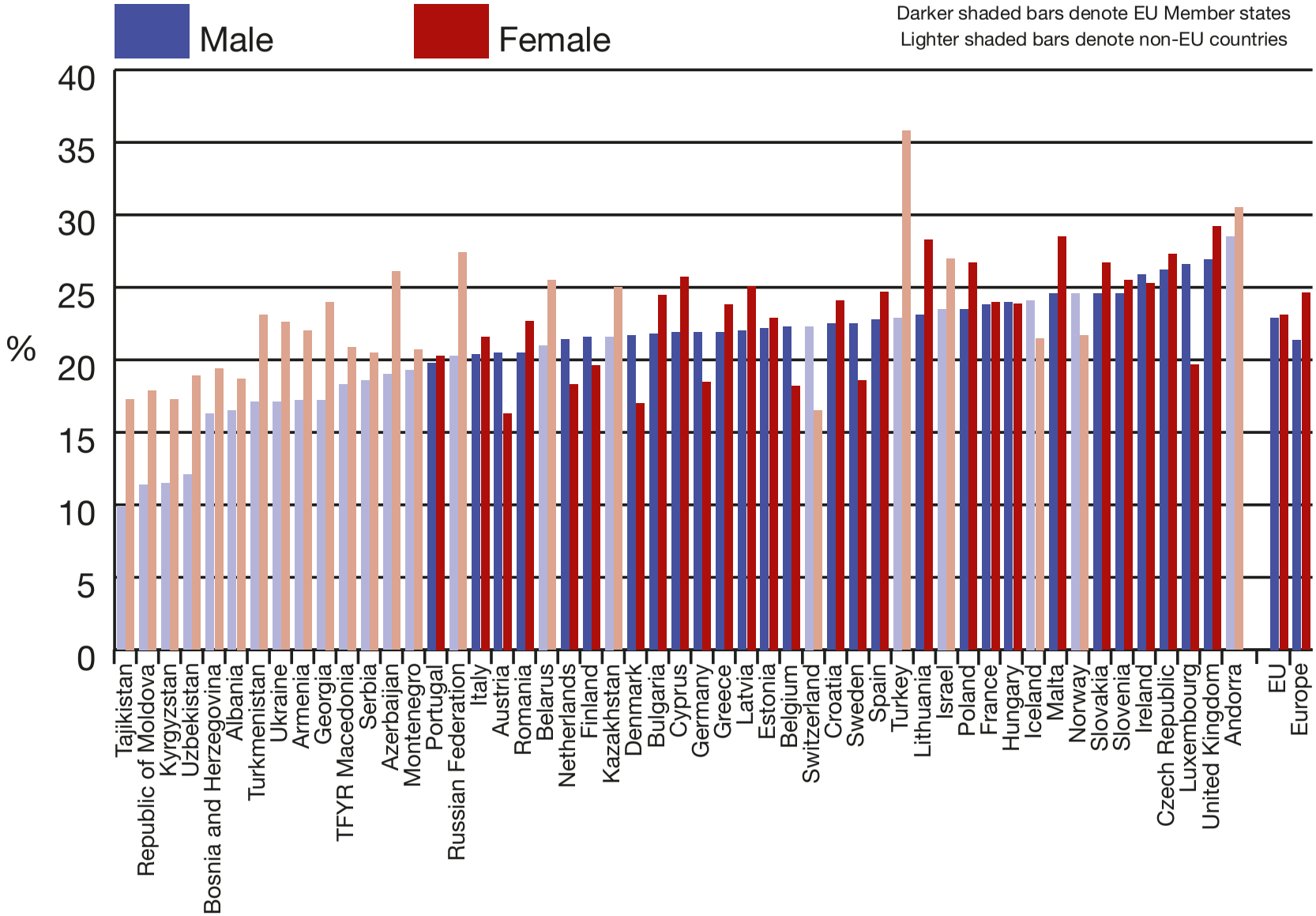


Table 11.2 Age-standardised mean BMI, aged 18+ years, by sex, 1980 to 2014, Europe

Males — Mean body mass index (BMI), kg/m^2

	1980	1985	1990	1995	2000	2005	2006	2007	2008	2010	2014
Albania	25.0	25.1	25.2	25.2	25.5	26.2	26.3	26.5	26.6	26.3	26.6
Andorra	25.7	25.8	26.1	26.4	26.8	27.3	27.4	27.5	27.6	27.5	27.8
Armenia	23.8	24.0	24.2	24.0	24.2	24.8	25.0	25.2	25.4	25.5	25.9
Austria*	24.8	25.0	25.3	25.6	25.8	26.2	26.3	26.4	26.4	26.2	26.5
Azerbaijan	24.4	24.6	24.8	24.6	24.5	25.1	25.3	25.5	25.6	25.9	26.6
Belarus	24.8	24.9	25.0	25.1	25.3	25.8	25.9	26.1	26.2	26.6	27.1
Belgium*	25.1	25.2	25.5	25.8	26.2	26.5	26.6	26.7	26.8	26.1	26.2
Bosnia and Herzegovina	25.1	25.3	25.3	25.0	25.5	26.3	26.5	26.6	26.8	26.2	26.5
Bulgaria*	25.1	25.4	25.6	25.7	25.8	26.2	26.4	26.5	26.6	26.4	26.7
Croatia*	25.1	25.3	25.5	25.5	25.9	26.4	26.5	26.6	26.8	26.2	26.5
Cyprus*	25.2	25.5	25.9	26.3	26.8	27.2	27.3	27.4	27.5	27.4	27.6
Czech Republic*	26.2	26.5	26.7	27.0	27.3	27.7	27.8	27.9	28.0	27.6	27.8
Denmark*	24.6	24.6	24.7	25.0	25.3	25.8	25.9	26.0	26.1	25.9	26.0
Estonia*	24.6	24.7	24.8	24.8	25.2	25.9	26.0	26.2	26.3	26.7	27.0
Finland*	25.4	25.5	25.7	25.9	26.1	26.5	26.6	26.7	26.8	26.4	26.5
France*	24.7	24.8	25.0	25.2	25.4	25.7	25.7	25.8	25.9	25.9	26.1
Georgia	24.6	24.8	25.0	24.6	24.6	25.2	25.3	25.4	25.6	26.7	27.2
Germany*	25.4	25.7	25.9	26.3	26.7	27.0	27.0	27.1	27.2	26.8	27.0
Greece*	24.7	24.9	25.1	25.4	25.7	26.1	26.2	26.3	26.4	27.3	27.4
Hungary*	25.2	25.6	25.9	26.1	26.4	26.9	27.1	27.2	27.3	27.3	27.5
Iceland	24.8	25.2	25.5	25.8	26.3	26.9	27.0	27.1	27.2	26.6	26.7
Ireland*	25.8	25.9	26.1	26.4	27.0	27.4	27.5	27.6	27.7	27.7	27.9
Israel	24.7	25.0	25.3	25.7	26.3	26.8	26.9	27.0	27.1	26	26.3
Italy*	25.4	25.4	25.5	25.7	25.9	26.3	26.4	26.4	26.5	26.6	26.8
Kazakhstan	24.5	24.8	24.9	24.9	25.0	25.7	25.9	26.1	26.3	26.8	27.4
Kyrgyzstan	24.3	24.4	24.5	24.3	24.2	24.5	24.6	24.7	24.8	25.2	25.6
Latvia*	25.1	25.2	25.3	25.3	25.5	26.1	26.2	26.4	26.5	26.4	26.8
Lithuania*	26.0	26.0	26.0	25.8	26.0	26.5	26.7	26.8	26.9	27	27.3
Luxembourg*	25.0	25.2	25.6	26.2	26.6	27.1	27.2	27.3	27.4	27.3	27.6
Malta*	25.6	25.9	26.1	26.6	27.1	27.5	27.6	27.6	27.7	27.3	27.5
Montenegro	25.3	25.5	25.7	25.6	25.9	26.4	26.5	26.6	26.8	26.2	26.5
Netherlands*	24.0	24.2	24.4	24.8	25.2	25.6	25.7	25.8	25.9	25.7	25.9
Norway	24.7	24.9	25.2	25.6	26.1	26.6	26.7	26.8	27.0	26.6	26.9
Poland*	25.0	25.2	25.3	25.5	25.9	26.4	26.5	26.6	26.7	26.7	27.0
Portugal*	25.0	25.0	25.3	25.7	26.1	26.5	26.5	26.6	26.7	26.5	26.7
Republic of Moldova	24.6	24.6	24.6	24.2	23.9	24.0	24.1	24.2	24.3	26	26.3
Romania*	24.6	24.7	24.8	24.6	24.7	25.2	25.3	25.5	25.6	25.4	25.7
Russian Federation	25.0	25.0	25.0	25.0	25.0	25.6	25.7	25.9	26.0	25.7	26.1
Serbia	25.6	25.8	26.0	26.0	26.3	26.8	26.9	27.1	27.2	26.2	26.4
Slovakia*	25.4	25.6	25.9	26.0	26.4	26.8	26.9	27.0	27.1	27	27.4
Slovenia*	25.6	25.8	26.0	26.2	26.7	27.3	27.4	27.5	27.6	27.2	27.5
Spain*	25.3	25.4	25.7	26.1	26.6	27.2	27.3	27.4	27.5	27.2	27.4
Sweden*	24.7	24.9	25.1	25.4	25.8	26.1	26.2	26.3	26.4	26.4	26.7
Switzerland	25.1	25.2	25.4	25.6	25.8	26.0	26.1	26.2	26.2	26.4	26.7
Tajikistan	24.0	24.2	24.2	23.7	23.3	23.5	23.6	23.7	23.8	25.1	25.5
TFYR Macedonia	25.2	25.4	25.5	25.5	25.8	26.2	26.3	26.5	26.6	26.1	26.4
Turkey	23.5	23.9	24.5	25.1	25.7	26.3	26.4	26.6	26.7	26.7	27.1
Turkmenistan	24.3	24.4	24.5	24.3	24.3	24.8	24.9	25.0	25.2	25.8	26.4
Ukraine	24.8	24.9	25.0	24.9	24.7	25.1	25.2	25.3	25.5	26.1	26.4
United Kingdom*	24.7	25.0	25.6	26.1	26.7	27.1	27.2	27.3	27.4	27.2	27.5
Uzbekistan	24.5	24.7	24.7	24.7	24.7	25.0	25.1	25.2	25.3	25.4	25.9

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.
Notes: Data were age standardised to the WHO standard population.
Data based on measured height and weight.
Data come from population-based surveys and surveillance systems.
Data were not available for Monaco or San Marino.
*Asterisk denotes EU member states.

Table 11.2 Age-standardised mean BMI, aged 18+ years, by sex, 1980 to 2014, Europe

