

Mortality, males, diabetes mellitus (ICD 250)



Figure 1: Age-standardised male death rates, diabetes mellitus, 1992

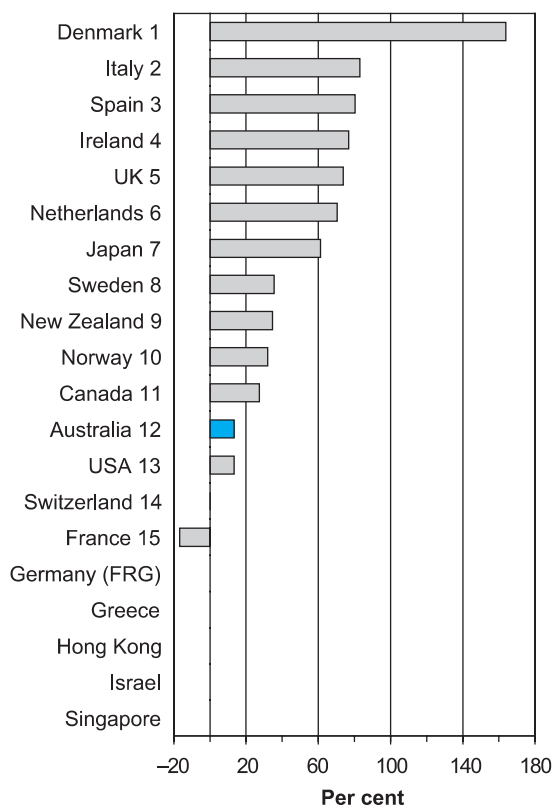


Figure 2: Changes in male death rates, diabetes mellitus, 1950-54 to 1992

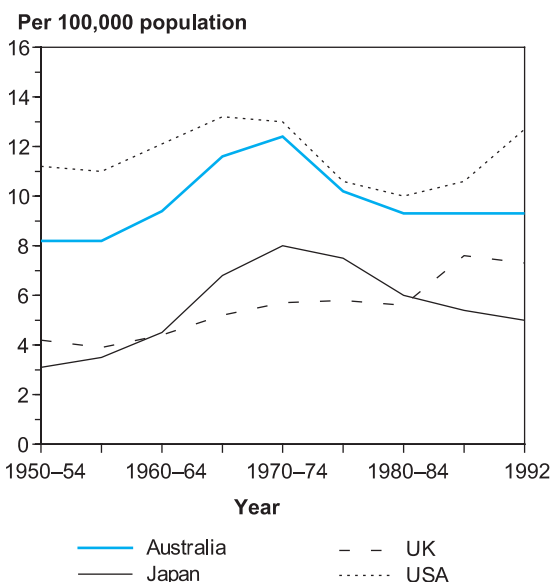


Figure 3: Trends in male death rates, diabetes mellitus, 1950-54 to 1992

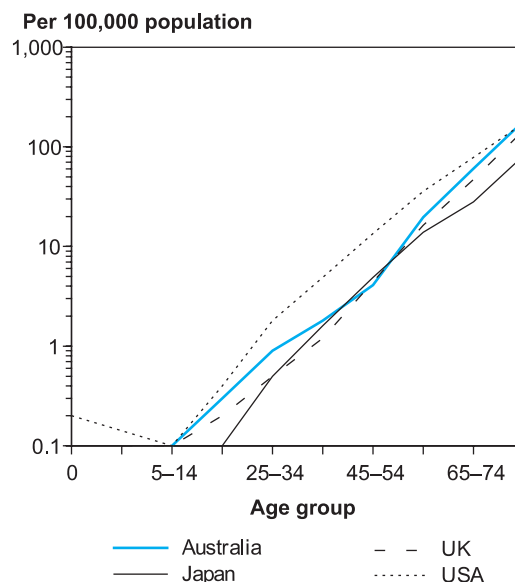


Figure 4: Age-specific male death rates, diabetes mellitus, 1992

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Death rates^(a), males, diabetes mellitus (per 100,000 population)

