

# Death rates plunge in older people with diabetes, but not younger people

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New research covering the entire population of Hong Kong shows that while death rates from any cause (all-cause mortality), cardiovascular disease and cancer are plummeting overall and in adults with diabetes aged 45 to 74 years, those in younger adults aged 20 to 44 years are barely changing.

Having [diabetes](#) as a younger adult continues to have a much bigger impact on individual's risk of [death](#) compared with [older adults](#), concludes the study by Dr. Andrea Luk, The Chinese University of Hong Kong, Hong Kong, China, and colleagues, that is published in *Diabetologia* (the journal of the European Association for the Study of Diabetes [EASD]).

The study, which covers the 16-year period from 2001 to 2016 and included the entire population of Hong Kong, shows that in 2016, men with diabetes were only 1.5 times (or 50%) more likely to die from any cause than those without the condition, compared with an almost three times increased death rate in 2001. For women with diabetes, in 2016 they were 1.7 times (or 70%) more likely to die than women without diabetes, compared with a 3.3 times increased death rate in 2001.

Although overall death rates from any cause are much lower in younger people, the differences in [death rates](#) between [younger people](#) with and without diabetes were much larger than in older people in 2001, and remained so in 2016. Men aged 20-44 years with diabetes were eight times more likely to die from any cause than those without diabetes in 2001, and five times more likely in 2016. For women aged 20-44 years with diabetes, they were six times more likely to die from any cause than those without the condition in 2001, and five times more likely in 2016.

The study used data from the entire population of Hong Kong (currently 7.3 million), which consists mostly of Chinese-ethnicity people living a Westernised lifestyle. The data came from a territory-wide diabetes cohort identified from the Hong Kong Hospital Authority electronic medical record system. Deaths between 2001 and 2016 were identified from linkage to the Hong Kong Death Registry.

Between 2001 and 2016, a total of 390,071 men and 380,007 women aged 20 years or older with diabetes were included. There were 96,645

deaths among men and 88,437 deaths among women. Mortality rates for all-cause, cardiovascular disease and cancer among all people with diabetes declined by 52%, 72% and 65% in men, respectively, and by 54%, 79% and 60% in women, respectively.

For all-cause mortality among people aged 20 to 44 years, the declines in rates per year over the study period were -3.2% for men and -1.2% for women, but neither was statistically significant. The declines in rates per year among people with diabetes aged 45-74 years were -6.1% for men and -6.7% for women, which were statistically significant.

Looking at the total falls in mortality, the all-cause mortality in people with diabetes aged 20-44 years declined by 33.8% for men and 6.9% for women from 2001 to 2016 (but again, neither was statistically significant). But in those with diabetes aged 45-74 years, the all-cause mortality declined by 58.9% for men and 63.6% for women from 2001 to 2016, both statistically significant.

The authors say the results of this new research are consistent with studies from other developed countries, including the USA, Canada, the UK and Australia. Regarding these specific results from Hong Kong, they say that the more than 50% reduction in all-cause mortality rate in the people with diabetes during the 16 year study period is noteworthy and may be related to the many changes that have occurred in the social and healthcare system in Hong Kong during the last two decades, as well as halving smoking rates in the region since 1982 and keeping obesity rates stable since the mid-1990s (while obesity has increased rapidly since then in most developed nations).

They say: "The less marked improvements in all-cause [mortality rates](#) among young people in Hong Kong and in other regions is concerning since these individuals are at the prime age of economic productivity and the high rates of premature mortality are expected to have a major

impact on society."

They conclude: "Using surveillance data, we revealed major declines in mortality rates from all causes, [cardiovascular disease](#) and cancer, and in [mortality](#) relative to the non-diabetic population in men and [women](#) with diabetes in Hong Kong between 2001 and 2016. The declines were more marked in older than younger age groups, suggesting that more focused prevention and care strategies are needed for young people. The multiple policy and system changes introduced in response to the growing prevalence of diabetes in Hong Kong might have contributed to these secular changes and may serve as a reference for other developing regions facing similar challenges."

**More information:** Hongjiang Wu et al. Secular trends in all-cause and cause-specific mortality rates in people with diabetes in Hong Kong, 2001–2016: a retrospective cohort study, *Diabetologia* (2020). [DOI: 10.1007/s00125-019-05074-7](#)

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