Females — Mean body mass index (BMI), kg/m^2

	1980	1985	1990	1995	2000	2005	2006	2007	2008	2010	2014
Albania	25.2	25.2	25.1	24.9	25.1	25.4	25.5	25.6	25.6	25.6	25.6
Andorra	25.6	25.6	25.7	25.9	26.0	26.3	26.3	26.3	26.4	27.1	27.1
Armenia	25.9	26.2	26.3	26.0	26.3	26.9	27.0	27.2	27.3	27.1	27.4
Austria*	23.9	24.1	24.3	24.5	24.7	24.9	25.0	25.0	25.1	24.3	24.4
Azerbaijan	26.2	26.5	26.7	26.5	26.4	27.1	27.3	27.5	27.7	27.6	28.1
Belarus	26.3	26.2	26.1	26.0	26.0	26.3	26.4	26.6	26.7	26.2	26.2
Belgium*	25.0	24.9	25.0	25.1	25.1	25.2	25.2	25.2	25.2	24.8	24.7
Bosnia and Herzegovina	25.0	25.3	25.4	25.2	25.8	26.2	26.2	26.3	26.4	25.7	25.7
Bulgaria*	25.6	25.7	25.7	25.4	25.2	25.3	25.4	25.4	25.5	25.2	25.3
Croatia*	25.2	25.2	25.0	24.6	24.6	25.0	25.1	25.1	25.2	24.5	24.6
Cyprus*	23.8	24.3	24.7	25.2	25.5	25.8	25.8	25.9	25.9	26.2	26.3
Czech Republic*	26.7	26.7	26.6	26.4	26.5	26.5	26.5	26.6	26.6	26.1	26.0
Denmark*	23.4	23.7	23.9	24.3	24.6	24.9	25.0	25.1	25.1	24.4	24.5
Estonia*	26.0	25.6	25.2	24.7	24.8	25.1	25.2	25.2	25.3	24.3	24.3
Finland*	25.0	25.0	25.2	25.3	25.4	25.5	25.6	25.6	25.6	25.4	25.3
France*	24.1	24.2	24.4	24.5	24.7	24.8	24.8	24.8	24.8	24.5	24.6
Georgia	25.8	26.0	26.1	25.5	25.7	26.2	26.3	26.4	26.5	26.8	27.3
Germany*	24.7	24.9	25.1	25.3	25.5	25.6	25.6	25.7	25.7	25.5	25.6
Greece*	24.1	24.3	24.4	24.5	24.7	24.9	24.9	24.9	25.0	27.2	27.2
Hungary*	25.1	25.3	25.5	25.4	25.4	25.7	25.8	25.9	25.9	25.2	25.2
Iceland	24.1	24.7	24.8	25.0	25.4	25.7	25.8	25.9	26.0	25.1	25.1
Ireland*	24.7	24.9	25.2	25.5	26.0	26.4	26.4	26.5	26.6	26.8	27.1
Israel	24.4	24.9	25.4	26.0	26.5	27.0	27.1	27.2	27.3	26.1	26.2
Italy*	25.2	25.0	24.9	24.8	24.8	24.8	24.8	24.8	24.8	25.2	25.2
Kazakhstan	25.3	25.6	25.8	25.8	25.8	26.3	26.5	26.6	26.8	27.1	27.5
Kyrgyzstan	25.2	25.4	25.6	25.3	25.3	25.5	25.6	25.7	25.8	26.4	26.8
Latvia*	25.6	25.5	25.4	25.1	25.0	25.4	25.5	25.6	25.6	25.1	25.1
Lithuania*	27.0	26.6	26.3	25.7	25.7	26.0	26.0	26.1	26.1	26	26.0
Luxembourg*	24.2	24.5	24.8	25.3	25.6	25.9	26.0	26.0	26.1	25.4	25.5
Malta*	25.9	26.0	26.1	26.4	26.8	27.0	27.0	27.0	27.1	26.8	26.8
Montenegro	26.0	26.0	25.8	25.4	25.4	25.5	25.5	25.6	25.7	25.5	25.5
Netherlands*	24.0	24.1	24.3	24.6	24.8	25.1	25.1	25.2	25.2	24.9	25.0
Norway	23.7	24.1	24.4	24.7	25.2	25.6	25.6	25.7	25.7	25.1	25.2
Poland*	25.9	25.7	25.6	25.5	25.7	25.8	25.9	25.9	25.9	25.7	25.7
Portugal*	24.8	24.8	25.2	25.6	25.9	26.1	26.2	26.2	26.2	25.7	25.7
Republic of Moldova	27.0	27.0	27.0	26.7	26.4	26.7	26.9	27.0	27.0	27	27.1
Romania*	25.4	25.4	25.3	25.0	24.9	25.1	25.2	25.2	25.3	24.9	24.9
Russian Federation	26.8	26.7	26.6	26.4	26.5	26.9	27.0	27.1	27.2	26.7	26.8
Serbia	26.1	26.1	25.9	25.4	25.2	25.2	25.3	25.3	25.4	25.2	25.2
Slovakia*	26.1	26.2	26.2	26.0	26.1	26.2	26.2	26.3	26.3	25.6	25.7
Slovenia*	26.4	26.4	26.3	26.2	26.3	26.5	26.5	26.6	26.6	26.2	26.3
Spain*	25.1	25.2	25.5	25.7	26.0	26.2	26.3	26.3	26.3	26	26.0
Sweden*	24.4	24.5	24.6	24.8	24.9	25.1	25.1	25.1	25.2	24.8	24.9
Switzerland	23.7	23.8	23.9	24.0	24.0	24.1	24.1	24.1	24.1	23.9	23.8
Tajikistan	24.3	24.4	24.4	23.8	23.4	23.6	23.7	23.8	23.9	24.8	25.3
TFYR Macedonia	25.4	25.4	25.3	25.1	25.1	25.2	25.3	25.3	25.4	25.2	25.3
Turkey	26.0	26.5	27.0	27.5	27.8	28.1	28.1	28.2	28.3	28.2	28.5
Turkmenistan	24.1	24.2	24.3	24.1	24.0	24.4	24.5	24.6	24.7	25.8	26.4
Ukraine	26.4	26.3	26.3	26.0	25.6	26.0	26.1	26.2	26.3	25.8	25.8
United Kingdom*	24.2	24.6	25.2	25.7	26.2	26.7	26.8	26.9	27.0	26.9	27.1
Uzbekistan	24.2	24.5	24.7	24.7	24.9	25.2	25.3	25.4	25.5	25.7	26.3

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.
Notes: Data were age standardised to the WHO standard population.
Data based on measured height and weight.
Data come from population-based surveys and surveillance systems.
Data were not available for Monaco or San Marino.
*Asterisk denotes EU member states.

