

Study shows some may be protected from diabetic eye disease

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Researchers at Joslin Diabetes Center, supported by JDRF, have completed a study of 158 people who have lived with type 1 diabetes (T1D) for 50 years or more with eye examinations at Joslin over many decades of follow-up, and have concluded that a high proportion of this unique group of patients developed little to no diabetic eye disease over time. The study focuses on a group of patients known as "50-year Medalists," and was funded by JDRF in support of its efforts to improve the lives of people with T1D by reducing or eliminating the impact of its complications. Their results, which researchers hope will lead to a means to prevent or slow the progression of the disease, were presented at the 72nd American Diabetes Association's (ADA) Scientific Sessions in Philadelphia this past weekend.

Diabetic retinopathy (DR) refers to a number of vision abnormalities that are all related to damage to the blood vessels in the eye caused by high [blood glucose levels](#). It is the most common and one of the most serious complications of diabetes, affecting nearly 90 percent of people who have had T1D for at least 20 years. Although some [treatment options](#) exist for those with more advanced forms of the disease, DR remains the leading cause of [vision loss](#) among working age adults in the United States and other developed countries worldwide. The fact that approximately 40 percent of Medalists are relatively unaffected by such a common complication led researchers in this study to evaluate whether these Medalists developed DR and then experienced regression or lack of progression, or never developed significant DR at all.

"Joslin's attempt to characterize [diabetic retinopathy](#) is an important starting point for preventing or treating this complication of T1D," said Helen Nickerson, JDRF's senior scientific program manager of complications therapies. "The understanding that these Medalists have been relatively unaffected by such a common complication leads us to infer that there may be biological or genetic protective factors that could be utilized to benefit other people with [type 1 diabetes](#)."

"The results we received from looking at this special group of patients led to some very interesting findings," said Dr. Jennifer Sun, co-investigator on the study at Joslin. "In Medalists who did not develop advanced DR, there was no evidence of substantial DR regression, but the progression of retinopathy seems to slow after about four years in comparison to those who do develop advanced DR. Further, after about two decades, the process of DR worsening essentially seems to halt. It is this halting of disease progression that we will be studying as we move forward to identify the factors that result in protection against long-term complications in the 50-year Medalists."

The Medalist program was initially conceived by Dr. Eliot P. Joslin as an incentive for those who had lived with T1D for 25 years, rewarding them for commitment to good self-management techniques. Due to the advancements in treatment therapies supported by organizations like JDRF and Joslin Diabetes Center, today the Medalist program recognizes people who have lived with T1D for 50 and even 75 years. In order to be selected as a 50-year Medalist, like the patients involved in this study, a person must have lived with documented insulin-dependent diabetes for at least 50 years.

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