

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

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

Factors Affecting Risk of CVD Events in a Global CVD Prevention Cohort of People with HIV

Steven Grinspoon, Maya Watanabe, Heather Ribaud, Pamela Douglas, Markella Zanni, and colleagues

[Published in CID, 2025](#)

Background

The risk of heart disease is increased approximately 2 times among people with HIV (PWH) as compared to people without HIV. Understanding the relative contributions of risk factors for heart disease is an important step towards the goal of preventing heart disease.

Goals of the Study

The goal of this study was to understand how risk factors contribute to the development of heart disease among participants in The Randomized Trial to Prevent Vascular Events in HIV (REPRIEVE). REPRIEVE enrolled PWH between ages 40-75 with low-to-moderate traditional heart disease risk, randomized these participants to a statin medication called pitavastatin or to placebo (a pill that contains no medication), and followed these participants for, on average, 5 years, to see if they developed heart disease events like a heart attack or stroke. Main findings from REPRIEVE were that [statin therapy reduced heart disease events among PWH by 36%](#), prompting guideline changes recommending statin use in PWH.

➤ The participants:

- 7,769 REPRIEVE participants (3,888 taking pitavastatin, 3,881 taking placebo)
 - Low-to-moderate traditional heart disease risk
 - Median age at enrollment: 50 years
 - 2,419 (31%) women and 5,350 (69%) men

➤ The findings:

- Risk of a heart disease event was higher for individuals with:
 - Older age
 - Black or African American race
 - Family history of premature heart disease
 - Current cigarette smoking*
 - High blood pressure (hypertension)*
 - Lower HDL ("good") cholesterol*
 - Detectable HIV-1 RNA level*
 - Certain antiretroviral therapy class combinations
- *Modifiable risk factors
- Individuals living in High Income countries had a higher risk of a heart disease event compared to those from other regions, except for South Asia.
- Female sex did not appear to protect against heart disease.

In Summary: Among participants in the REPRIEVE cohort of PWH, we identified risk factors associated with heart disease. Risk factors that can be changed through lifestyle or behavior modifications were cigarette smoking, hypertension, lower HDL cholesterol, and detectable HIV-1 RNA. Importantly, female sex did not appear to protect against heart disease. These findings strengthen our understanding of heart disease risk factors and highlight the need support strategies to modify risk factors among PWH, including among Black or African American PWH in High Income countries and among women with HIV.

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