Figure 11.2a Mean BMI, males aged 18+ years, 2014, Europe

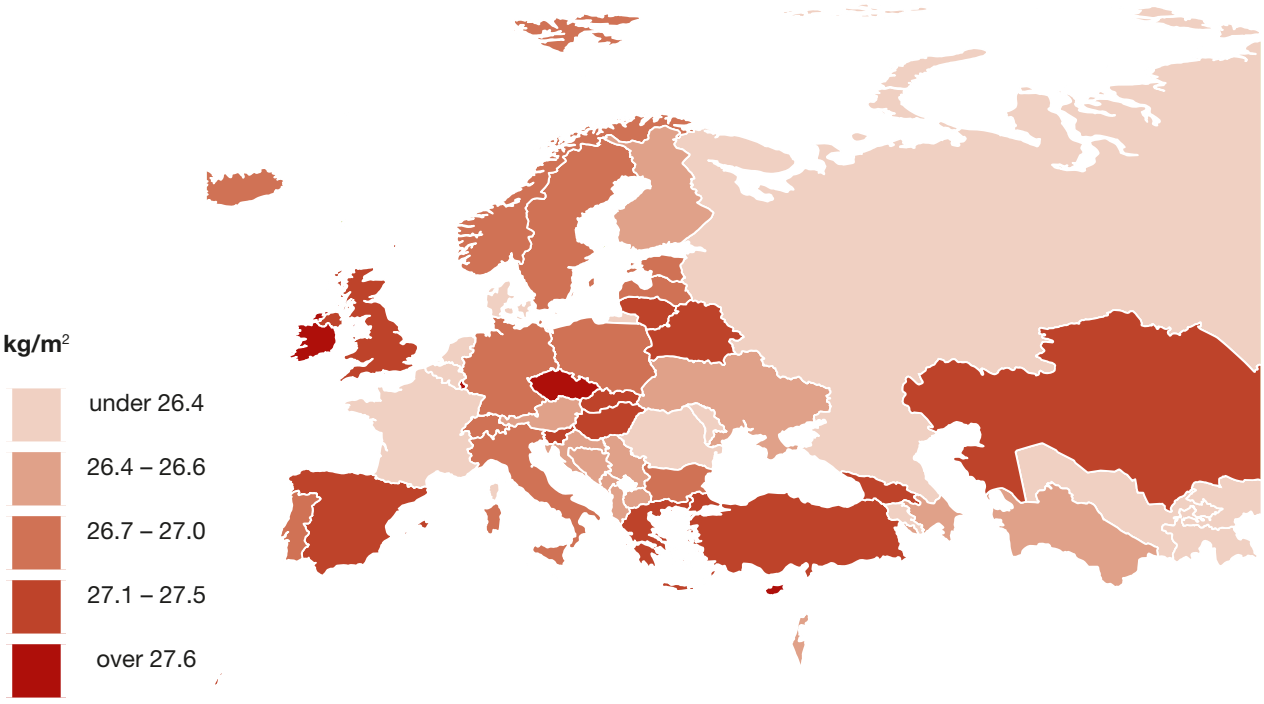


Figure 11.2b Mean BMI, females aged 18+ years, 2014, Europe

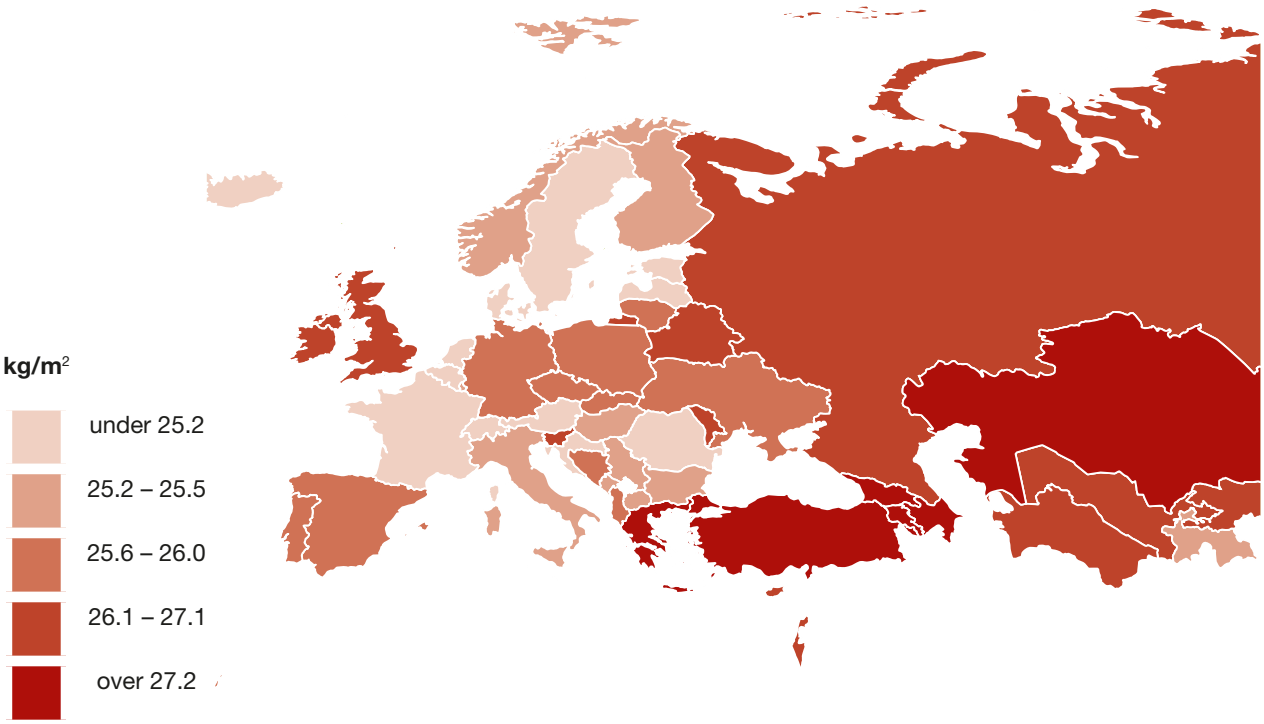


Figure 11.2c Mean BMI, males aged 18+ years, 1980 to 2014, Europe

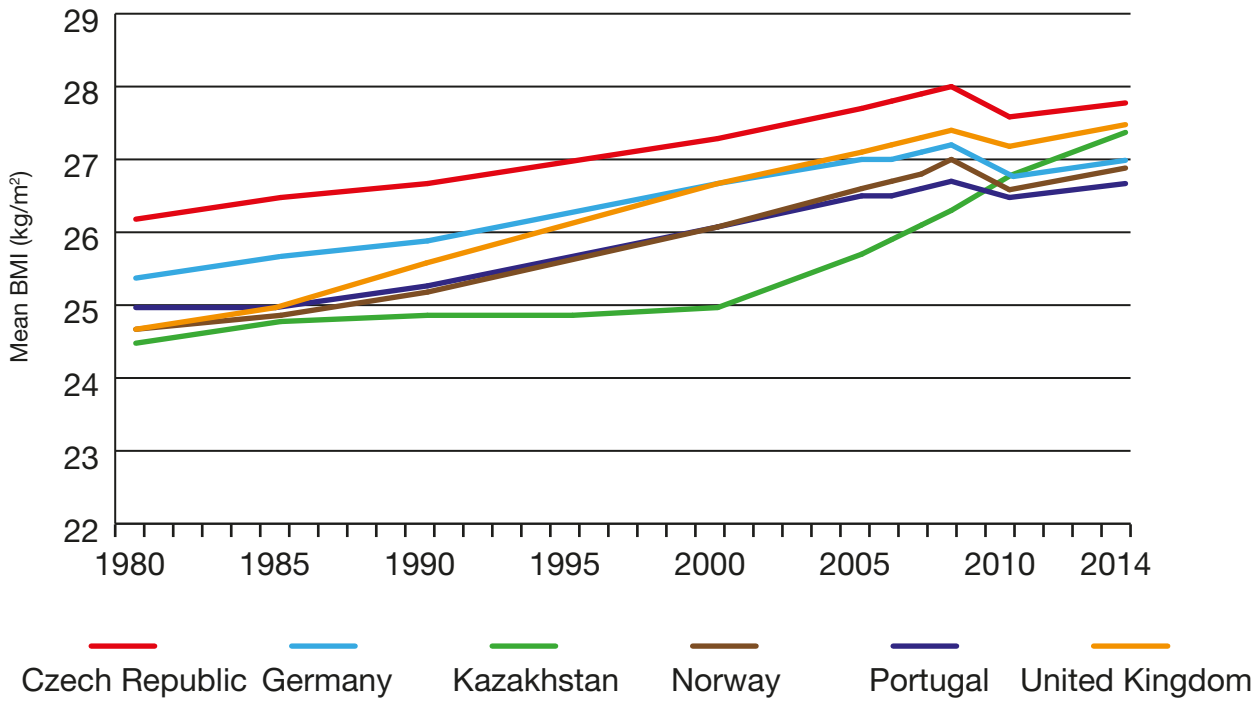


Figure 11.2d Mean BMI, females aged 18+ years, 1980 to 2014, Europe

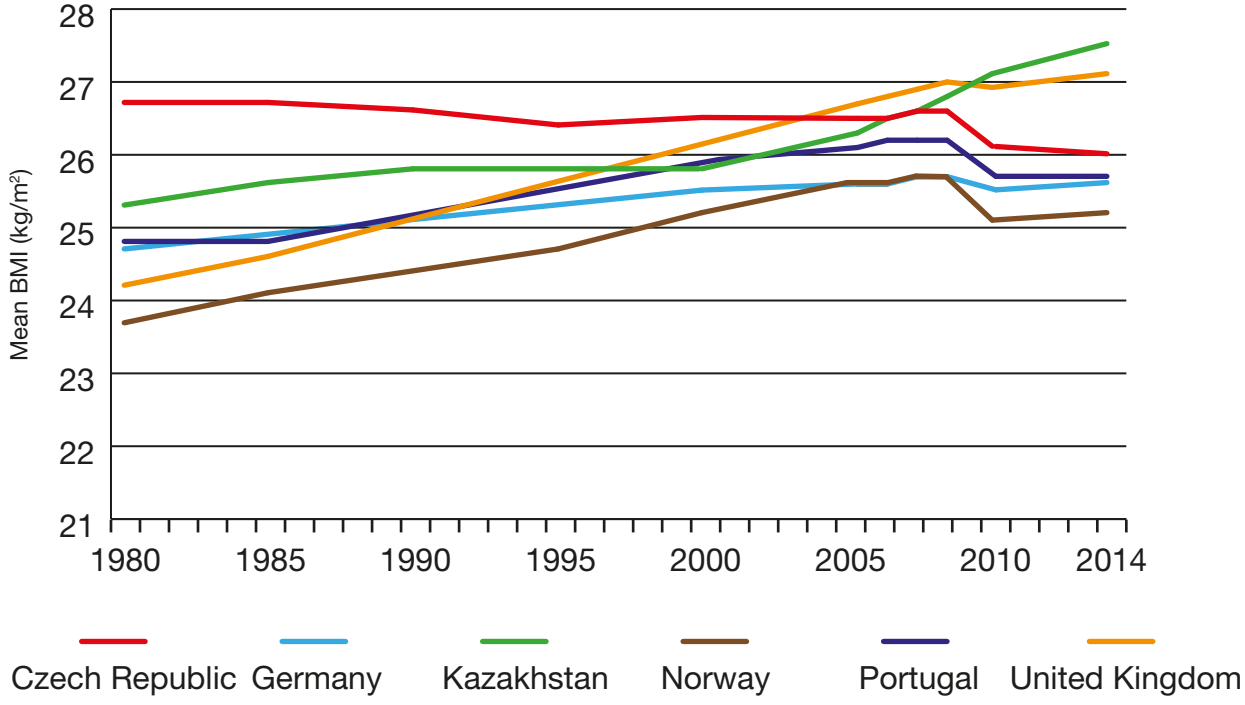


Table 11.3 Prevalence of overweight or obesity among children, 11, 13 and 15 years, by sex, 2013/14 , Europe

	11-year olds (%)			13-year olds (%)			15-year olds (%)		
	Boys	Girls	Both sexes	Boys	Girls	Both sexes	Boys	Girls	Both sexes
Albania	17	10	14	12	5	8	11	4	7
Armenia†	20	16	18	20	10	15	14	6	9
Austria*	14	13	13	18	12	15	16	9	12
Belgium (Flemish)*	11	11	11	13	11	12	15	11	13
Belgium (French)†*	13	12	12	16	13	14	17	13	15
Bulgaria*	25	16	20	21	12	17	24	11	18
Croatia*	23	14	18	20	11	15	21	8	15
Czech Republic*	19	12	15	20	10	14	19	11	15
Denmark*	9	7	8	8	8	8	10	9	10
England†*	17	15	16	21	9	15	16	12	14
Estonia*	19	13	16	15	13	14	19	9	14
Finland*	16	13	14	20	11	15	20	14	17
France*	12	13	12	14	9	11	14	10	12
Germany*	11	8	10	15	10	13	20	12	16
Greece*	25	22	23	22	15	18	28	15	21
Hungary*	21	11	16	19	12	16	20	12	16
Iceland	14	11	12	17	12	15	20	16	18
Ireland†*	5	29	17	12	15	14	18	13	15
Israel†	17	11	14	16	11	13	21	13	17
Italy*	22	17	20	23	15	19	22	9	15
Latvia*	20	15	17	17	14	16	16	9	12
Lithuania†*	17	11	14	14	7	10	14	7	11
Luxembourg*	13	11	12	18	11	15	17	13	15
Malta†*	28	28	28	26	27	27	29	25	27
Netherlands*	10	7	8	11	9	10	21	12	16
Norway	11	7	9	14	8	11	13	12	12
Poland*	21	16	19	19	10	15	18	7	13
Portugal*	22	15	18	21	18	19	19	6	12
Republic of Moldova	10	9	9	13	11	12	17	14	16
Romania†*	24	11	18	18	8	13	13	7	10
Russian Federation	20	14	17	17	10	13	18	9	13
Scotland†*	15	13	14	18	15	17	20	6	12
Slovakia*	20	14	17	19	10	14	16	11	14
Slovenia*	20	17	18	22	12	17	17	9	13
Spain*	22	16	19	20	14	17	21	13	17
Sweden*	12	10	11	15	11	13	20	13	16
Switzerland	10	9	9	13	7	10	20	13	16
TFYR Macedonia	29	14	22	23	14	18	15	9	12
Ukraine	12	8	10	14	8	11	13	6	9
Wales†*	20	20	20	19	13	16	23	16	20

Source: HBSC Survey 2014/15 http://www.hbsc.org/publications/international/.

Notes: Young people were asked how much they weigh without clothes and how tall they are without shoes, and to record these in country-appropriate units (centimetres versus inches, pounds versus kilograms). These data were (re)coded in centimetres and kilograms respectively to compute the body mass index (BMI) as weight (kg) divided by height (m^2). The analysis presented here uses the international BMI standards for young people adopted by the International Obesity Task Force (IOTF), called the IOTF BMI cut-off points.

†BMI is missing for more than 30% of the age-group sample.

*Asterisk denotes EU member states.

Figure 11.3a Prevalence of overweight or obesity among children, 11-year olds, by sex, 2013/14 , Europe

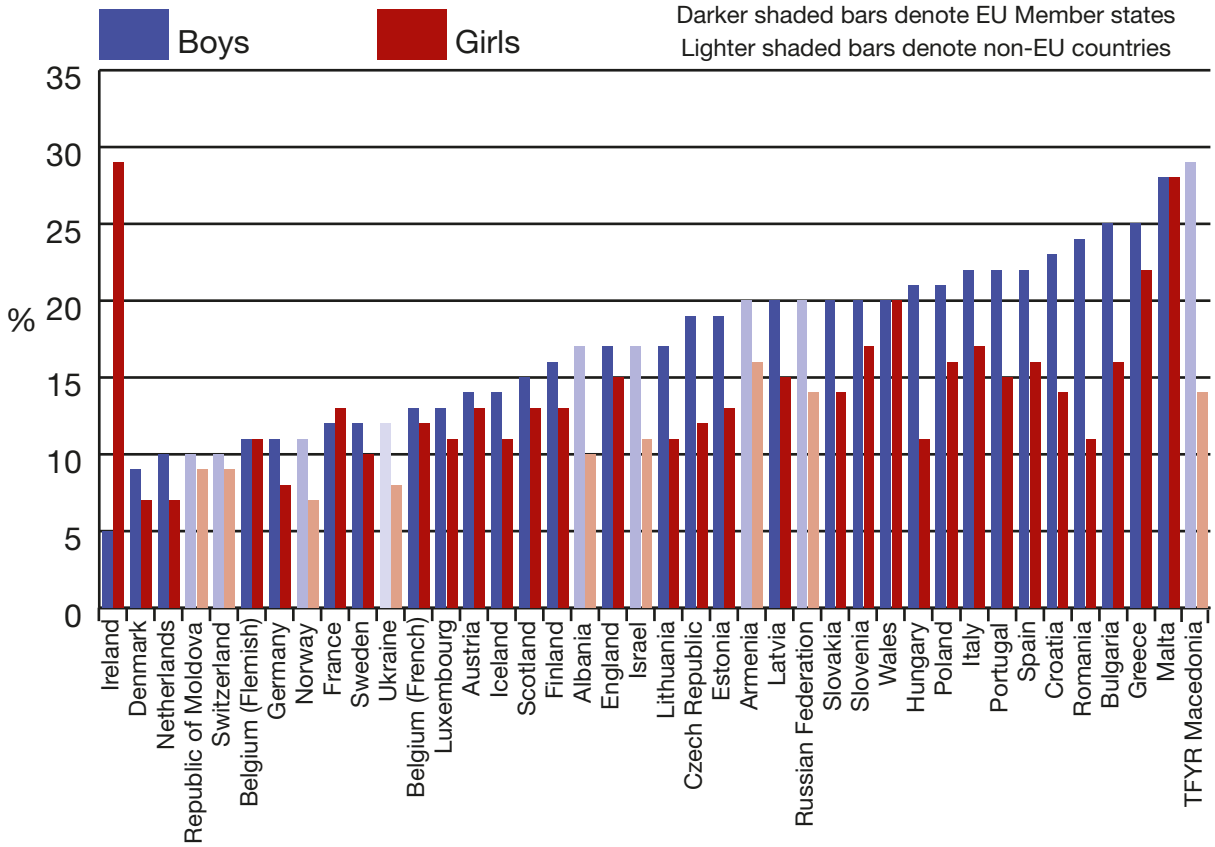


Figure 11.3b Prevalence of overweight or obesity among children, 13-year olds, by sex, 2013/14 , Europe

