

## Mortality from circulatory diseases

Circulatory diseases – notably heart attack and stroke – remain the main cause of mortality in most OECD countries, accounting for almost one in three deaths across the OECD. While mortality rates have declined in most OECD countries over time, population ageing, rising obesity and diabetes rates may hamper further reductions (OECD, 2015[1]). Indeed, slowing improvements in heart disease and stroke are one of the principal causes of a slowdown in life expectancy gains in many countries (Raleigh, 2019[2]).

Heart attacks and other ischaemic heart diseases (IHDs) accounted for 11% of all deaths in OECD countries in 2017. IHDs are caused by the accumulation of fatty deposits lining the inner wall of a coronary artery, restricting blood flow to the heart. Mortality rates are 80% higher for men than women across OECD countries, primarily because of a greater prevalence of risk factors among men, such as smoking, hypertension and high cholesterol.

Among OECD countries, central and eastern European countries have the highest IHD mortality rates, particularly in Lithuania where there are 383 deaths per 100 000 people (age-standardised). Rates are also very high in the Russian Federation. Japan, Korea and France have the lowest rates among OECD countries, at about one quarter of the OECD average and less than a tenth of rates in Lithuania and the Russian Federation (Figure 3.10).

Since 2000, IHD mortality rates have declined in nearly all OECD countries, with an average reduction of 42%. Declines have been most marked in France, Denmark, the Netherlands, Estonia and Norway, where rates fell by over 60%. Mexico is the one country where IHD mortality rates have increased; this is closely linked to increasing obesity rates and diabetes prevalence. Survival rates following a heart attack are also much lower in Mexico than in all other OECD countries (see indicator on “Mortality following acute myocardial infarction” in Chapter 6).

Stroke (or cerebrovascular disease) was the underlying cause of 7% deaths across the OECD in 2017. Disruption of the blood supply to the brain causes a stroke. As well as causing many deaths, strokes have a significant disability burden. Mortality rates are particularly high in Latvia and

Lithuania, at over double the OECD average. Rates are also high in the partner countries such as South Africa and the Russian Federation (Figure 3.11).

Mortality rates from stroke have fallen in all OECD and partner countries since 2000, with an average reduction of 47%. Declines have been slower in the Slovak Republic and Chile, however, at less than 15%. For strokes, as for IHD, a reduction in certain risk factors – notably smoking – has contributed to fewer deaths, alongside improved survival rates following an acute episode, reflecting better quality of care (see indicators on “Mortality following ischaemic stroke” and “Mortality following acute myocardial infarction (AMI)” in Chapter 6).

### Definition and comparability

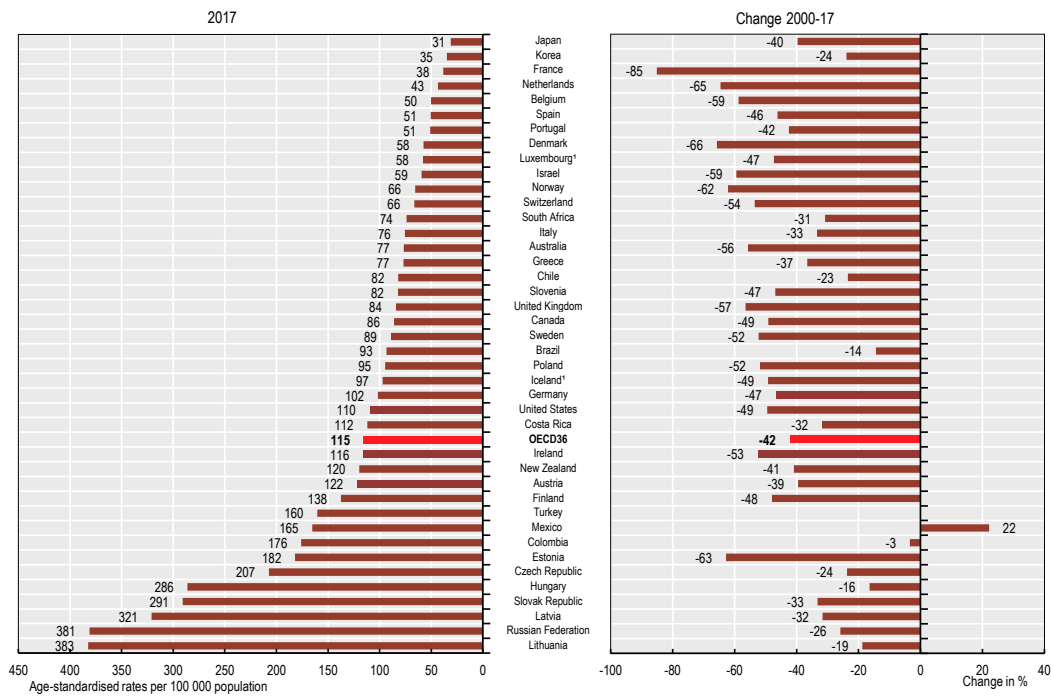
Mortality rates are based on numbers of deaths registered in a country in a year divided by the size of the corresponding population. The rates have been directly age-standardised to the 2010 OECD population (available at <http://oe.cd/mortality>) to remove variations arising from differences in age structures across countries and over time. The source is the WHO Mortality Database.

