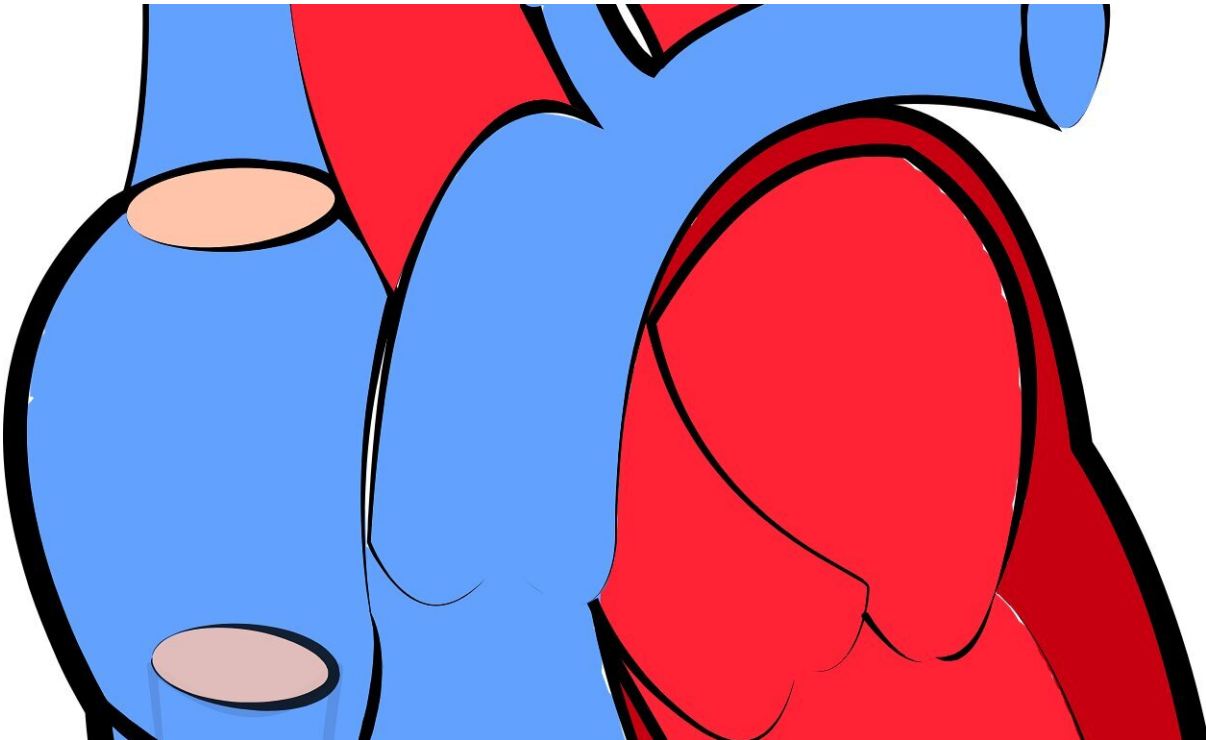


# Risk of heart attacks halves in patients with diabetes in 15 years

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Dramatic reductions in the risk of heart attacks in patients with diabetes coincides with major increases in the use of preventive medications. That's the finding of late breaking research presented today at ESC Congress 2020.

"Our results suggest that when patients are diagnosed with type 2 [diabetes](#), starting medications to prevent cardiovascular disease has a substantial impact on the risk of heart attacks and premature death," said principal investigator Dr. Christine Gyldenkerne of Aarhus University Hospital, Denmark.

People with type 2 diabetes are twice as likely to have a heart attack or die from [heart disease](#) compared to people without diabetes.

Management of patients with type 2 diabetes has changed considerably over the last two decades, with increased focus on prevention of cardiovascular disease. This was the first study to examine how these changes may have affected the risk of heart attacks and premature death in patients with newly diagnosed type 2 diabetes and no previous cardiovascular disease.

The researchers identified all patients in Denmark initiating therapy for type 2 diabetes from 1996 to 2011—a total of 211,278 patients. Each patient with diabetes was matched on age and sex with five people without diabetes from the general population. Those with previous cardiovascular disease were excluded.

All participants were followed for seven years. Using data from national health registries, the researchers recorded heart attacks and death during follow-up. They also noted the use of medications to prevent cardiovascular disease at the time of diabetes diagnosis.

The researchers found that patients with newly diagnosed type 2 diabetes and no previous cardiovascular disease experienced major reductions in the risk of heart attack and death. From 1996 to 2011, the relative risk was reduced by 61% for heart attack and by 41% for death. During the same period, the absolute risks of heart attack and death reduced by 4% and 12%, respectively.

When comparing patients with diabetes to the general population, the initially large differences in risk narrowed over time. By the end of the study, the risk of heart attack among patients with diabetes was only marginally—0.6% - higher than in the general population.

In those with diabetes, use of cholesterol-lowering medications increased more than 10-fold, aspirin increased by 50%, and blood pressure-lowering medications increased up to four times during the study period.

Dr. Gyldenkerne said: "The risk of heart attack and premature death among patients with newly diagnosed type 2 diabetes and no previous [cardiovascular disease](#) was approximately halved from 1996 to 2011. In the same period, the difference in risk of [heart attack](#) and death for [patients](#) with diabetes, as compared to the [general population](#), was narrowed substantially."

She noted that this was an observational study and causation cannot be assumed. Dr. Gyldenkerne said: "In addition to the use of preventive medications, other factors may have influenced the likelihood of [heart attack](#) and [premature death](#). For example, stricter control of diabetes and [lifestyle changes](#) such as smoking cessation, physical activity, and healthier food may have contributed to the improved prognosis."

**More information:** Abstract title: Nationwide trends for myocardial infarction and mortality among patients with type 2 diabetes mellitus.

Provided by European Society of Cardiology

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