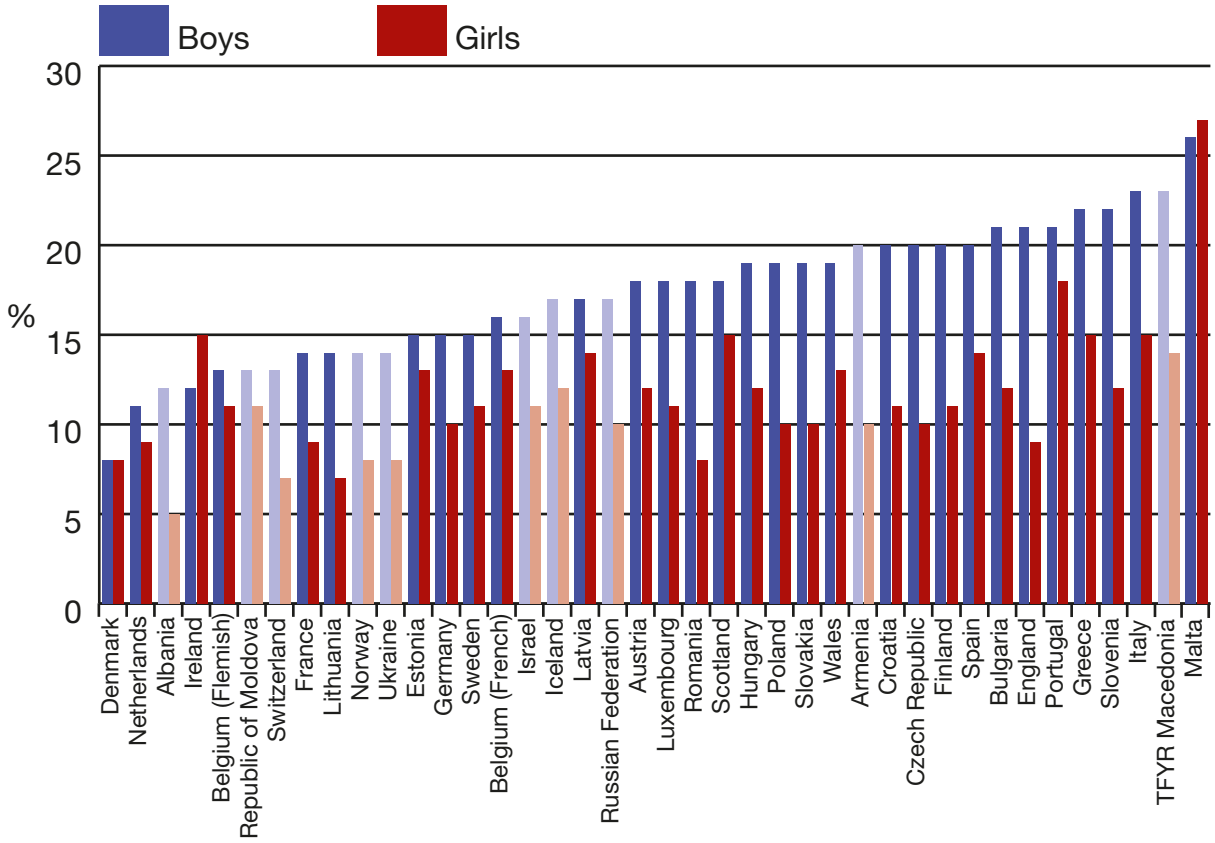
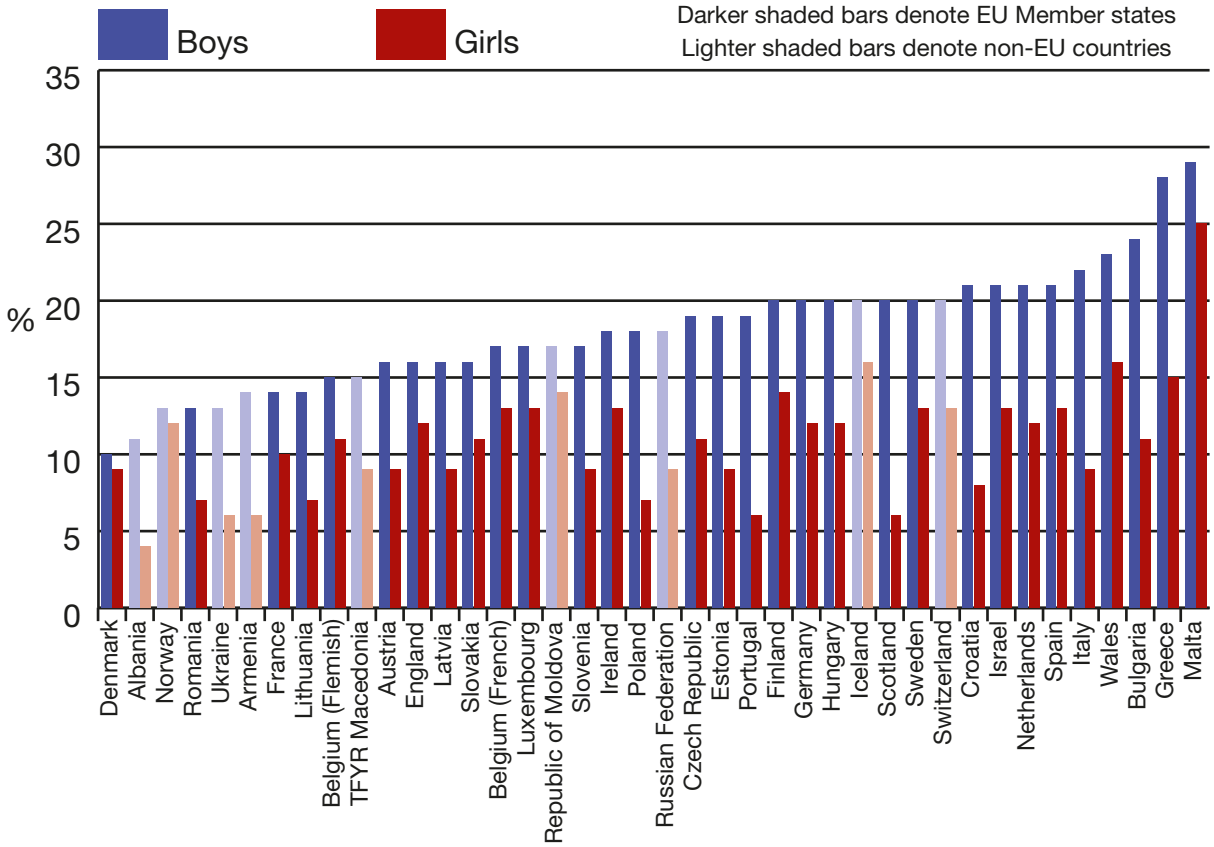


Figure 11.3c Prevalence of overweight or obesity among children, 15-year olds, by sex, 2013/14 , Europe



12. Diabetes

Diabetes mellitus is diagnosed by the presence of high fasting blood sugar and is a major risk factor of CVD. High blood sugar causes damage to blood vessels, thus increasing the risk of CVD directly, as well as exacerbating the effects of other CVD risk factors such as raised blood pressure, raised cholesterol levels, smoking and obesity. The Global Burden of Disease 2015 estimates that 15% of CVD deaths in Europe are due to high blood sugar[1]. There are two forms of diabetes: Type I and Type 2. The latter is most common and can often be prevented through body weight management, diet, and physical exercise.

Prevalence of diabetes

The WHO's European Health for All Database collates data on the prevalence of diabetes from national diabetes registers where available, or from routine reporting systems. Overall, in the latest available year, the prevalence of diabetes in the EU on average (5.1%) was higher than that in Europe as a whole (3.8%). Of the countries with available data, Portugal had the highest overall prevalence of diabetes within the EU (9.5%), while Greece had the lowest prevalence (0.1%). Outside of the EU, the highest prevalence of diabetes was found in Israel (5.9%), while the lowest was in Albania (0.1%). Tajikistan, Turkmenistan, Uzbekistan and Kyrgyzstan also had a diabetes prevalence of less than 1% (Table 12.1, Figure 12.1a).

Over the past 30 years, the prevalence of diabetes has increased across Europe. Between 2005 and 2013 (the data range available for Europe) the prevalence in Europe as a whole increased by 28%; between 2006 and 2012 (the data range available for the EU), the prevalence of diabetes in the EU increased by 20%. The prevalence of diabetes increased in all countries with available data between the year 2000 and the latest available year, except for Greece, Tajikistan and Turkmenistan whose very low prevalence stayed roughly constant (Table 12.1, Figure 12.1b).

There is strong evidence that registers of the number of diabetes sufferers may underestimate the number of actual sufferers, and that the extent to which such under-diagnosis occurs may vary between countries. Using the WHO's estimates of the prevalence of raised fasting glucose (defined as levels above 7.0mmol/l) (Table 12.2) reveals substantially larger proportions of the population at risk compared to evidence from registers (Table 12.1). Among both males and females, the age-standardised prevalence of raised blood glucose was greater than 10% in 8 out of 50 countries.

In both men and women, raised blood glucose was notably more common in Central and Eastern European countries, particularly those of the former Soviet Union, compared to Western European countries. This was the case for both EU and non-EU member states. Within the EU, the estimated prevalence of raised blood glucose in women ranged from 3.2% in Austria to 7.0% or above in Lithuania (7.1%), Poland (7.0%) and Slovenia (7.0%). Outside of the EU, the prevalence of raised blood glucose in women varied from 2.8% in Switzerland to 12.4% in Turkmenistan and 14.2% in Turkey. Among men, the prevalence of raised blood glucose in the EU was highest in Malta (9.0%) and lowest in the Netherlands (5.2%). Amongst non-EU countries, the prevalence of raised blood glucose in men was highest in Georgia (13.3%) and lowest in Switzerland (5.3%) (Table 12.2, Figure 12.2). Raised blood glucose was more common in men than women in most countries with available data; with the seven countries in which this wasn't the case predominantly found in Eastern Europe: Armenia, Azerbaijan, Kyrgyzstan, Republic of Moldova, Russian Federation, Turkey, and Uzbekistan (Table 12.2, Figure 12.2).

Incidence of diabetes

In addition to the number of patients living with diabetes, the WHO Health for All Database provides information on the number of newly diagnosed diabetes patients in 30 European countries. In the latest available year, within the EU, the incidence of diabetes ranged from 224.5 per 100,000 population in Malta[2] to 690.7 per 100,000 population in the Czech Republic. Outside of the EU, the incidence of diabetes varied form 59.4 per 100,000 in Turkmenistan to 762.0 per 100,000 in Turkey (Table 12.3). As with the prevalence of diagnosed diabetes, estimates of incidence have seen large increases since the mid-1980s in all countries for which data were available (Table 12.3).

1 Global Burden of Disease (2015) https://vizhub.healthdata.org/gbd-compare/ (Accessed December 2016).

2 It should be noted that the most recent data point for Malta is for the year 2007, which is older than that for all other countries. Focusing on countries with data available from 2012 onwards, the lowest incidence of diabetes in the EU was in the UK (247.7/100,000 in 2014).

Table 12.1 Prevalence of diabetes, 1980 to 2015, Europe

	%																			
	1980-84	1985-89	1990-94	1995-99	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania												0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Armenia	0.6	0.8	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.1	1.2	1.3	1.4	1.5	1.5	1.6	1.9	2.1	2.2	
Austria*											4.7									4.2
Azerbaijan			0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.8	0.9	1.1	1.2	1.5	1.6	1.9	2.2		
Belarus			1.2	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	1.9	2.1	2.3	2.4	2.5	2.7	3.0	
Belgium*				2.9		2.8			3.4		4.8	5.0	5.2	5.4	5.6	5.7	5.9	6.0		
Bosnia and Herzegovina	0.5	0.6	0.7	1.3	1.2	1.1	1.1	1.2	1.3	1.7	1.6	1.5	1.8	2.2	2.1	2.7	2.6	2.9	2.9	
Bulgaria*	1.0	1.2	1.2	1.6	1.7															
Croatia*																5.2	5.5	5.7	6.0	
Czech Republic*	3.4	4.1	4.8	5.8	6.4	6.4	6.5	6.7	7.0	7.2	7.3	7.3	7.4	7.5	7.7	7.9	8.0	8.2		
Denmark*			2.4	2.4	2.8	3.0	3.2	3.5	3.8	4.0	4.2	4.4	4.7	4.9	5.2	5.5	5.7			
Estonia*											2.9									
Finland*	1.8	1.9	2.1	2.3	2.6	2.7	2.8	2.9	3.1	3.3	3.4	3.5	3.7	4.0	4.3	4.7	5.0	5.3	5.5	5.7
France*			0.6	2.8	3.0						3.9	4.1	4.3	4.5	4.3	4.4	4.5	4.6		
Georgia			1.0	1.1	1.0	1.1	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7	1.8	1.7	2.2	
Germany*																	5.6			
Greece*	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	1.1	0.2	0.2	0.1	0.1			
Hungary*		4.4																		
Iceland	0.1	0.1		0.2		0.2														
Israel			2.6	3.0	3.2			3.3		3.5	3.9	4.1	4.2	4.5	5.3	5.5	5.8	5.8	5.9	
Italy*				3.7						4.2	4.5	4.6	4.8	4.8	4.9	5.0	5.5	5.4	5.5	
Kazakhstan			0.7	0.6	0.7	0.6	0.8	0.9	0.8	0.9	0.9	1.0	1.2	1.1	1.2	1.4	1.4	1.4	1.5	1.6
Kyrgyzstan	0.2	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.6		0.6	0.7	0.7	0.7	0.8	0.8
Latvia*		1.1	1.1	1.1	1.5	1.6	1.5	1.8	1.8	2.1	2.5	2.7	3.0	3.1	3.5	3.7	3.9	4.1	4.3	
Lithuania*	0.8	0.9	1.0	1.2	1.5	1.5	1.7	2.0	2.1	2.2	1.8	1.9	2.1	2.3	2.5	2.8	3.1	3.2	3.4	
Malta*			6.5	6.6	6.8	7.1	7.6				6.5									
Netherlands*		2.0	1.9	2.0				3.8							4.5	4.6				
Norway		2.9		2.0			2.9	3.1	3.6	3.4	3.9	4.0	4.2	4.5	4.5	4.6				
Portugal*		6.1		4.8							6.5		8.6	9.3	9.4	9.5	9.5			
Republic of Moldova	0.6	0.9	1.0	0.9	1.1	0.9	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.5	1.7	1.9	2.0	2.3	2.4	
Romania*		0.6	0.7	1.1	1.4	1.6	1.8	1.9	2.1	2.2	2.0	2.7	3.0	2.7	2.9	3.1	3.2	3.2	3.3	
Russian Federation		1.0	1.3	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.4	2.5	2.6	2.8		
San Marino																6.1	5.9	5.8	5.6	5.7
Slovakia*	2.8	3.3	3.8	4.2	4.7	4.9	5.1	5.2	5.3	5.3	5.5	5.7	5.6	6.2	6.3	6.2	6.3	6.3	6.3	
Slovenia*	2.5	2.8	3.4							3.5	3.7	3.9	4.1	4.3	4.5	4.7	4.8	4.9	5.1	5.2
Spain*								5.0			5.1					5.8			5.7	
Sweden*		3.0		2.9																
Tajikistan			0.3	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.3
TFYR Macedonia			1.1	0.8	1.0	1.0	1.1	1.1	1.3	1.3	1.4			1.7	1.9	2.1	2.4	2.5	2.9	
Turkey				1.9																
Turkmenistan			0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
Ukraine	1.0	1.3	1.7	1.8	1.9	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	3.1		
United Kingdom*										3.5	3.7	3.9	4.1	4.3	4.5	4.7	4.8	5.0	5.2	
Uzbekistan			0.4	0.4	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6
EU											4.2	4.4	4.6	4.7	4.8	4.9	5.1			
Europe										3.0	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.8		

Source: WHO Europe. Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/.

