

# Men with young-onset type 2 diabetes at higher risk of retinopathy, study finds

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New research being presented at the Annual Meeting of the European Association for the Study of Diabetes (EASD), held online this year, found that men who are diagnosed with type 2 diabetes (T2D) at a young

age are more likely to develop retinopathy than those diagnosed aged 50-plus.

Men diagnosed with T2D before the age of 40 were 72% more likely to have retinopathy than males who had T2D for the same amount of time but were diagnosed at the more typical age of 50 or over.

Retinopathy is a common complication of diabetes in which damage to the blood vessels of the retina can lead to blindness.

T2D, the most common form of diabetes, usually occurs in middle-aged and [older people](#). However, onset at a younger age is becoming more common globally.

Dr. Katrina Tibballs and colleagues at the University of Oslo, Norway, analysed data from the GP records of 10,242 people with T2D to find out the prevalence of young-onset diabetes in Norway and to explore the relationship between age at [diagnosis](#) and complications.

The dataset was representative for Norway and the average age of diagnosis with T2D among all the participants was 56.

980 (10.2%) had young-onset diabetes (diagnosis under the age of 40) and their average age of diagnosis was 33.3 years old. This group had T2D for 11.4 years, on average, at the time of the study, and was 55.6% male. 15.5% had retinopathy.

Their risk of retinopathy and [coronary heart disease](#), another complication of T2D, was compared with a group of 6,627 people who were diagnosed with T2D aged 50-plus (normal onset T2D).

The average age of diagnosis in this group was 62.7. This group had T2D for 7.8 years, on average, at the time of the study, and was 53.4% male.

5.9% had retinopathy.

Those diagnosed before the age of 40 had, on average, a higher HbA1c (average blood sugar level) at diagnosis than those diagnosed after 50 (7.6% versus 6.9%).

In those with young-onset T2D, HbA1c levels were higher already from the point of diabetes diagnosis but also increased more rapidly with time. In other words, if two people had T2D for the same length of time, HbA1c levels would likely be higher in the one diagnosed at a younger age.

Risk of coronary heart disease was more strongly linked to age in both groups than to diabetes duration. Risk of retinopathy, however, increased with diabetes duration, with the risk increasing particularly sharply in those with young-onset T2D.

When other relevant factors including diabetes duration, HbA1c, current age, BMI and blood pressure were considered and adjusted for, men with young-onset diabetes were 72% more likely to have retinopathy than those with normal-onset T2D.

In contrast to men with young-onset T2D, women with young-onset T2D weren't at significantly higher risk of retinopathy than those with normal-onset T2D, after taking all the above-mentioned factors into account.

The analysis also showed that retinopathy developed sooner after diagnosis in men, but not women, with young-onset T2D than in normal-onset T2D.

The study's authors say that diagnosis may be more likely to be delayed in males, who tend to visit their GP less often than females. This would mean their T2D was uncontrolled for longer, raising their risk of

complications.

In addition, young-onset T2D may be a more aggressive form of the condition. T2D occurs when beta cells in the pancreas can't make enough insulin (a hormone which helps turn the sugar in food into energy) or the insulin it makes doesn't work properly (a phenomenon known as "insulin resistance").

The researchers say that the higher average blood sugar levels found in those with young-onset T2D could be a sign of more rapid deterioration of the insulin-producing cells and therefore a more severe form of the condition.

Dr. Tibballs, a GP and Ph.D. student, concludes: "It is important that young-onset type 2 diabetes is detected early enough and treated adequately to reduce the likelihood of retinopathy and other complications.

"The current guidelines on diabetes prevention and treatment should be updated to reflect the higher risk of complications in those with young-onset [diabetes](#), particularly the elevated risk of [retinopathy](#) in men."

Provided by Diabetologia

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