Country	1950–54	1960–64	1970–74	1980–84	1992	1993	1994	% change 1950–54 to 1992
Australia	8.2	9.4	12.4	9.3	9.3	10.4	10.9	13.4
Canada	8.4	10.1	12.0	9.4	10.7	11.5		27.4
Denmark	3.6	5.6	7.9	8.7	9.5	11.8		163.9
France	6.0	8.1	8.3	6.6	5.0	5.4		-16.7
Germany (FRG)	—	—	—	—	9.9	12.2	11.6	—
Greece	—	9.0	14.1	16.2	5.4	4.0	3.4	—
Hong Kong	—	—	—	—	5.2	5.4	4.7	—
Ireland	5.2	5.3	7.4	6.3	9.2			76.9
Israel	—	—	—	—	13.6	12.3		—
Italy	7.1	9.5	12.1	14.9	13.0			83.1
Japan	3.1	4.5	8.0	6.0	5.0	5.0	5.2	61.3
Netherlands	6.1	7.9	6.7	5.5	10.4	10.7	10.6	70.5
New Zealand	7.2	9.0	12.5	10.4	9.7	10.4		34.7
Norway	5.0	5.4	4.3	6.0	6.6	6.5		32.0
Singapore	—	—	16.0	17.9	8.1	8.4	9.4	—
Spain	5.1	6.8	9.9	10.4	9.2			80.4
Sweden	6.2	8.6	8.4	7.3	8.4	8.5		35.5
Switzerland	8.6	10.2	14.6	9.8	8.6	8.6	8.7	0.0
UK	4.2	4.4	5.7	5.6	7.3	6.1	6.0	73.8
USA	11.2	12.1	13.0	10.0	12.7			13.4

(a) Age-standardised to the World Standard Population.

Sources: WHO 1988, 1994, 1995a, 1996d.

- Diabetes mellitus is one of the most common chronic diseases in Western populations, in which the body makes too little of the hormone insulin or cannot use it properly. This disturbs the body's main energy processes, especially those involving the sugar glucose. The two most common forms of diabetes are insulin-dependent (or Type 1), which generally has a childhood onset, and non-insulin-dependent (or Type 2) which mostly occurs after age 40.
- In Australia, approximately 90% of persons with diabetes have Type 2. The disease is estimated to affect about 4% of the Australian adult population, with much higher rates for Aboriginal and Torres Strait Islander peoples (AIHW 1998).
- In 1992, the death rate for diabetes mellitus among Australian males was 9.3 deaths per 100,000 population. Many developed countries experience similar rates. Israel, Italy and the United States had rates in excess of 12 per 100,000 population in 1992. Japan, France, Hong Kong and Greece had rates below 6 per 100,000 population (Figure 1).
- Most developed countries have recorded post-war increases in male diabetes mortality, the largest rise occurring in Denmark (164%). Italy and Spain have also recorded increases of over 80%. Only France had a net decline in rates (17%).
- There has been a small overall increase (13%) in the Australian male death rate since 1950–54 (Figure 2); however, this masks a pronounced rise and fall beginning in the mid-1950s and ending in the early 1980s due mainly to changing coding practices (Figure 3). The United Kingdom and Japan have experienced similar rises and falls, although the death rate for the United States has risen lately.
- Diabetes mortality rates rise rapidly after the age of 40 (Figure 4). There are major differences in the age-specific death rates between Japan and the United Kingdom, United States and Australia at younger ages. The number of deaths below age 20 is almost nil in Japan, reflecting the low incidence of type 1 diabetes in that country.
- Besides increasing age, the risk factors for type 2 diabetes include obesity and physical inactivity, both of which are modifiable. The incidence of diabetes is rising in Australia and the disease remains a major public health threat.

For more information, see:

McCarty DJ et al. 1996. The rise and rise of diabetes in Australia, 1996. Canberra: International Diabetes Institute.