Notes: Cumulative number of patients with diabetes (ICD-9: 250; ICD-10: E10-E14) at the end of the calendar year. Data from the national diabetes register, whenever available, or from the routine reporting system. Where years are given as 5-year ranges, values are the averages of available data for the 5 years. Blank cells indicate data were not available.

*Asterisk denotes EU member states.

Figure 12.1a Prevalence of diabetes, latest available year, Europe

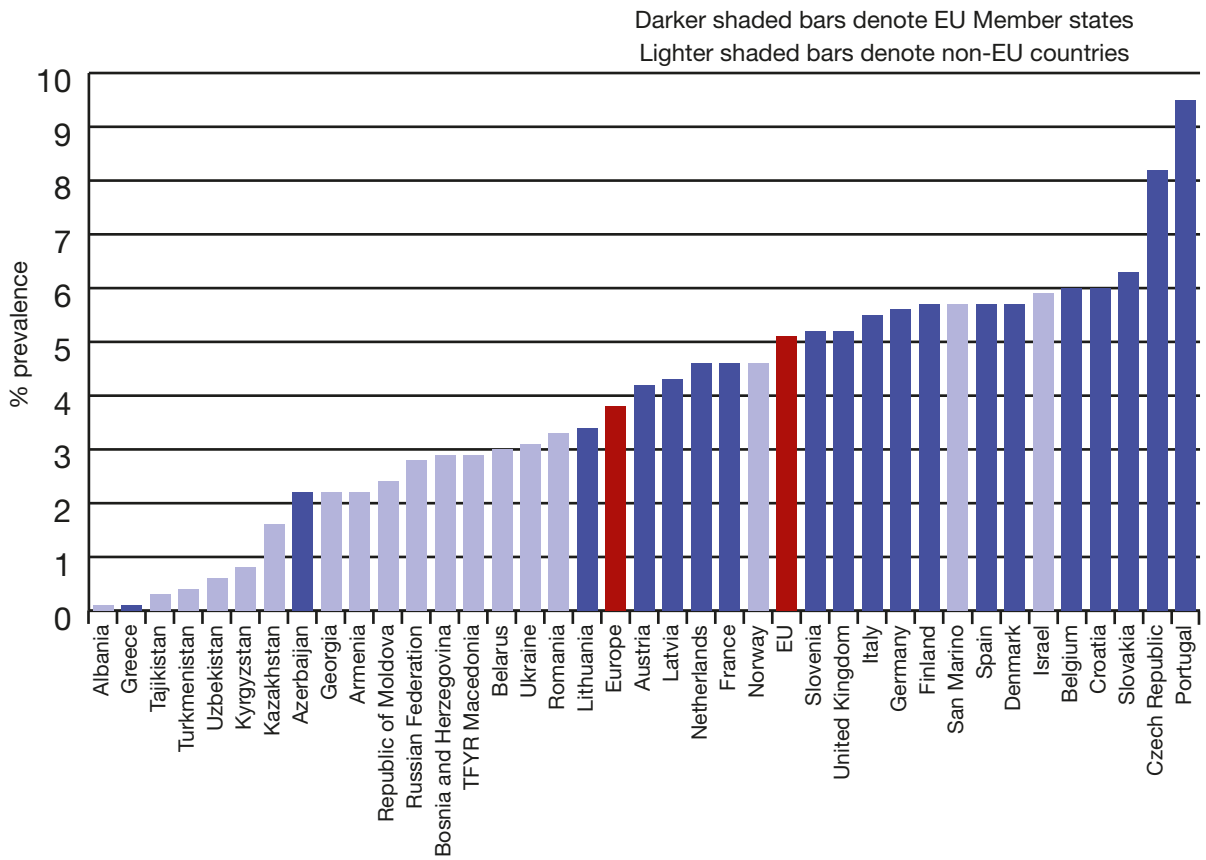


Figure 12.1b Prevalence of diabetes, 1980 to 2015, selected European countries

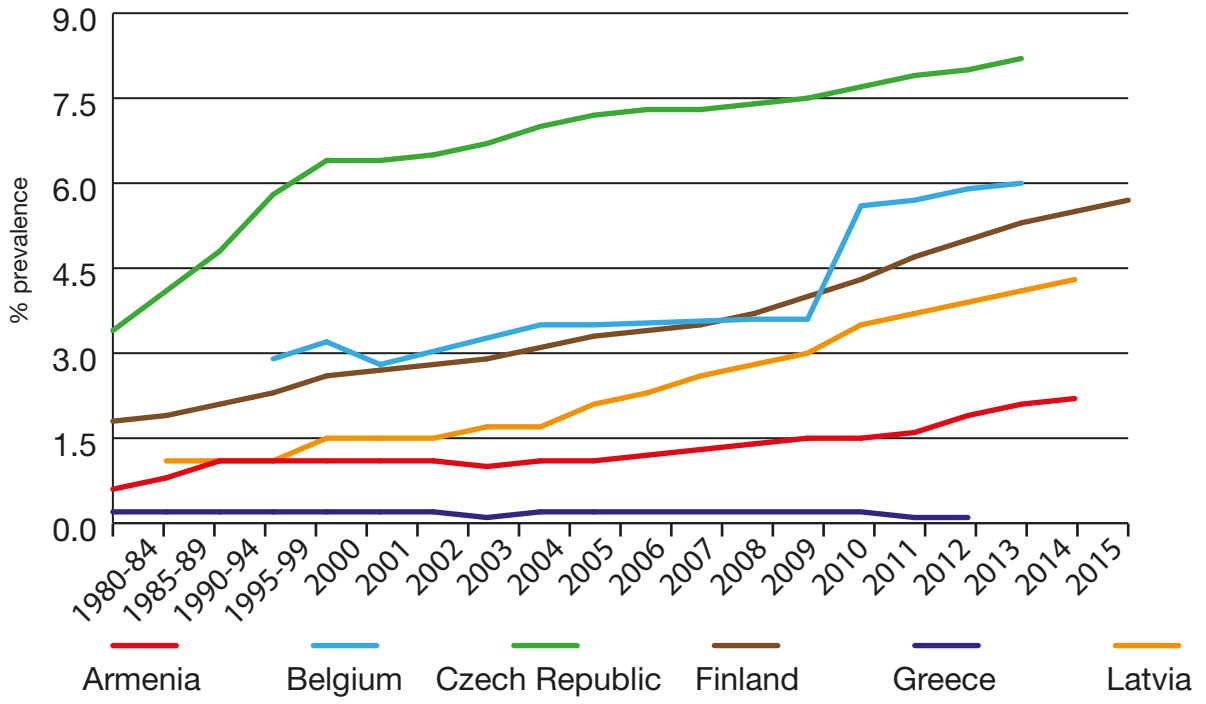


Table 12.2 Age-standardised prevalence of raised blood glucose, aged 18+ years, by sex, 2014, Europe

	% population	
	Males	Females
Albania	7.7	7.1
Andorra	8.1	5.8
Armenia	11.0	12.0
Austria*	5.4	3.2
Azerbaijan	11.6	13.0
Belarus	8.0	7.5
Belgium*	5.7	3.5
Bosnia and Herzegovina	8.0	6.9
Bulgaria*	8.4	6.9
Croatia*	8.4	6.3
Cyprus*	8.3	5.7
Czech Republic*	8.4	6.6
Denmark*	5.4	3.3
Estonia*	7.7	6.5
Finland*	6.4	4.3
France*	7.5	4.4
Georgia	13.3	12.1
Germany*	6.0	3.9
Greece*	7.2	6.0
Hungary*	8.9	6.7
Iceland	7.6	4.2
Ireland*	7.3	5.1
Israel	7.1	5.8
Italy*	7.1	4.6
Kazakhstan	12.4	11.4
Kyrgyzstan	9.9	10.8
Latvia*	7.8	6.6
Lithuania*	8.9	7.1
Luxembourg*	7.0	3.9
Malta*	9.0	6.4
Montenegro	7.6	6.6
Netherlands*	5.2	3.5
Norway	6.2	3.9
Poland*	8.4	7.0
Portugal*	8.4	5.3
Republic of Moldova	7.8	8.4
Romania*	7.3	6.4
Russian Federation	7.4	8.0
Serbia	7.3	6.5
Slovakia*	8.2	6.3
Slovenia*	7.3	7.0
Spain*	8.5	5.7
Sweden*	5.8	4.0
Switzerland	5.3	2.8
Tajikistan	10.3	9.9
TFYR Macedonia	7.6	6.8
Turkey	13.0	14.2
Turkmenistan	12.4	12.4
Ukraine	7.4	7.2
United Kingdom*	6.6	4.9
Uzbekistan	10.5	10.7

Source: WHO Global Health Observatory http://www.who.int/gho/database/en/.
Notes: Includes those with fasting glucose of ≥126 mg/dl (7.0 mmol/l) or on medication for raised blood glucose. Data are age-standardised to the WHO standard population.
*Asterisk denotes EU member states.

