

Having children lowers mortality in people with type 1 diabetes, but for women more than men

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New research published at this week's annual meeting of the European Association for the Study of Diabetes (EASD) in Barcelona, Spain, shows that having children lowers mortality in people with type 1 diabetes, but for women more than men. The research is by Dr Lena Sjöberg, University of Helsinki, Helsinki, Finland, and National Institute for Health and Welfare, Helsinki, Finland, and colleagues.

Previous research has shown that type 1 [diabetes](#) is associated with increased [mortality](#) compared with the [general population](#), from both acute and long-term [diabetic complications](#). Other previous research has shown that mortality in the general population is higher among [women](#) and men who do not have any offspring than among those who have [children](#). Both men and women with childhood-onset type 1 diabetes have fewer offspring than the general population. In this study, Sjöberg and colleagues examined mortality and causes of death among subjects with childhood-onset type 1 diabetes compared to control people, with a focus on mortality differences between childless people and those having had offspring.

The people with diabetes in the study came from the Finnish DERI cohort (Diabetes Epidemiology Research International). Each person included was diagnosed with diabetes at 17 years of age or under during 1965-1979 and placed on insulin at diagnosis. 5,162 cases were identified nationwide, and 2,327 (45%) of them were women. Two non-

diabetic control persons for each person in the DERI cohort were selected from the database of the national Social Insurance Institution, matched for the year of birth, geographical birth region and gender.

The data showed that 1,025 people with diabetes and 497 people without diabetes had died during the follow-up until the end of 2010. All-cause mortality in people with diabetes was significantly higher than that of control persons: all-cause mortality in men with diabetes was three times as high as that of men in the [control group](#). For women, the all-cause mortality was almost five times higher among women with diabetes than in the control group. Overall, mortality is much higher in men than in women, in both cases and controls. For people with diabetes, the mortality differences between men and women are less pronounced than among the controls. Diabetes diminishes the difference between genders. "Although diabetes multiplies the mortality more in women than in men, it doesn't mean that the overall mortality of women gets as high as that of men," explains Dr Sjöberg.

The effect of having offspring was looked at people in four categories: no children, one child, two children, three or more children. In general, the more children a person had, the lower mortality, but this trend was less pronounced for men than for women. Overall, all-cause mortality was half that in persons who had offspring, among both people with diabetes and controls, and in both genders. "Among females, having children lowered mortality in a similar way in diabetic persons and controls. In males, this difference was less pronounced," says Dr Sjöberg.

Dr Sjöberg says: "The beneficial effect of having offspring on mortality was observed. It was, however, significantly smaller among men with diabetes than among men in the control group. In women, having offspring was associated with lower mortality in a similar way regardless of the diabetes status. One possible reason for this gender difference is that women with [type 1 diabetes](#) are trained and well motivated to

achieve better metabolic control during pregnancy and that this motivation may persist also post partum."

She adds: "One of the limitations of a register study is that you don't know who have chosen to remain childless or to have fewer children than desired, and whether those with diabetes have done so specifically because of their disease. Partly, the differences in mortality between childless persons and persons with children are probably due to the fact that those with serious health problems choose not to have children."

Provided by Diabetologia

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