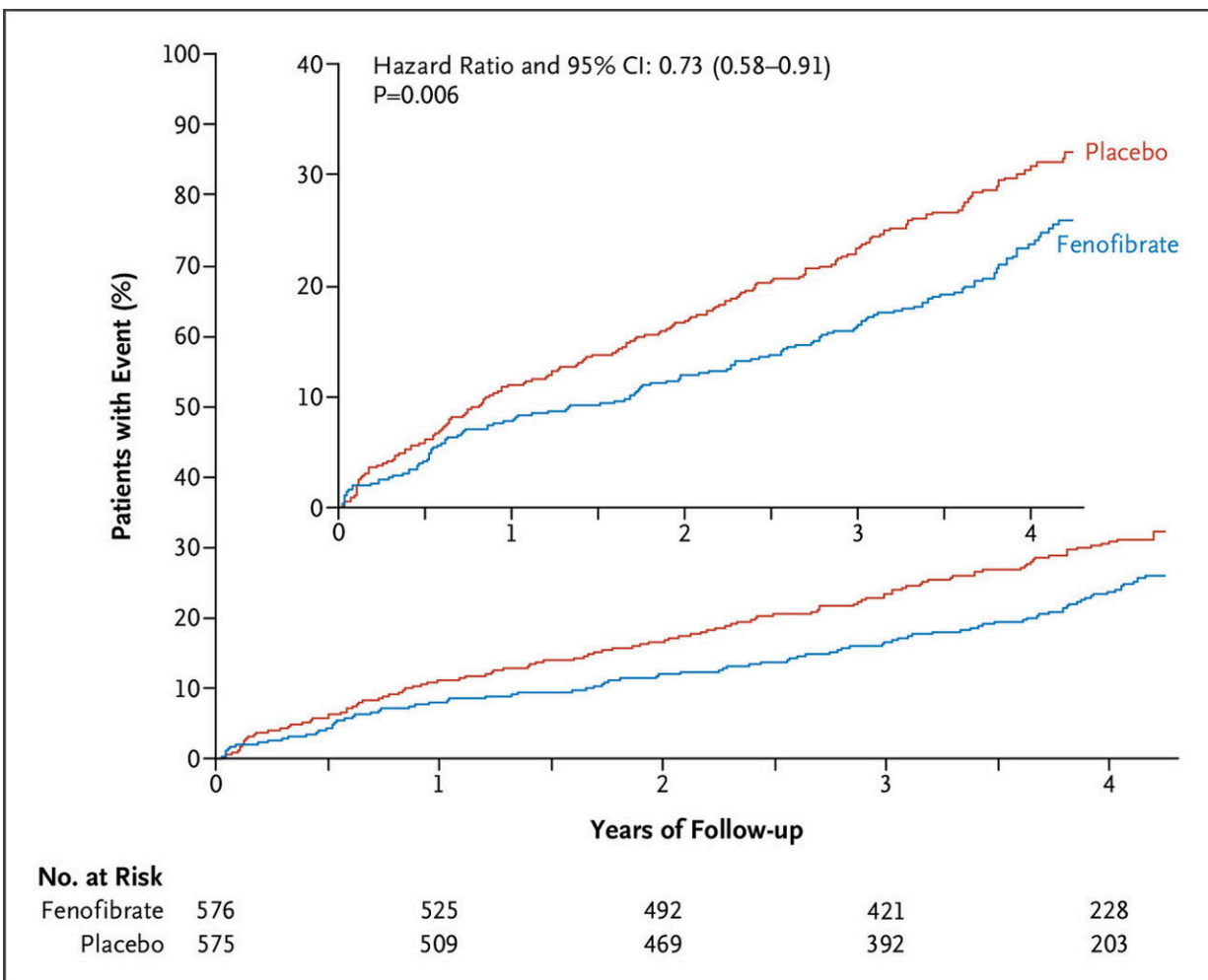


Cholesterol-lowering drug slows progression of eye disease in people with diabetes: Clinical trial

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Primary composite outcome of referable diabetic retinopathy or maculopathy, or treatment thereof, with intravitreal injection of medication, retinal laser therapy, or vitrectomy. The inset graph shows the same data on an expanded y axis.

Credit: *NEJM Evidence* (2024). DOI: 10.1056/EVIDoa2400179

The LENS trial has demonstrated that fenofibrate, a drug usually used to lower cholesterol, reduces the risk of progression of diabetic retinopathy by 27%. The results were announced at the American Diabetes Association Scientific Sessions and published in a [paper](#) titled, "Effect of Fenofibrate on Progression of Diabetic Retinopathy," published in *NEJM Evidence*.

Diabetes can cause damage to the [small blood vessels](#) at the back of the eye, a condition called diabetic retinopathy. Diabetic retinopathy is among the top five causes of visual loss worldwide and the only major cause to increase in recent decades.

Fenofibrate is a tablet that has been used to lower cholesterol for more than 30 years. Previous results from sub-studies of trials looking into treatments for heart disease had suggested that [fenofibrate](#) might be able to slow the progression of diabetic retinopathy but more conclusive results were needed.

Coordinated by Oxford Population Health, the LENS (Lowering Events in Non-proliferative retinopathy in Scotland) trial compared the effects of fenofibrate with a placebo (dummy tablet) on the progression of retinopathy in 1,151 adults with type 1 or type 2 [diabetes](#) in Scotland as part of the national routine diabetic eye screening program. All of the participants had early to moderate diabetic retinopathy when they joined the trial.

The results showed that people who received fenofibrate had a 27% lower risk of needing to be referred for specialist care or treatment for diabetic retinopathy or maculopathy (a progressive eye disease that can

lead to [vision loss](#)) over four years compared with people who were assigned to receive a placebo.

Treatment with fenofibrate was also associated with a lower risk of developing macular edema (swelling at the back of the eye) and a lower risk of requiring treatment for retinopathy compared to placebo, and the benefits of fenofibrate were similar in people with both type 1 and type 2 diabetes, and in people with both normal and impaired kidney function.

Dr. David Preiss, Associate Professor at Oxford Population Health and lead author of the study, said, "Diabetic retinopathy remains a leading cause of visual loss. Good control of blood glucose is important but this is very difficult to achieve for many people, and there are few other treatments available.

"We need simple strategies that can be widely used to reduce the progression of diabetic eye disease. Fenofibrate may therefore provide a valuable addition to treat people with early to moderate [diabetic retinopathy](#)."

Melville Henry, a LENS trial participant from Leven, said, "Taking part in the trial was very easy; there was nothing to it really. I just had to follow the instructions and take the study tablets. I attended my local research clinic appointments at first and then I had regular telephone calls to ask about my progress."

Linda Gillespie, a LENS trial participant from Kirkcaldy, said, "I attended the clinic for diabetic eye screening anyway so taking part in the trial was extremely easy, I never had to think about it. If I had any questions, someone was always at the end of the phone. It was really important to me to take part in research because without trials like LENS we can't move forward. The results of the trial might not help me

but it might help someone else in the future."

Dr. Lucy Chambers, Head of Research Communications at Diabetes UK, said, "Eye problems are a frightening and too frequent complication of diabetes. But acting early can stop the first signs of damage progressing into devastating sight loss. We're excited by the positive results from this major trial of a new treatment to slow progression of eye damage, which has the potential to benefit many people with diabetes in the U.K."

More information: David Preiss et al, Effect of Fenofibrate on Progression of Diabetic Retinopathy, *NEJM Evidence* (2024). [DOI: 10.1056/EVIDoa2400179](https://doi.org/10.1056/EVIDoa2400179)

Provided by University of Oxford

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