Figure 12.2a Age-standardised prevalence of raised blood glucose, males, 2014

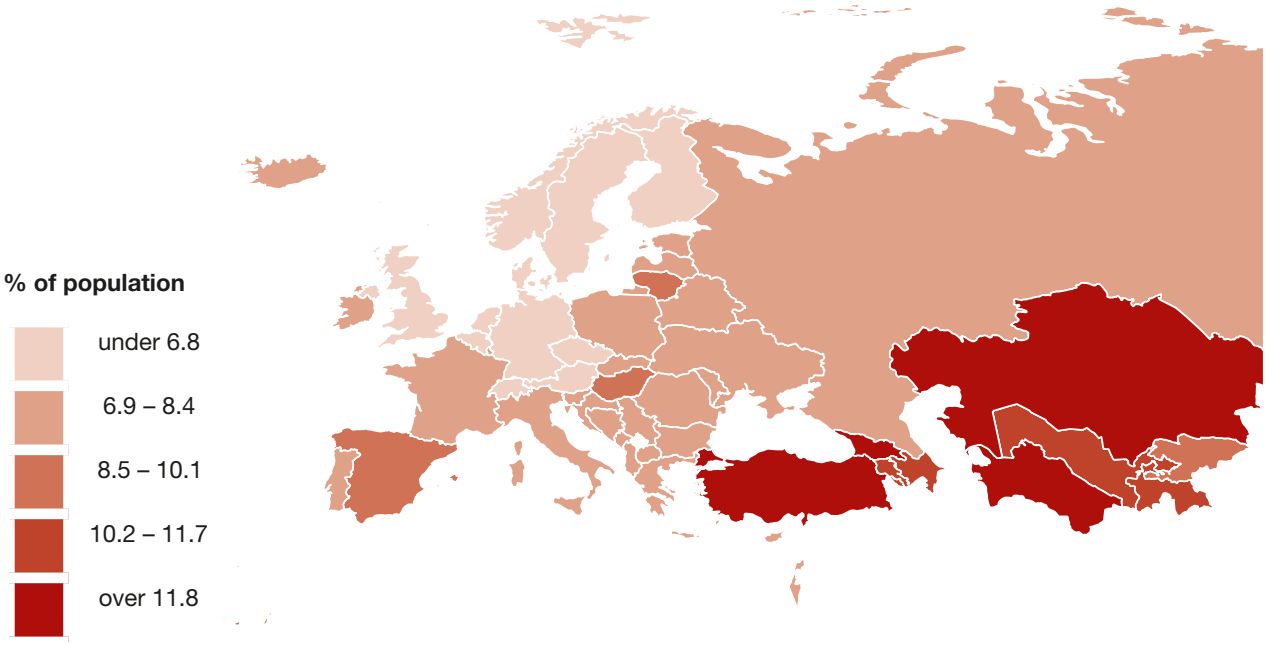


Figure 12.2b Age-standardised prevalence of raised blood glucose, females, 2014

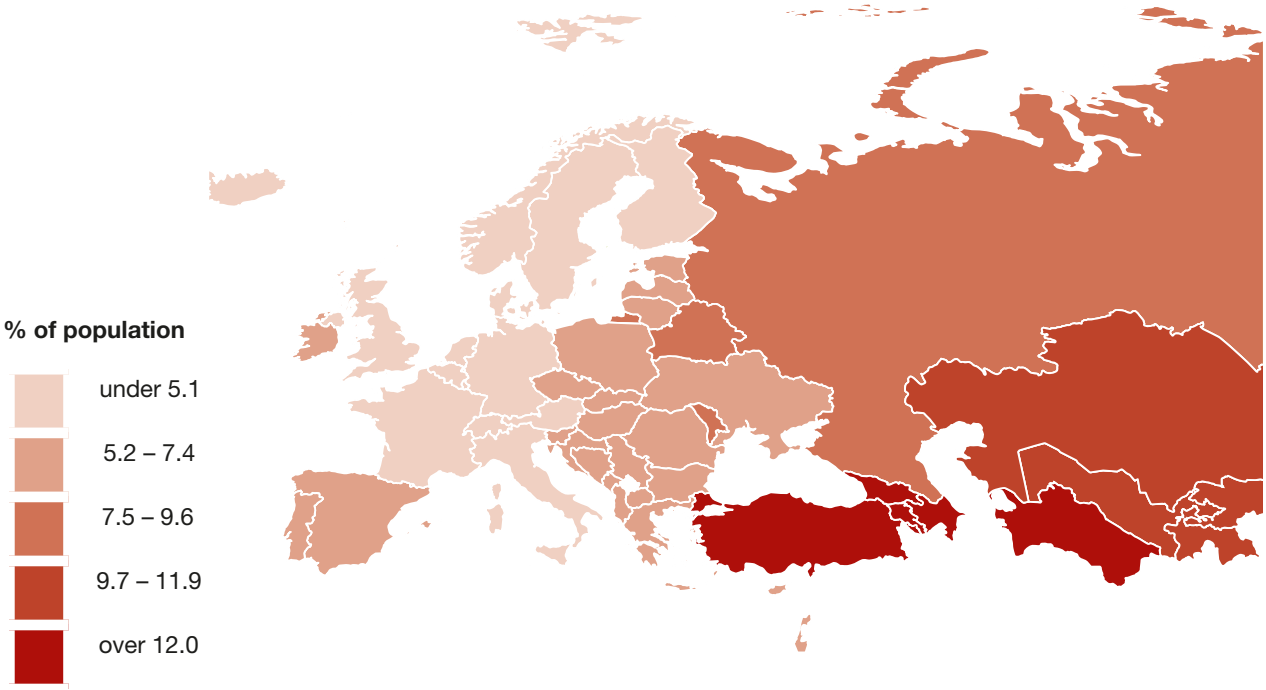


Table 12.3 Incidence of diabetes, 1986-2015

	New cases of diabetes mellitus per 100 000 population																	
	1986-1990	1991-1995	1996-2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Armenia			94.5	87.6	93.5	87.4	112.7	171.6	183.0	164.9	178.8	195.2	218.0	219.9	237.5	277.2	267.2	
Azerbaijan		48.2	63.5	69.1	75.5	88.5	106.1	117.1	173.0	163.1	265.6	256.8	271.9	287.2	325.9	369.9		
Belarus			118.2	131.5	151.4	162.5	168.0	201.5	215.1	199.7	225.7	233.5	246.6	239.5	249.7	266.5	271.5	
Czech Republic*		424.3	501.9	512.3	506.3	555.6	532.0	552.5	548.5	546.4	536.7	584.8	618.0	652.5	685.7	690.7		
Denmark*			322.6	366.9	406.3	441.2	442.9	408.9	422.5	448.1	485.0	482.2	499.7	580.7	466.4			
Estonia*			225.7	283.2	389.5	341.4	294.4	404.8	462.7	513.0	458.7	477.1	476.1	484.8	460.2	475.0	492.4	
Finland*	182.1	187.0	203.9	241.8	251.9	252.6	274.3	311.8	257.9	278.8	391.4	419.7	450.7	619.6	484.7	478.5	451.9	435.6
Georgia	103.4	60.1	121.5	145.3	135.1	138.2	167.5	217.6	185.3	170.0	215.0	252.3	246.7	281.2	371.8	333.2	479.0	
Germany*		246.6	245.3	251.2	245.7	270.2	267.2	278.6	278.8	282.4	284.3	276.2	278.9	278.1	277.0	281.0	278.1	
Kazakhstan	71.2	43.4	62.7	93.5	107.5	111.3	106.3	116.2	133.5	129.2	135.0	148.3	146.7	158.4	170.8	170.4	164.4	172.7
Kyrgyzstan	49.9	29.5	40.5	45.0	49.5	51.3	61.4	60.6	70.3	69.0	56.4	61.8	78.1	88.2	95.7	95.8	92.3	93.2
Latvia*			123.9	149.2	203.2	168.3	192.4	330.2	413.1	351.9	378.3	331.4	414.6	327.7	335.6	326.9	357.8	
Lithuania*	74.6	62.5	147.9	230.1	263.3	295.7	311.6	285.8	259.1	256.1	299.8	292.6	283.5	291.3	319.4	401.8	478.5	
Malta*			126.0	133.8	156.6	293.0	385.3		207.2	224.5								
Netherlands*						446.8								315.7				
Portugal*									461.3	511.6	582.2	571.4	623.5	650.9	499.6	555.5	520.8	
Republic of Moldova			83.0	88.8	106.2	149.6	167.2	177.6	190.5	193.4	177.3	198.3	216.9	257.1	251.6	283.0	257.3	
Romania*			172.3	221.7	244.9	231.1	254.2	247.2	265.2	392.8	407.6	335.3	370.2	337.5	303.9	332.4	359.0	
Russian Federation	108.4	89.9	107.8	127.2	146.2	149.5	167.1	174.4	202.8	212.8	212.5	217.5	226.8	223.1	239.8	237.7		
San Marino														215.4	404.6	435.1	326.0	350.3
Serbia									246.3	229.1	221.3	227.5	230.9	229.8	232.1	235.3	209.5	
Slovakia*	314.6	286.8	380.9	411.2	424.0	382.4	388.4	404.1	452.4	532.3	483.6	471.0	429.6	428.7	465.3	416.7	435.8	
Slovenia*													551.6	566.8	521.4	515.1	566.3	561.2
Tajikistan		44.0	35.1	37.6	54.2	61.9	46.6	50.9	56.7	52.7	49.7	65.6	57.9	57.5	60.5	61.2	63.6	
Macedonia			58.5	47.5	47.4	51.3	51.5	39.7	74.6			68.1	74.4	96.0	106.8	122.2	124.2	
Turkey															1075.8	762.0		
Turkmenistan			10.2	36.5	31.3	33.2	34.6	29.3	27.2	29.8	31.5	35.4	36.6	42.5	47.1	43.2	51.5	59.4
Ukraine			130.4	146.6	158.0	171.4	195.6	215.4	228.8	240.2	249.0	246.7	250.3	255.3	267.2	272.8		
United Kingdom*												350.6	368.4	380.9	311.0	256.7	247.7	
Uzbekistan			52.9	32.7	34.0	40.6	54.6	40.9	47.6	44.9	45.9	44.8	50.2	46.6	51.1	62.2	58.8	73.0

Source: WHO Europe. Health for All Database (HFA-DB) http://data.euro.who.int/hfadb/.

Notes: Number of patients with newly diagnosed diabetes (ICD-9: 250; ICD-10: E10-E14) during the given calendar year. Where years are given as 5-year ranges, values are the averages of available data for the 5 years. Data are crude rates. Blank cells indicate data were not available.

*Asterisk denotes EU member states.

13. Economic costs

Total costs

CVD has major economic costs as well as human costs for Europe.[1] Overall CVD is estimated to cost the EU economy €210 billion a year. Of the total cost of CVD in the EU, 53% (€111 billion) is due to direct health care costs, 26% (€54billion) to productivity losses and 21% (€45 billion) to the informal care of people with CVD (Table 13.1).

IHD is estimated to cost the EU economy €59 billion a year: 28% of the overall cost of CVD. Of the total cost of IHD in the EU, 32% (€19 billion) is due to direct health care costs, 33% (€20 billion) to productivity losses and 35% (€21 billion) to the informal care of people with IHD (Table 13.1).

Stroke is estimated to cost the EU economy €45 billion a year: around one-fifth of the overall cost of CVD. Of the total cost of stroke in the EU, 44% (€20 billion) is due to direct health care costs, 22% (€9 billion) to productivity losses and 35% (€16 billion) to the informal care of people with stroke (Table 13.1).

Health care costs

CVD cost the health care systems of the EU just under €111 billion in 2015.[2] This represents a cost per capita of €218 per annum, 8% of the total health care expenditure across the EU. The cost of inpatient hospital care for people who have CVD accounted for over 50% (€57 billion) of these costs, and that of drugs for 25% (€28 billion -Table 13.2 and Figure 13.1).

The amount spent on health care for people with CVD varies widely across the EU. Cost per capita varied seven-fold in 2015, from €48 in Bulgaria to €365 in Finland. Percentage of total health care expenditure spent on CVD varied from 3% in Sweden to 19% in Hungary (Table 13.2).

Almost one-fifth (17%) of health care expenditure on CVD in the EU is due to IHD (Tables 13.2 and 13.3). IHD cost the health care systems of the EU just under €19 billion in 2015. Inpatient hospital care for people who have IHD accounted for 55% (€10 billion) of these costs and drugs accounted for 20% (€4 billion -Table 13.3).

Almost one-fifth (18%) of health care expenditure on CVD in the EU is due to stroke (Tables 13.2 and 13.4). Stroke cost the health care systems of the EU €20 billion in 2015. Inpatient hospital care for people who have strokes accounted for about 72% (€14 billion) of these costs and drugs accounted for about 7% (€1 billion -Table 13.4).

Non health-care costs

Considering only the cost of CVD to the health care systems of the EU grossly underestimates the true cost of CVD. Production losses from death and illness in those of working age and from the informal care of people with the disease contribute greatly to the overall financial burden. Informal care costs are equivalent to the opportunity cost of unpaid care. This opportunity cost is a measure of the amount of money that carers forgo to provide unpaid care for their spouses, friends or relatives suffering from CVD, IHD or stroke.

In 2015, production losses due to mortality and morbidity associated with CVD cost the EU €54 billion, with 58% of this cost due to death (€32 billion) and 42% due to illness (€23 billion) in those of working age (Table 13.5).

Just under half (44% - €14 billion) of the production losses due to mortality from CVD and 27% (€6 billion) of the cost of production losses due to morbidity were due to IHD. In 2015, production losses due to mortality and morbidity associated with IHD cost the EU €20 billion (Table 13.5).

Stroke accounted for 17% (€5 billion) of the production losses due to mortality from CVD and 18% (€4 billion) of the cost of production losses due to morbidity. In 2015, production losses due to mortality and morbidity associated with stroke cost the EU €9 billion (Table 13.5).

The cost of informal care for people with CVD in the EU is another important non-health care cost. In 2015, the total cost of providing this care was €45 billion. Just under half of these costs were due to IHD (€21 billion) and over one-third were due to stroke (€16 billion) (Table 13.5).

1. The figures for this section are from a new cost of illness study by researchers at the Health Economics Research Centre, Department of Public Health, University of Oxford. The analysis was carried out for the year 2015, and costs calculated for individual Member States and the EU as a whole.
2. Due to lack of data across the EU, this figure does not include the money spent on non-clinical activities concerned with the primary prevention of CVD, for example, public anti-smoking campaigns, nutrition education etc. However, the cost of drugs prescribed in primary care for both primary and secondary prevention are included.

