

# **New medicine reduces triglyceride by 25%, no change in CVD risk in people with type 2 diabetes**

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A new medication, pemafibrate, lowered triglyceride levels among adults with type 2 diabetes yet did not decrease their cardiovascular risk,

according to late-breaking science research presented today at the American Heart Association's Scientific Sessions 2022.

"Triglyceride levels are commonly measured as part of routine preventive care in the U.S. Understanding the best course of treatment for elevated [triglyceride levels](#) has been a major challenge due to limited data to support specific treatment options," said the study's lead investigator Aruna D. Pradhan, M.D., M.P.H., M.Sc., an associate professor of medicine at Harvard Medical School and associate physician in the division of preventive medicine at Brigham and Women's Hospital in Boston.

"We were very surprised by our findings," Pradhan said. "Many of us in the [scientific community](#) thought lowering triglycerides with this medication class in this population should have worked because high triglycerides are a pretty good marker of who's at risk. Unfortunately, our results showed no lowering of cardiovascular event rates."

Triglycerides are a fatty substance in the blood. High triglyceride levels can increase the risk of cardiovascular disease, especially in conjunction with too much "bad" cholesterol, or [low-density lipoprotein](#) (LDL), and too little "good" cholesterol, or high-density lipoprotein (HDL).

Likewise, type 2 diabetes also increases the risk of cardiovascular disease. In the U.S., about 28 million, or more than 1 in 10, adults have diagnosed type 2 diabetes. Type 2 diabetes caused more than 1.6 million deaths worldwide in 2020, according to the American Heart Association's 2022 Heart and Stroke Statistical Update.

What remained unclear was whether lowering triglyceride levels may protect against cardiovascular disease among people with type 2 diabetes. This study, Pemafibrate to Reduce Cardiovascular Outcomes by Reducing Triglycerides in Patients with Diabetes (PROMINENT),

examined the effects of pemafibrate, a novel medication designed to lower triglycerides and increase HDL levels.

Between March 2017 and September 2020, nearly 10,500 adults with high triglycerides, low HDL and type 2 diabetes enrolled in the study in 24 countries, with one-fifth of participants in the U.S. They were randomly assigned to receive pemafibrate or placebo for three years, on average, and neither the researchers nor the study participants knew which group was receiving the medication or placebo.

The average age of participants was 64 years. Slightly more than one-fourth of study participants were women, and approximately 20% were Hispanic adults and 3% were Black adults. Nearly all were taking a statin to lower cholesterol. At the time of the study, half of participants had type 2 diabetes for more than 10 years.

After three years, results indicate:

- Pemafibrate reduced triglyceride levels by 26% compared to placebo. However, the medication did not appear to reduce the risk of cardiovascular disease.
- Approximately 1 out of 10 study participants—in both groups—had a [heart attack](#), stroke, blocked arteries that required treatment or died from cardiovascular disease within three years.
- The medication was also associated with an increase in LDL cholesterol during the trials.

"We need to find another solution to this problem," Pradhan said. "This medication class is the second most commonly used group, after statins, to lower lipid levels and while the medication did *not increase* CVD risk, the study raises new questions about the best way to treat patients with type 2 diabetes and hypertriglyceridemia who continue to experience a high rate of cardiovascular events—1 in 10 by 3 years despite being on

statin therapy and having fairly good control of LDL."

The study had several limitations: the medication did not lower triglycerides or increase HDL levels as much as expected, potentially due to the high proportion of statin use, and Black adults were underrepresented in the study.

**More information:** Conference abstract:  
[eppro02.ativ.me/src/EventPilot ... le=agenda&tid=P21780](https://eppro02.ativ.me/src/EventPilot...le=agenda&tid=P21780)

Provided by American Heart Association

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