

# People with well-controlled, long-duration type 1 diabetes may still face high risk of heart disease

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People who have had type 1 diabetes for more than 50 years without kidney complications may still be at substantial risk for heart disease, despite excellent control of blood pressure, cholesterol and blood sugar levels, according to a study presented at [ENDO 2024](#), the Endocrine Society's annual meeting in Boston, Mass.

Heart disease is a major cause of death in people with type 1 [diabetes](#), especially in those who develop [kidney complications](#) from diabetes.

"As people with type 1 diabetes live longer due to improved medical care, a substantial proportion of these patients survive without kidney complications, but are still at high risk for heart disease," said lead researcher Marc Gregory Yu, M.D., of the Joslin Diabetes Center and Harvard Medical School in Boston, Mass.

Yu and colleagues examined data from a patient group known as the "Medalists," consisting of more than 1,000 individuals from across the United States who have had type 1 diabetes for over 50 years.

The "Medalists" are noteworthy because only 13% have kidney complications from diabetes, and most also have excellent control of blood pressure, [cholesterol](#), and [blood sugar levels](#)—all traditional [risk factors](#) for heart disease. Despite this, around 40% of them still report having heart disease.

From the overall study group of more than 1,000 people, 153 underwent CT scans to detect calcium deposits in the heart's blood vessels, and 111 underwent MRI imaging to evaluate the heart's overall structure and pumping capacity.

The "Medalists" had higher [calcium deposits](#) in the heart's blood vessels, although with comparable heart structure and function, compared to other individuals of a similar age with type 1 or type 2 diabetes. Higher

blood sugar levels among the "Medalists" were also observed to be closely linked to heart disease.

"This highlights the continued importance of blood sugar control in type 1 diabetes despite advancing age," Yu said.

"We likewise observed that risk factors for heart disease may differ among the 'Medalists' when they were grouped according to those who have and don't have kidney complications from diabetes," Yu said.

"These risk factors may also be different for type 1 diabetes in general, as compared to type 2 diabetes. The findings may help guide the development of new medications specifically targeted for [heart disease](#) in type 1 diabetes."

Provided by The Endocrine Society

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