Mortality, females, diabetes mellitus (ICD 250)



Figure 1: Age-standardised female death rates, diabetes mellitus, 1992

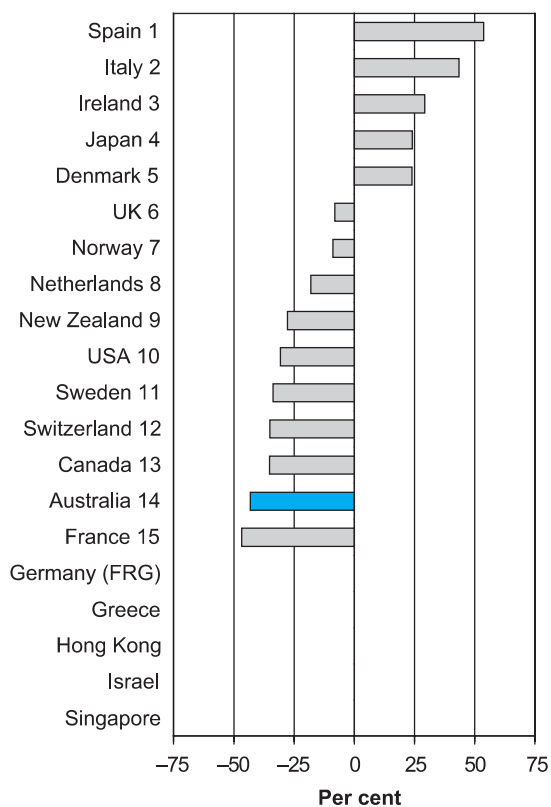


Figure 2: Changes in female death rates, diabetes mellitus, 1950-54 to 1992

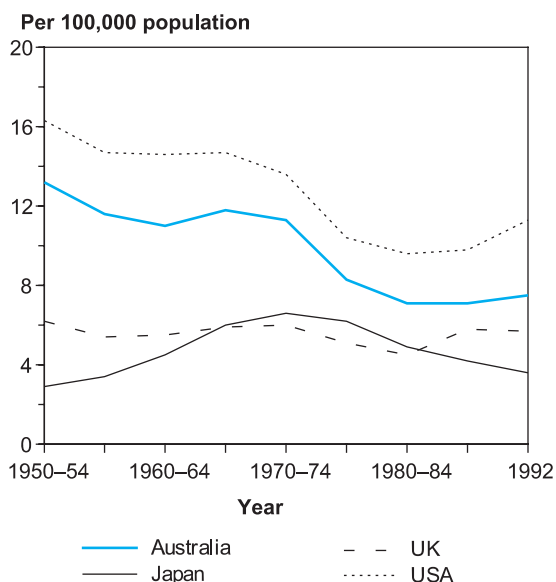


Figure 3: Trends in female death rates, diabetes mellitus, 1950-54 to 1992

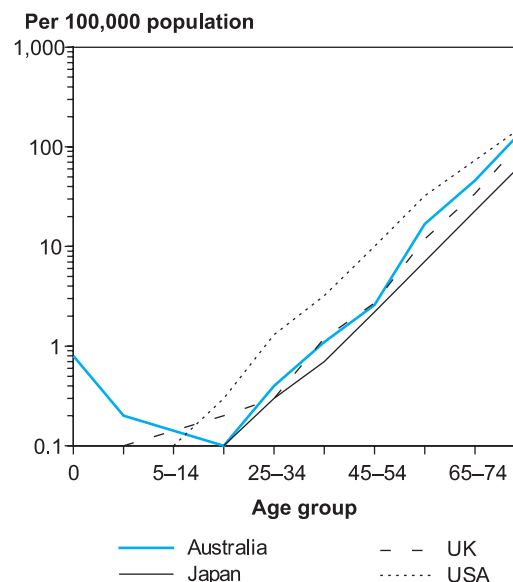


Figure 4: Age-specific female death rates, diabetes mellitus, 1992

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Death rates^(a), females, diabetes mellitus (per 100,000 population)