Deaths from ischaemic heart disease are classified to ICD-10 codes I20-I25, and cerebrovascular disease to I60-I69.

### References

- [1] OECD (2015), *Cardiovascular Disease and Diabetes: Policies for Better Health and Quality of Care*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264233010-en>.
- [2] Raleigh, V. (2019), “Trends in life expectancy in EU and other OECD countries: Why are improvements slowing?”, *OECD Health Working Papers*, No. 108, OECD Publishing, Paris, <https://doi.org/10.1787/223159ab-en>.

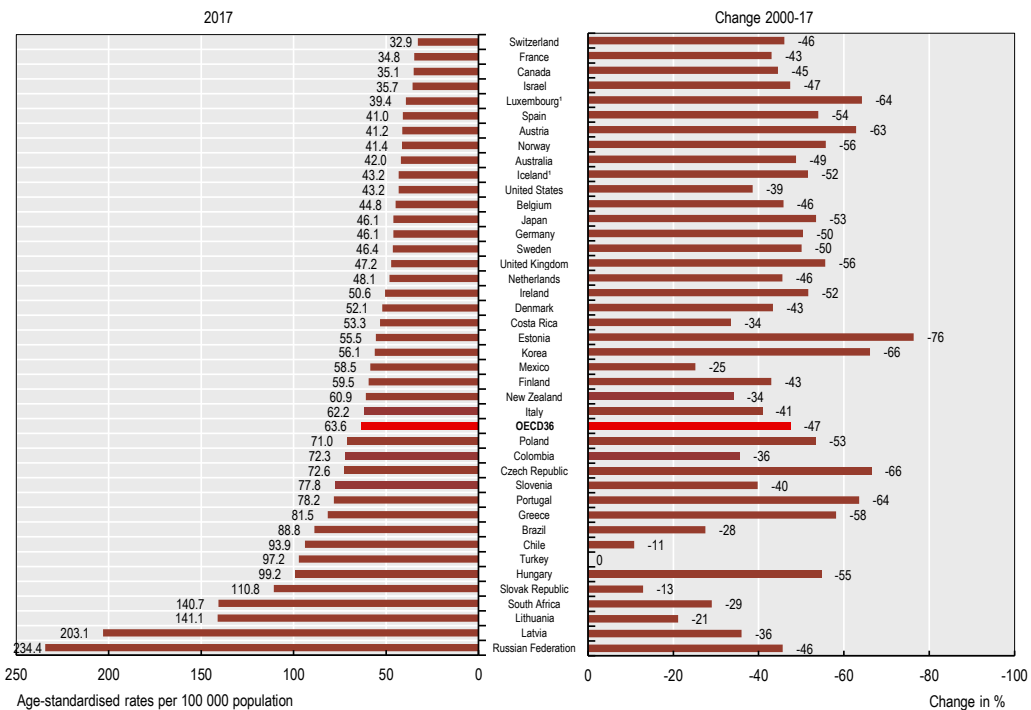
Figure 3.10. Heart attacks and other ischaemic heart disease mortality, 2017 and change 2000-17 (or nearest year)



1. Three-year average.  
Source: OECD Health Statistics 2019.

StatLink <https://doi.org/10.1787/888934014992>

Figure 3.11. Stroke mortality, 2017 and change 2000-17 (or nearest year)



1. Three-year average.  
Source: OECD Health Statistics 2019.

StatLink <https://doi.org/10.1787/888934015011>



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