Table 13.1 Total cost of CVD, IHD and cerebrovascular diseases, 2015, EU

	CVD		IHD		Cerebrovascular disease	
	€ thousands	% of total	€ thousands	% of total	€ thousands	% of total
Direct healthcare costs	€ 110,809,465	53%	€ 18,875,775	32%	€ 20,058,318	44%
Productivity loss due to mortality	€ 31,631,317	15%	€ 13,783,879	23%	€ 5,440,593	12%
Productivity loss due to morbidity	€ 22,635,461	11%	€ 6,031,162	10%	€ 3,983,874	9%
Informal care costs	€ 45,088,142	21%	€ 20,636,600	35%	€ 15,855,181	35%
Total	**€ 210,164,386**		**€ 59,327,415**		**€ 45,337,965**	

Table 13.2 Costs of CVD (€ thousands) by country, 2015, EU

Country	Primary care	Outpatient care	A&E	Inpatient care	Medications	Total health care costs	Cost per capita	Percentage of total health care expenditure
Austria	€ 55,428	€ 55,572	€ 104,422	€ 1,670,262	€ 636,553	€ 2,522,237	€ 294	7%
Belgium	€ 97,029	€ 65,405	€ 17,098	€ 1,540,114	€ 701,600	€ 2,421,246	€ 216	6%
Bulgaria	€ 28,068	€ 33,306	€ 7,916	€ 119,432	€ 154,844	€ 343,566	€ 48	9%
Croatia	€ 22,663	€ 12,134	€ 30,176	€ 74,232	€ 102,689	€ 241,894	€ 57	8%
Cyprus	€ 10,269	€ 31,071	€ 6,813	€ 6,816	€ 25,364	€ 80,332	€ 95	7%
Czech Rep.	€ 68,479	€ 166,731	€ 35,026	€ 820,687	€ 389,816	€ 1,480,739	€ 141	12%
Denmark	€ 43,237	€ 44,801	€ 19,266	€ 699,654	€ 154,638	€ 961,596	€ 170	3%
Estonia	€ 16,550	€ 33,234	€ 6,807	€ 89,717	€ 31,500	€ 177,808	€ 135	14%
Finland	€ 62,910	€ 178,402	€ 49,696	€ 1,517,504	€ 190,800	€ 1,999,312	€ 365	10%
France	€ 647,039	€ 1,020,418	€ 135,235	€ 9,569,704	€ 3,822,884	€ 15,195,280	€ 229	6%
Germany	€ 3,215,531	€ 4,730,257	€ 115,223	€ 14,965,129	€ 5,279,912	€ 28,306,051	€ 349	8%
Greece	€ 21,564	€ 44,542	€ 51,062	€ 944,736	€ 885,900	€ 1,947,804	€ 179	13%
Hungary	€ 81,093	€ 119,550	€ 15,488	€ 699,520	€ 596,149	€ 1,511,800	€ 153	19%
Ireland	€ 29,646	€ 31,687	€ 29,539	€ 431,201	€ 334,803	€ 856,876	€ 185	3%
Italy	€ 823,533	€ 2,695,056	€ 728,191	€ 7,067,848	€ 4,393,500	€ 15,708,130	€ 258	11%
Latvia	€ 18,417	€ 6,431	€ 3,128	€ 40,782	€ 61,638	€ 130,396	€ 66	10%
Lithuania	€ 30,367	€ 35,841	€ 2,403	€ 95,265	€ 62,574	€ 226,450	€ 78	10%
Luxembourg	€ 5,300	€ 17,972	€ 845	€ 96,835	€ 40,911	€ 161,863	€ 288	5%
Malta	€ 1,812	€ 1,986	€ 922	€ 29,500	€ 13,411	€ 47,632	€ 111	6%
Netherlands	€ 527,266	€ 1,019,625	€ 23,607	€ 3,108,402	€ 848,301	€ 5,527,201	€ 327	7%
Poland	€ 343,490	€ 1,048,924	€ 39,513	€ 1,474,666	€ 1,445,929	€ 4,352,521	€ 115	16%
Portugal	€ 127,633	€ 191,515	€ 63,684	€ 237,475	€ 554,100	€ 1,174,407	€ 113	7%
Romania	€ 41,602	€ 140,469	€ 8,096	€ 495,432	€ 588,167	€ 1,273,766	€ 64	15%
Slovakia	€ 80,004	€ 194,459	€ 10,211	€ 217,624	€ 154,800	€ 657,098	€ 121	12%
Slovenia	€ 33,456	€ 11,977	€ 7,186	€ 113,351	€ 81,200	€ 247,170	€ 120	8%
Spain	€ 1,318,339	€ 1,033,283	€ 431,310	€ 2,970,554	€ 3,489,974	€ 9,243,461	€ 199	9%
Sweden	€ 88,766	€ 196,604	€ 123,099	€ 998,875	€ 257,080	€ 1,664,424	€ 171	3%
UK	€ 1,638,492	€ 1,073,695	€ 398,661	€ 6,505,414	€ 2,732,144	€ 12,348,406	€ 190	5%
TOTAL EU	**€ 9,477,982**	**€ 14,234,946**	**€ 2,464,625**	**€ 56,600,730**	**€ 28,031,183**	**€ 110,809,465**	**€ 218**	**8%**

Figure 13.2 Percentage of total healthcare expenditure on CVD in the EU, 2015, by resource use category

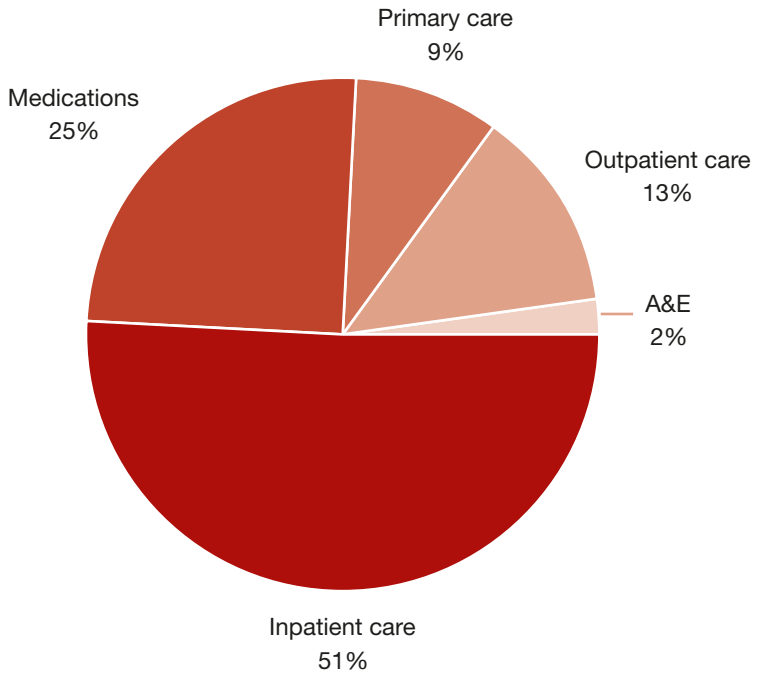


Table 13.3 Costs of IHD (€ thousands) by country, 2015, EU

Country	Primary care	Outpatient care	A&E	Inpatient care	Medications	Total health care costs	Cost per capita	Percentage of total health care
Austria	€ 13,492	€ 13,527	€ 25,417	€ 368,901	€ 88,310	€ 509,647	€ 59	1%
Belgium	€ 24,443	€ 16,476	€ 4,307	€ 256,859	€ 97,334	€ 399,420	€ 36	1%
Bulgaria	€ 6,460	€ 7,666	€ 1,822	€ 19,714	€ 21,482	€ 57,144	€ 8	1%
Croatia	€ 6,014	€ 3,220	€ 5,645	€ 16,984	€ 14,246	€ 46,109	€ 11	2%
Cyprus	€ 3,333	€ 10,085	€ 2,211	€ 2,214	€ 3,519	€ 21,363	€ 25	2%
Czech Rep.	€ 13,062	€ 31,803	€ 6,681	€ 106,188	€ 54,080	€ 211,814	€ 20	2%
Denmark	€ 10,253	€ 10,624	€ 4,200	€ 133,064	€ 21,453	€ 179,595	€ 32	1%
Estonia	€ 3,190	€ 6,406	€ 1,312	€ 15,529	€ 4,370	€ 30,806	€ 23	2%
Finland	€ 13,412	€ 38,033	€ 10,594	€ 214,932	€ 26,470	€ 303,441	€ 55	2%
France	€ 57,986	€ 91,447	€ 29,621	€ 1,440,405	€ 428,076	€ 2,047,534	€ 31	1%
Germany	€ 409,560	€ 602,490	€ 27,660	€ 3,039,515	€ 696,897	€ 4,776,122	€ 59	1%
Greece	€ 6,487	€ 13,399	€ 15,360	€ 210,655	€ 122,903	€ 368,804	€ 34	3%
Hungary	€ 17,052	€ 25,139	€ 3,257	€ 118,982	€ 82,705	€ 247,134	€ 25	3%
Ireland	€ 8,138	€ 8,698	€ 8,109	€ 86,437	€ 46,448	€ 157,830	€ 34	1%
Italy	€ 178,288	€ 583,456	€ 157,647	€ 1,197,432	€ 609,519	€ 2,726,342	€ 45	2%
Latvia	€ 6,041	€ 2,109	€ 631	€ 10,805	€ 8,551	€ 28,137	€ 14	2%
Lithuania	€ 8,345	€ 9,849	€ 661	€ 26,070	€ 8,681	€ 53,606	€ 18	2%
Luxembourg	€ 1,321	€ 4,479	€ 211	€ 15,382	€ 5,676	€ 27,069	€ 48	1%
Malta	€ 441	€ 483	€ 225	€ 6,187	€ 1,861	€ 9,196	€ 21	1%
Netherlands	€ 131,082	€ 253,486	€ 5,869	€ 802,183	€ 146,083	€ 1,338,702	€ 79	2%
Poland	€ 86,834	€ 265,166	€ 9,989	€ 273,358	€ 200,597	€ 835,943	€ 22	3%
Portugal	€ 29,391	€ 44,101	€ 14,665	€ 37,000	€ 76,871	€ 202,028	€ 19	1%
Romania	€ 5,801	€ 19,587	€ 1,129	€ 56,066	€ 81,598	€ 164,181	€ 8	2%
Slovakia	€ 19,880	€ 48,320	€ 2,537	€ 46,624	€ 21,476	€ 138,836	€ 26	3%
Slovenia	€ 6,985	€ 2,500	€ 1,500	€ 18,065	€ 11,265	€ 40,315	€ 20	1%
Spain	€ 253,466	€ 198,661	€ 82,924	€ 497,628	€ 484,171	€ 1,516,851	€ 33	2%
Sweden	€ 11,228	€ 24,869	€ 29,245	€ 170,562	€ 35,665	€ 271,570	€ 28	1%
UK	€ 149,694	€ 299,002	€ 102,413	€ 1,236,089	€ 379,036	€ 2,166,234	€ 33	1%
Total EU	**€ 1,481,677**	**€ 2,635,082**	**€ 555,843**	**€ 10,423,831**	**€ 3,779,341**	**€ 18,875,775**	**€ 37**	**1%**

Table 13.4 Costs of cerebrovascular diseases (€ thousands) by country, 2015, EU

Country	Primary care	Outpatient care	A&E	Inpatient care	Medications	Total health care costs	Cost per capita	Percentage of total health care expenditure
Austria	€ 8,423	€ 8,445	€ 15,868	€ 441,891	€ 32,951	€ 507,578	€ 59	1%
Belgium	€ 10,275	€ 6,926	€ 1,811	€ 338,371	€ 36,318	€ 393,701	€ 35	1%
Bulgaria	€ 5,090	€ 6,039	€ 1,435	€ 27,012	€ 8,016	€ 47,592	€ 7	1%
Croatia	€ 4,239	€ 2,270	€ 5,645	€ 19,426	€ 5,316	€ 36,895	€ 9	1%
Cyprus	€ 1,265	€ 3,829	€ 839	€ 1,185	€ 1,313	€ 8,431	€ 10	1%
Czech Rep.	€ 12,296	€ 29,938	€ 6,289	€ 297,050	€ 20,179	€ 365,752	€ 35	3%
Denmark	€ 5,332	€ 5,525	€ 3,131	€ 113,744	€ 8,005	€ 135,737	€ 24	0%
Estonia	€ 3,251	€ 6,529	€ 1,337	€ 29,781	€ 1,631	€ 42,529	€ 32	3%
Finland	€ 10,827	€ 30,702	€ 8,553	€ 661,163	€ 9,877	€ 721,122	€ 132	4%
France	€ 47,188	€ 74,419	€ 14,466	€ 1,680,234	€ 156,928	€ 1,973,235	€ 30	1%
Germany	€ 645,202	€ 949,135	€ 16,793	€ 3,757,819	€ 282,112	€ 5,651,062	€ 70	2%
Greece	€ 3,575	€ 7,385	€ 8,466	€ 290,886	€ 45,859	€ 356,170	€ 33	2%
Hungary	€ 20,129	€ 29,675	€ 3,844	€ 191,983	€ 30,860	€ 276,492	€ 28	4%
Ireland	€ 2,789	€ 2,981	€ 2,779	€ 117,960	€ 17,331	€ 143,840	€ 31	1%
Italy	€ 155,968	€ 510,415	€ 137,912	€ 2,164,166	€ 227,430	€ 3,195,890	€ 53	2%
Latvia	€ 3,717	€ 1,298	€ 631	€ 12,228	€ 3,191	€ 21,065	€ 11	2%
Lithuania	€ 5,595	€ 6,604	€ 443	€ 25,693	€ 3,239	€ 41,574	€ 14	2%
Luxembourg	€ 486	€ 1,646	€ 77	€ 19,717	€ 2,118	€ 24,044	€ 43	1%
Malta	€ 191	€ 210	€ 97	€ 7,563	€ 694	€ 8,756	€ 20	1%
Netherlands	€ 81,127	€ 156,883	€ 3,632	€ 550,464	€ 51,631	€ 843,737	€ 50	1%
Poland	€ 40,538	€ 123,793	€ 4,663	€ 317,490	€ 74,849	€ 561,333	€ 15	2%
Portugal	€ 21,801	€ 32,713	€ 10,878	€ 65,612	€ 28,683	€ 159,687	€ 15	1%
Romania	€ 6,790	€ 22,926	€ 1,321	€ 101,635	€ 30,446	€ 163,118	€ 8	2%
Slovakia	€ 13,389	€ 32,544	€ 1,709	€ 54,196	€ 8,013	€ 109,852	€ 20	2%
Slovenia	€ 3,798	€ 1,360	€ 816	€ 25,447	€ 4,203	€ 35,624	€ 17	1%
Spain	€ 189,955	€ 148,882	€ 62,146	€ 663,171	€ 180,659	€ 1,244,812	€ 27	1%
Sweden	€ 5,547	€ 12,285	€ 20,618	€ 284,558	€ 13,308	€ 336,316	€ 35	1%
UK	€ 51,448	€ 299,002	€ 68,554	€ 2,091,942	€ 141,429	€ 2,652,375	€ 41	1%
Total EU	**€ 1,360,231**	**€ 2,514,357**	**€ 404,754**	**€ 14,352,389**	**€ 1,426,587**	**€ 20,058,318**	**€ 39**	**1%**

