1.4. Mortality from heart disease and stroke

Cardiovascular diseases are the main cause of mortality in almost all OECD countries, accounting for 36% of all deaths in 2006. They cover a range of diseases related to the circulatory system, including ischemic heart disease (known as IHD, or heart attack) and cerebro-vascular disease (or stroke). Together, IHD and stroke comprise two-thirds of all cardiovascular deaths, and caused one-quarter of all deaths in OECD countries in 2006.

Ischemic heart disease is caused by the accumulation of fatty deposits lining the inner wall of a coronary artery, restricting blood flow to the heart. IHD alone was responsible for 16% of all deaths in OECD countries in 2006. Mortality from IHD varies considerably, however, across OECD countries (Figure 1.4.1). Central and eastern European countries report the highest IHD mortality rates, the Slovak Republic for both males and females, followed by Hungary and the Czech Republic. IHD mortality rates are also relatively high in Finland, Poland and the United States, with rates several times higher than in Japan and Korea. There are regional patterns to the variability in IHD mortality rates. Closely following the two OECD Asian countries, the countries with the lowest IHD mortality rates are four countries located in southern Europe: France, Spain, Portugal and Italy. This lends support to the commonly held hypothesis that there are underlying risk factors, such as diet, which explain differences in IHD mortality across countries.

Death rates are much higher for men than for women in all countries (Figure 1.4.1). On average across OECD countries, IHD mortality rates in 2006 were nearly two times greater for men than for women.

Since 1980, IHD mortality rates have declined in nearly all OECD countries. The decline has been most remarkable in Denmark, the Netherlands, Sweden, Norway and Australia, with IHD mortality rates being cut by two-thirds or more. A number of factors are responsible, with declining tobacco consumption contributing to reducing the incidence of IHD, and consequently reducing IHD mortality rates. Significant improvements in medical care for treating IHD have also contributed to reducing mortality rates (Moïse *et al.*, 2003) (see Indicators 4.6 "Cardiac procedures" and 5.4 "In-hospital mortality following acute myocardial infarction"). A small number of countries, however, have seen little or no decline since 1980. In Hungary and Poland, mortality rates have increased. The rate in Greece has declined only slightly, although it was already comparatively low in 1980.

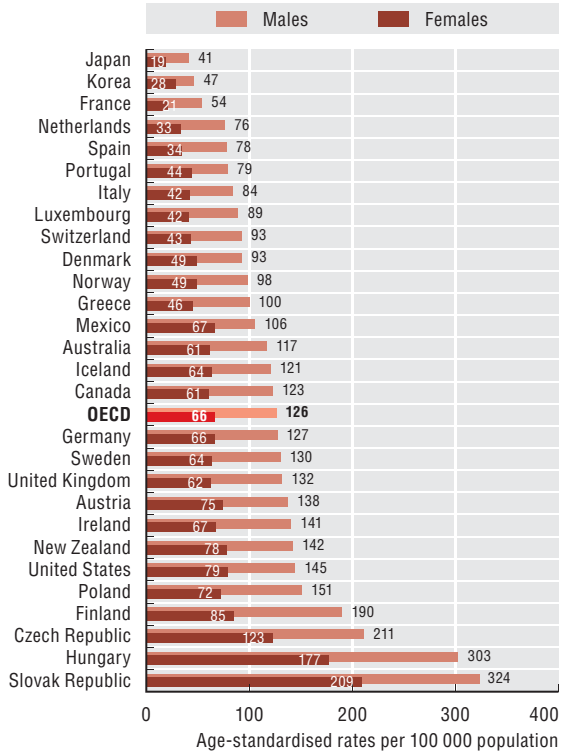
Stroke is another important cause of mortality in OECD countries, accounting for about 9% of all deaths in 2006. It is caused by the disruption of the blood supply to the brain, and in addition to being an important cause of mortality, the disability burden from stroke is substantial (Moon *et al.*, 2003). As with IHD, there are large variations in stroke mortality rates across countries (Figure 1.4.1). The rates are highest in Portugal, Hungary, the Czech Republic and Greece. They are the lowest in Switzerland, France, Canada and the United States.

Looking at trends over time, stroke mortality has decreased in all OECD countries (except Poland) since 1980. Rates have declined by almost three-quarters in Austria, Japan, Luxembourg, Ireland and France. As with IHD, the reduction in stroke mortality can be attributed at least partly to a reduction in risk factors. Tobacco smoking and hypertension are the main modifiable risk factors for stroke. Improvements in medical treatment for stroke have also increased survival rates (see Indicator 5.5 "In-hospital mortality following stroke").

