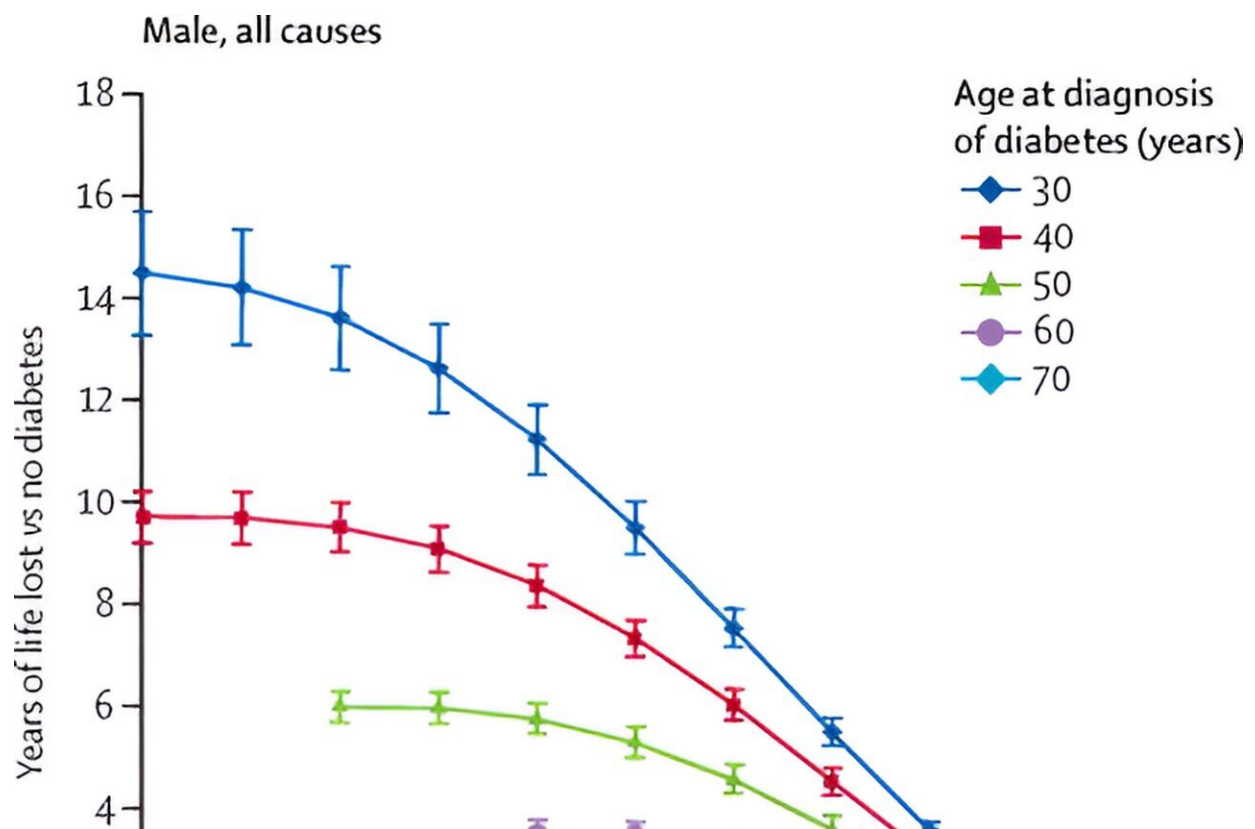


Type 2 diabetes diagnosis at age 30 can reduce life expectancy by up to 14 years, warn experts

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Estimated years of life lost by age. Credit: *The Lancet Diabetes & Endocrinology* (2023). DOI: 10.1016/S2213-8587(23)00223-1

An individual diagnosed with type 2 diabetes at age 30 years could see

their life expectancy fall by as much as 14 years, an international team of researchers has warned.

Even people who do not develop the condition until later in life—with a diagnosis at age 50 years—could see their life expectancy fall by up to six years, an analysis of data from 19 high-income countries found.

The researchers say [the findings, published in *The Lancet Diabetes & Endocrinology*](#), highlight the urgent need to develop and implement interventions that prevent or delay onset of [diabetes](#), especially as the prevalence of diabetes among younger adults is rising globally.

Increasing levels of obesity, [poor diet](#) and increased sedentary behavior are driving a rapid rise in the number of cases of type 2 diabetes worldwide. In 2021, 537 million adults were estimated to have diabetes worldwide, with an increasing number diagnosed at younger ages.

Type 2 diabetes increases an individual's risk of a range of complications including heart attack and stroke, kidney problems, and cancer. Previous estimates have suggested that adults with type 2 diabetes die, on average, six years earlier than adults without diabetes. There is uncertainty, however, about how this average reduction in life expectancy varies according to age at diagnosis.

To answer this question, a team led by scientists at the University of Cambridge and University of Glasgow examined data from two major international studies—the Emerging Risk Factors Collaboration and UK Biobank—comprising a total of 1.5 million individuals.

The earlier an individual was diagnosed with type 2 diabetes, the greater the reduction in their life expectancy. Overall, every decade of earlier diagnosis of diabetes was associated with about four years of reduced life expectancy.

Using data from US population it was estimated that, individuals with type 2 diabetes diagnosed at ages 30, 40, and 50 years died on average about 14, 10, and six years earlier, respectively, than individuals without the condition. These estimates were slightly higher in women (16, 11, and seven years, respectively) than they were in men (14, 9, and five years, respectively).

The findings were broadly similar in analyses using EU data, with corresponding estimates being about 13, nine, or five years earlier death on average.

Professor Emanuele Di Angelantonio from the Victor Phillip Dahdaleh Heart and Lung Research Institute (VPD-HLRI), University of Cambridge, said, "Type 2 diabetes used to be seen as a disease that affected older adults, but we're increasingly seeing people diagnosed earlier in life. As we've shown, this means they are at risk of a much shorter life expectancy than they would otherwise have."

Dr. Stephen Kaptoge, also from the VPD-HLRI, said, "Type 2 diabetes can be prevented if those at greatest risk can be identified and offered support—whether that's to make changes to their behavior or to provide medication to lower their risk. But there are also structural changes that we as a society should be pursuing, including relating to food manufacturing, changes to the built environment to encourage more physical activity, and so on.

"Given the impact type 2 diabetes will have on people's lives, preventing—or at least delaying the onset—of the condition should be an urgent priority."

The researchers found that the majority of the reduction in life expectancy associated with diabetes was due to "vascular deaths"—deaths related to conditions such as heart attack, stroke and

aneurysms. Other complications such as cancer also contributed to lowering [life expectancy](#).

Professor Naveed Sattar from the Institute of Cardiovascular & Medical Sciences, University of Glasgow, added, "Our findings support the idea that the younger an individual is when they develop type 2 diabetes, the more damage their body accumulates from its impaired metabolism. But the findings also suggest that early detection of diabetes by screening followed by intensive glucose management could help prevent long-term complications from the condition."

More information: S Kaptoge et al, Life expectancy associated with different ages at diagnosis of type 2 diabetes in high-income countries: 23 million person-years of observation, *The Lancet Diabetes & Endocrinology* (2023). [DOI: 10.1016/S2213-8587\(23\)00223-1](https://doi.org/10.1016/S2213-8587(23)00223-1)

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