Table 13.5 Non health-care costs (€ thousands) of CVD , IHD and cerebrovascular diseases, by country, 2015, EU

Country	CVD			IHD			Cerebrovascular diseases		
	Production losses due to mortality	Production losses due to morbidity	Informal care	Production losses due to mortality	Production losses due to morbidity	Informal care	Production losses due to mortality	Production losses due to morbidity	Informal care
Austria	€ 614,955	€ 592,585	€ 1,010,938	€ 319,598	€ 267,262	€ 399,699	€ 99,861	€ 179,458	€ 408,088
Belgium	€ 634,057	€ 743,251	€ 870,164	€ 236,061	€ 169,232	€ 414,157	€ 122,074	€ 157,266	€ 287,365
Bulgaria	€ 329,448	€ 67,523	€ 208,307	€ 77,759	€ 8,890	€ 99,235	€ 69,052	€ 12,829	€ 68,610
Croatia	€ 132,665	€ 161,597	€ 241,176	€ 68,650	€ 46,863	€ 115,059	€ 28,733	€ 20,200	€ 79,552
Cyprus	€ 41,827	€ 44,566	€ 45,475	€ 26,850	€ 17,816	€ 18,998	€ 5,328	€ 7,543	€ 11,148
Czech Rep.	€ 432,252	€ 345,029	€ 522,965	€ 208,729	€ 63,240	€ 211,197	€ 65,974	€ 29,907	€ 188,272
Denmark	€ 518,439	€ 436,460	€ 238,235	€ 199,015	€ 96,458	€ 108,513	€ 114,130	€ 82,070	€ 101,389
Estonia	€ 105,052	€ 90,279	€ 115,461	€ 39,320	€ 21,845	€ 56,048	€ 13,137	€ 24,288	€ 36,609
Finland	€ 501,593	€ 225,019	€ 198,216	€ 221,079	€ 29,047	€ 80,509	€ 90,689	€ 116,334	€ 86,075
France	€ 2,396,912	€ 1,566,029	€ 4,444,011	€ 813,816	€ 570,403	€ 2,450,857	€ 499,020	€ 287,826	€ 1,533,984
Germany	€ 8,556,221	€ 8,495,837	€ 12,149,160	€ 3,692,822	€ 1,990,291	€ 5,282,605	€ 1,207,034	€ 1,017,903	€ 4,959,773
Greece	€ 443,451	€ 363,366	€ 434,886	€ 272,257	€ 145,259	€ 222,139	€ 72,418	€ 61,501	€ 115,823
Hungary	€ 381,853	€ 120,954	€ 555,934	€ 183,491	€ 23,914	€ 316,795	€ 68,980	€ 33,726	€ 233,915
Ireland	€ 465,570	€ 224,493	€ 260,884	€ 255,579	€ 84,465	€ 110,631	€ 70,888	€ 29,222	€ 99,305
Italy	€ 2,850,082	€ 1,629,205	€ 8,027,415	€ 1,129,765	€ 369,368	€ 3,358,476	€ 498,187	€ 488,796	€ 2,566,381
Latvia	€ 181,479	€ 44,927	€ 111,332	€ 77,984	€ 10,871	€ 53,120	€ 32,320	€ 12,087	€ 36,811
Lithuania	€ 187,665	€ 82,713	€ 140,233	€ 95,521	€ 23,878	€ 67,173	€ 32,594	€ 19,819	€ 46,622
Luxembourg	€ 24,734	€ 19,207	€ 52,342	€ 13,146	€ 3,745	€ 26,163	€ 2,207	€ 3,658	€ 14,726
Malta	€ 18,922	€ 17,070	€ 26,824	€ 12,425	€ 4,316	€ 11,464	€ 2,070	€ 4,693	€ 6,859
Netherlands	€ 1,254,310	€ 655,170	€ 1,516,864	€ 403,593	€ 202,437	€ 736,061	€ 245,812	€ 117,157	€ 542,106
Poland	€ 1,647,321	€ 902,156	€ 1,765,246	€ 453,083	€ 200,444	€ 973,989	€ 298,059	€ 188,838	€ 626,073
Portugal	€ 476,927	€ 298,190	€ 878,833	€ 197,572	€ 63,162	€ 380,702	€ 129,464	€ 71,775	€ 370,746
Romania	€ 752,634	€ 174,388	€ 632,848	€ 316,808	€ 22,960	€ 299,978	€ 185,026	€ 33,133	€ 205,207
Slovakia	€ 202,234	€ 150,287	€ 262,617	€ 96,804	€ 24,541	€ 118,640	€ 43,096	€ 11,005	€ 78,998
Slovenia	€ 66,571	€ 83,799	€ 143,992	€ 30,286	€ 19,817	€ 65,537	€ 14,978	€ 15,016	€ 35,259
Spain	€ 1,441,759	€ 1,990,041	€ 4,175,536	€ 622,626	€ 474,722	€ 1,906,062	€ 261,334	€ 474,482	€ 923,611
Sweden	€ 769,370	€ 562,954	€ 491,315	€ 354,894	€ 117,097	€ 186,783	€ 127,232	€ 151,625	€ 246,765
UK	€ 6,203,014	€ 2,548,365	€ 5,566,934	€ 3,364,345	€ 958,817	€ 2,566,012	€ 1,040,896	€ 331,719	€ 1,945,108
Total EU	**€ 31,631,317**	**€ 22,635,461**	**€ 45,088,142**	**€ 13,783,879**	**€ 6,031,162**	**€ 20,636,600**	**€ 5,440,593**	**€ 3,983,874**	**€ 15,855,181**

Appendix

Member states of the WHO European Region

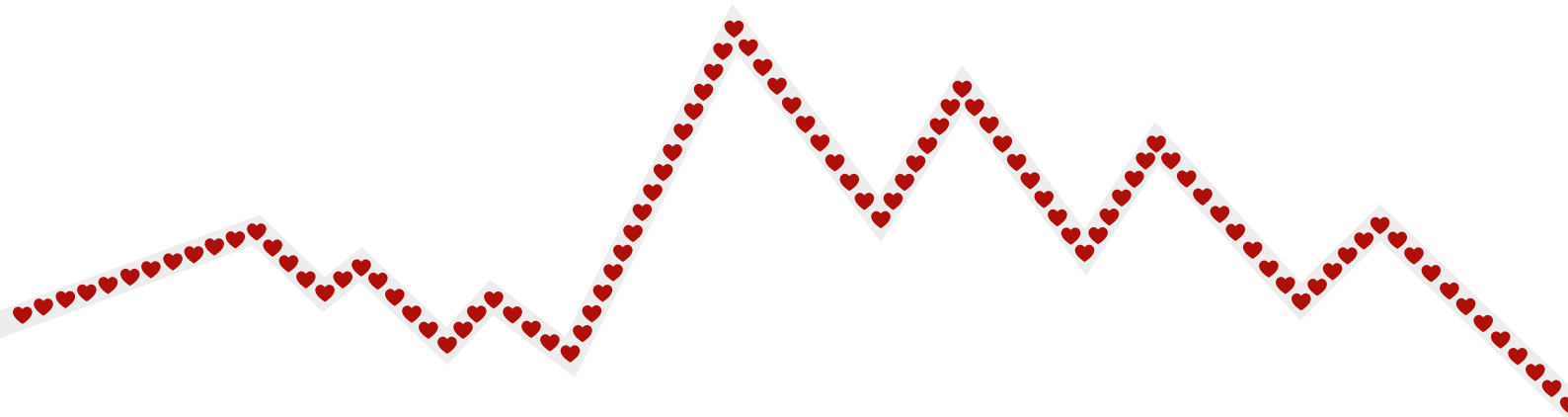
	2015 Mid-year male population	2015 Mid-year female population	EU membership (2016)	GBD regional classification*	UN regional classification**
Albania	1,437,000	1,459,859		Central Europe	Southern Europe
Andorra	35,237	35,237		Western Europe	Southern Europe
Armenia	1,399,511	1,618,201		Central Asia	Western Asia
Austria	4,196,000	4,348,265	✓	Western Europe	Western Europe
Azerbaijan	4,855,546	4,898,422		Central Asia	Western Asia
Belarus	4,414,000	5,082,297		Eastern Europe	Eastern Europe
Belgium	5,559,000	5,740,091	✓	Western Europe	Western Europe
Bosnia and Herzegovina	1,896,000	1,913,965		Central Europe	Southern Europe
Bulgaria	3,473,000	3,676,381	✓	Central Europe	Eastern Europe
Croatia	2,045,000	2,195,067	✓	Central Europe	Southern Europe
Cyprus	594,492	570,808	✓	Western Europe	Western Asia
Czech Republic	5,180,000	5,363,119	✓	Central Europe	Eastern Europe
Denmark	2,814,000	2,855,152	✓	Western Europe	Northern Europe
Estonia	614,000	698,240	✓	Eastern Europe	Northern Europe
Finland	2,709,000	2,794,418	✓	Western Europe	Northern Europe
France	31,342,000	33,053,692	✓	Western Europe	Western Europe
Georgia	1,908,000	2,092,000		Central Asia	Western Asia
Germany	39,653,000	41,035,821	✓	Western Europe	Western Europe
Greece	5,345,000	5,609,448	✓	Western Europe	Southern Europe
Hungary	4,691,000	5,164,158	✓	Central Europe	Eastern Europe
Iceland	165,000	164,405		Western Europe	Northern Europe
Ireland	2,340,000	2,348,368	✓	Western Europe	Northern Europe
Israel	3,998,623	4,065,413		Western Europe	Western Asia
Italy	29,070,000	30,727,975	✓	Western Europe	Southern Europe
Kazakhstan	8,512,059	9,113,167		Central Asia	Central Asia
Kyrgyzstan	2,940,177	2,999,785		Central Asia	Central Asia
Latvia	904,000	1,066,513	✓	Eastern Europe	Northern Europe
Lithuania	1,325,000	1,553,165	✓	Eastern Europe	Northern Europe
Luxembourg	285,000	282,495	✓	Western Europe	Western Europe
Malta	208,000	210,174	✓	Western Europe	Southern Europe
Monaco	18,866	18,866		-	Western Europe
Montenegro	309,000	316,570		Central Europe	Southern Europe
Netherlands	8,401,000	8,524,303	✓	Western Europe	Western Europe
Norway	2,625,000	2,586,163		Western Europe	Northern Europe
Poland	18,674,000	19,938,107	✓	Central Europe	Eastern Europe
Portugal	4,901,000	5,449,264	✓	Western Europe	Southern Europe
Republic of Moldova	1,956,000	2,113,038		Eastern Europe	Eastern Europe
Romania	9,451,000	10,060,347	✓	Central Europe	Eastern Europe
Russian Federation	66,644,000	76,812,871		Eastern Europe	Eastern Europe
San Marino	15,891	15,891		-	Southern Europe
Serbia	4,320,000	4,531,328		Central Europe	Southern Europe
Slovakia	2,630,000	2,796,123	✓	Central Europe	Eastern Europe
Slovenia	1,025,000	1,042,698	✓	Central Europe	Southern Europe
Spain	22,624,000	23,498,098	✓	Western Europe	Southern Europe
Sweden	4,887,000	4,892,609	✓	Western Europe	Northern Europe
Switzerland	4,109,000	4,189,298		Western Europe	Western Europe
Tajikistan	4,295,841	4,186,014		Central Asia	Central Asia
TFYR Macedonia	1,035,000	1,043,803		Central Europe	Southern Europe
Turkey	38,674,562	39,991,268		North Africa and Middle East	Western Asia
Turkmenistan	2,640,706	2,732,796		Central Asia	Central Asia
Ukraine	20,759,000	24,064,369		Eastern Europe	Eastern Europe
United Kingdom	31,899,000	32,817,216	✓	Western Europe	Northern Europe
Uzbekistan	14,699,448	15,194,040		Central Asia	Central Asia

Source: UN World Population Prospects 2015 Revision.

*The GBD Project does not include San Marino or Monaco and classifies Turkey as a member of the North Africa and Middle East region.

** The UN classifies Armenia, Azerbaijan, Cyprus, Georgia, Israel, Kazakhstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan and Uzbekistan as members of the Asia macro geographical region. For Andorra, Monaco and San Marino, only whole population figures were available. Data presented here assume equal male and female populations.


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ESTONIA*
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NETHERLANDS*
POLAND*
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