

Clinical Coordinating Center
Massachusetts General Hospital
50 Staniford St, Suite 750
Boston, MA 02114

Data Coordinating Center
Massachusetts General Hospital
165 Cambridge Street Suite 400
Boston, MA 02114

Effects of Pitavastatin on COVID-19 Incidence and Seriousness among a Global Cohort of People with HIV

Markella V. Zanni, Triin Umbleja, Heather J. Ribaldo, Steven K. Grinspoon, and colleagues

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Background

Prior studies have suggested that therapy with a statin medication (a medication that is usually prescribed to lower LDL, or “bad” cholesterol) may help decrease the severity of viral illnesses such as influenza. Little was known as to whether statin therapy influences the occurrence or seriousness of COVID-19 among people with HIV (PWH).

Goals of the Study

The goal of our study was to find out whether statin therapy reduces the incidence (occurrence) and/or seriousness of COVID-19 among people with HIV. To do so, we used data from the Randomized Trial to Prevent Vascular Events in HIV (REPRIEVE), in which a global group of PWH with low-to-moderate traditional risk for heart disease were randomly assigned to take either pitavastatin calcium (“pitavastatin”, a type of statin medication) or placebo (a pill that contains no medication) and followed for the development of heart disease events. The original study showed that pitavastatin reduced heart disease events among PWH. We used the data collected in this trial to evaluate whether pitavastatin reduces COVID-19 events among PWH.

➤ The participants and follow-up period:

- 6,905 participants (representing a subset of REPRIEVE participants who remained in follow-up as of January 1, 2020 (marked as the start of the COVID-19 pandemic))
 - 3,451 prescribed pitavastatin; 3,454 prescribed placebo at the start of REPRIEVE
 - 2,207 (32%) women
 - 2,835 (41%) Black or African American; 2,319 (34%) White
 - Median age: 53 years
- Median follow-up time for COVID-19 outcomes from start of analysis (January 1, 2020): 3.3 years

➤ The findings:

- Overall, 1701 (25%) participants reported COVID-19 diagnoses; 117 participants (2%) had serious COVID-19 (which means COVID-19 resulted in hospitalization or death or was life-threatening)
- Statin therapy did not reduce the overall incidence of COVID-19
- Statin therapy reduced the incidence of serious COVID-19 by 25% but the 117 serious COVID-19 events were too few to be certain of the pitavastatin effect
- By the end of the study follow-up period, 83% of study participants had received COVID-19 vaccination
- COVID-19 vaccination had a strong effect to reduce the incidence of serious COVID-19; only 17 serious COVID-19 events occurred after vaccination

In Summary: Among PWH, statin therapy had no effect on COVID-19 incidence but showed potential to reduce the risk of serious COVID-19 prior to COVID-19 vaccination. Additional research is needed to understand how statins may work to protect against serious COVID-19. In the meanwhile, our findings highlight the importance of receiving vaccination against COVID-19 as a means of protecting against serious disease.

REPRIEVE Trial Website: reprivetrial.org

The findings shared in this summary are from the REPRIEVE population at a specific point in time. These findings are descriptive and not intended to change clinical care. If you have questions about what you've read, please talk to members of the REPRIEVE study team at your local site or a health care provider