Country	1950–54	1960–64	1970–74	1980–84	1992	1993	1994	% change 1950–54 to 1992
Australia	13.2	11.0	11.3	7.1	7.5	7.5	7.6	–43.2
Canada	12.5	12.4	12.1	8.1	8.1	9.1		–35.2
Denmark	5.0	5.2	7.9	6.8	6.2	7.6		24.0
France	7.7	8.8	8.2	5.7	4.1	4.4		–46.8
Germany (FRG)	—	—	—	—	10.1	12.1	11.3	—
Greece	—	10.4	17.0	18.8	6.4	4.4	3.7	—
Hong Kong	—	—	—	—	5.9	5.9	4.3	—
Ireland	5.8	6.5	8.4	5.3	7.5			29.3
Israel	—	—	—	—	14.2			—
Italy	9.2	12.4	15.8	17.7	13.2			43.5
Japan	2.9	4.5	6.6	4.9	3.6	3.5	3.6	24.1
Netherlands	12.7	13.8	9.9	6.1	10.4	10.1	10.2	–18.1
New Zealand	11.5	10.4	11.7	8.1	8.3	8.1		–27.8
Norway	5.7	5.8	3.9	4.3	5.2	4.4		–8.8
Singapore	—	—	18.2	24.2	10.2	10.9	13.7	—
Spain	6.7	9.8	13.7	13.1	10.3			53.7
Sweden	9.2	9.5	8.0	5.9	6.1	6.3		–33.7
Switzerland	12.3	13.2	16.7	9.8	8.0	7.9	7.6	–35.0
UK	6.2	5.5	6.0	4.5	5.7	4.6	4.4	–8.1
USA	16.3	14.6	13.6	9.6	11.3			–30.7

(a) Age-standardised to the World Standard Population.

Sources: WHO 1988, 1994, 1995a, 1996d.

- In Australia, the female diabetes death rate is lower than the male rate. However, this is not the case in several other developed countries. In 1992, females had higher death rates than males in Greece, Israel, Singapore and Spain.
- The female death rate for diabetes mellitus in Australia in 1992 was 7.5 per 100,000 population. Again, Australia occupies a middle ranking among developed countries – Israel, Italy and the United States at the high end of this distribution, and Japan, France and Norway with lower rates (Figure 1).
- Whereas most countries recorded increases in male diabetes death rates between 1950–54 and 1992, many countries recorded decreases in death rates for females (Figure 2). Australia recorded the second largest decrease among countries for which data are available – a net fall of 43%, or over 1% per annum. There was a notable rise in the Australian rate during the 1960s, followed by a strong fall in rates in the early 1970s (Figure 3). Mortality from diabetes among Australian females has been relatively stable since the early 1980s.
- France recorded the largest fall in female diabetes mortality between 1950–54 and 1992 (47%), and is also the only country that recorded a decline in male death rates during the same period. Spain, Italy, Ireland, Japan and Denmark on the other hand recorded

increases in death rates, with Japan experiencing a marked increase between the mid-1950s and early 1970s. The rate in the United Kingdom remained stable at around 5 deaths per 100,000 population over four decades. The trend in the United States was similar to that for Australia until the mid-1980s (Figure 3), but has varied since then. It is likely that these trends reflect changing death coding practices more than any other factor.

- Underestimation of diabetes death rates from routine data collections is well recognised (Colaguirri et al. 1998). In addition to being a primary cause of death, diabetes also predisposes individuals to a variety of life-threatening complications, including end-stage renal disease, coronary heart disease and stroke. The contribution of diabetes to fatal outcomes from these complications is not considered in estimating death rates.

For more information, see:

McCarty DJ et al. 1996. The rise and rise of diabetes in Australia, 1996. Canberra: International Diabetes Institute.