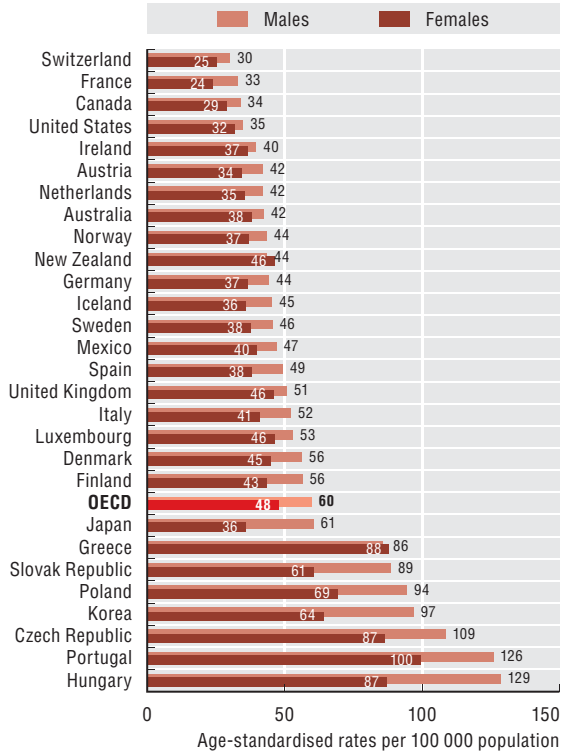
Definition and deviations

Mortality rates are based on the crude number of deaths according to selected causes in the WHO Mortality Database. Mathers *et al.* (2005) have provided a general assessment of the coverage, completeness and reliability of WHO data on causes of death. Mortality rates have been age-standardised to the 1980 OECD population, to remove variations arising from differences in age structures across countries and over time within each country.

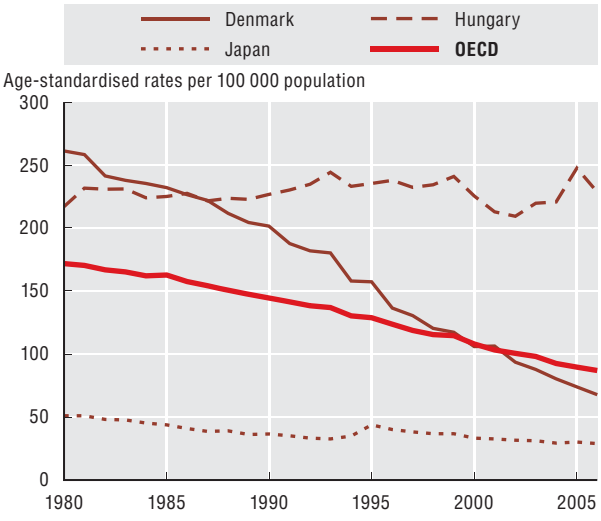
1.4.1 Ischemic heart disease, mortality rates, 2006 (or latest year available)



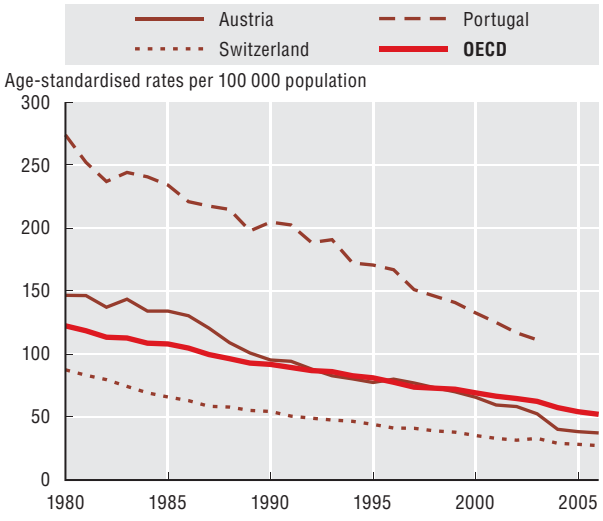
1.4.2 Stroke, mortality rates, 2006 (or latest year available)



1.4.3 Trends in ischemic heart disease mortality rates, selected OECD countries, 1980-2006

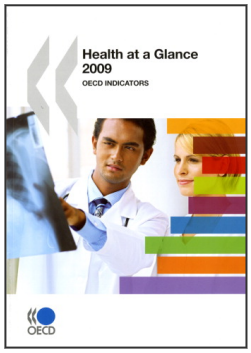


1.4.4 Trends in stroke mortality rates, selected OECD countries, 1980-2006



Source: OECD Health Data 2009. The raw mortality data are extracted from the WHO Mortality Database, and age-standardised to the 1980 OECD population.

StatLink http://dx.doi.org/10.1787/717474000840



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